NHS
Ayrshire & Arran

Full Business Case for the future delivery of front door services within NHS Ayrshire & Arran

Phases 1 and 2

Working together to achieve the healthiest life possible for everyone in Ayrshire and Arran

28th January 2014

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Glossary of Abbreviations

A&A	Ayrshire & Arran
ADOC	NHS Ayrshire Doctors on Call
AEDET	Achieving Excellence Design Evaluation Toolkit
AME	Annually Managed Expenditure
AND	Associate Nurse Director
ANP	Advanced Nurse Practitioner
BDM	Benefits Dependency Map
BfBC	Building for Better Care
BREEAM	Building Research Establishment Environmental Assessment Method
BRP	Benefits Realisation Plan
CAU	Combined Assessment Unit
CAT	Contract Administration Toolkit
CDU	Clinical Decisions Unit
CEL	Chief Executives Letter
CIG	Capital Investment Group
CMT	Corporate Management Team
CoE	Care of the Elderly
CPMG	Capital Planning Management Group
DEL	Departmental Expenditure Limit
EAC	Equivalent Annual Cost
ECQIP	Emergency Care Quality Improvement Programme
ED	Emergency Department
FBC	Full Business Case
HFS	Health Facilities Scotland
HMRC	Her Majesty's Revenue and Customs
HR	Human Resource
HRG	Healthcare Resource Group
IA	Initial Agreement
IFRS	International Financial Reporting Standards
IDM	Investment Decision Maker
LoS	Length of Stay
LUCAP	Local Unscheduled Care Action Plan
MAU	Medical Assessment Unit
MI	Myocardial Infarction
MSSW	Medical Short Say Ward
NEC3	The New Engineering Contract Engineering and Construction Contract
NPC	Net Present Cost
OBC	Outline Business Case
OGC	Office of Government Commerce
POE	Post Occupancy Evaluation
PPE	Post-Project Evaluation
PPP	Public Private Partnership
PSC	Professional Service Contractors
PSCP	Principal Supply Chain Partner
SCIM	Scottish Capital Investment Manual
ScotPHO	Scottish Public Health Observatory
SFIs	Standing Financial Instructions
SGHSCD	Scottish Government Health and Social Care Directorates
SMART	Specific Measurable, Achievable, Realistic and Time-constrained
SRO	Senior Responsible Owner
SRU	Surgical Receiving Unit

TUPE	Transfer of Undertaking and Protection of Employment
UCEG	Unscheduled Care Expert Group
VAT	Value Added Tax
VFM	Value For Money
WBS	Weighted Benefit Score
WTE	Whole Time Equivalent

EXECUTIVE SUMMARY

Context

1. This Full Business Case (FBC) sets out proposals for the re-development of the Emergency Department (ED) at University Hospital Ayr (herein referred to as Ayr Hospital) and the development of Combined Assessment Units (CAUs) at both Ayr Hospital and University Hospital Crosshouse (herein referred to as Crosshouse Hospital).
2. This represents the delivery of phases 1 and 2 of an Initial Agreement (IA) 'Building for Better Care' (BfBC), the implementation planning programme for the future delivery of urgent and critical care services across NHS Ayrshire & Arran, approved by the Scottish Government Health and Social Care Directorates (SGHSCD) Capital Investment Group (CIG) in June 2009.
3. The Outline Business Case (OBC), for Phase 1 of BfBC Programme, covering the redevelopment of the ED at Ayr Hospital and the development of the CAU at Crosshouse Hospital, was approved by the SGHSCD in February 2013. Subsequently an addendum to this OBC, comprising Phase 2 of the BfBC programme, put forward proposals for further investment into the development of a CAU at Ayr Hospital; which was approved by the SGHSCD in August 2013.
4. The FBC confirms the need for investment, established within the OBC, building on national strategies (including 2020 Vision", "Quality Strategy" and "Reshaping Care for Older People") to establish the case for change. In addition, since the development of the OBC, the Board has established an Emergency Care Quality Improvement Programme (ECQIP) which has been testing and establishing improvements to unscheduled care pathways based on the Board's new model of care, moving towards the establishment of the Combined Assessment Units.
5. Subsequently there was a requirement from the Scottish Government Health and Social Care Directorates for all NHS Boards to present a Local Unscheduled Care Action Plan in June 2013 (LUCAP). NHS Ayrshire and Arran was well placed to provide their Local Unscheduled Action Plan as this reflected the work of the Board's established Emergency Care Quality Improvement Programme (ECQIP). The Board's LUCAP sets out the detail of specific ECQIP developments across the entire patient pathway along with investment proposals. An improvement in the 4 hour standard is a key performance measure along with an improvement in the quality of care and treatment for patients at all steps in their pathway.
6. The Building for Better Care Investment Programme provides for the future capital investment and associated nursing workforce required for front door services, to ensure that emergency care and treatment are delivered in facilities which are in the right place and configured to best manage patient care and flow. As such they provide the capital solution required to most effectively support the delivery of the developments established by our emergency care quality improvement programme (ECQIP) and detailed within the Board's LUCAP

Case for Change

7. Existing assessment functions are fragmented and do not provide sufficient space and appropriate accommodation to carry out initial assessment and treatment resulting in a majority of patients being admitted regardless of condition. This leads to an "admit to decide" approach. Provision of new assessment rooms and chairs will allow the Board to alter this approach to one of "decide to admit".

8. In addition within the Ayr Hospital Emergency Department (ED) there is insufficient space within the department, especially in relation to the number of resuscitation rooms

9. The case for change is based on the following key drivers:

   - Managing demand for unscheduled care – including adoption of new models of care and best practice assessment methods
   - Responding to and managing future demographic change & epidemiology – providing facilities that will meet growing demand within NHS Ayrshire & Arran
   - Provision of person centred, safe and effective care – respect individual's needs and values and receive healthcare in an appropriate, clean and safe environment
   - Lack of appropriate workforce to support early decision making
   - Current configuration and nature of front door services – in particular poor integration with ED and other services, disparate locations resulting in long transit times and capacity constraints

Future Service & Workforce requirements

10. A detailed capacity planning exercise was undertaken to determine the future capacity requirements for Ayr ED, Crosshouse & Ayr CAUs and the resultant impact on specialty beds at both Ayr and Crosshouse sites. A summary of the results is outlined below.

Table 1: Summary Capacity Projections

Room function	Current	Projected 2016 improved flows	Difference
Ayr ED	20	19	-1
Ayr Front door (CAU)	39	43	+4
Ayr specialty beds	246	248	+2
Crosshouse Front door (CAU)	56	53	-3
Crosshouse specialty beds	356	325	-31

11. Whilst there appears to be a modest increase in assessment capacity, the new CAUs will operate under a very different model of care to the current assessment facilities. It should also be noted that there is enhancement to the provision of ambulatory care (which is an integral part of the CAUs) at both Ayr and Crosshouse.

12. The analysis shows that there is potential for a small reduction in specialty beds (primarily at Crosshouse), from the new model of care for the front door and increases in performance (as demonstrated through the benchmarking analysis). However a proportion of this reduction (14 beds) relates to surgical capacity and assumes an increase in day case provision. As there are no additional costs for increased day case provision within this FBC no reduction in surgical beds have been assumed. For Ayr there is no scope to operate with fewer specialty beds than present.

13. Detailed workforce planning was undertaken, in particular on nursing, to establish the requirements for both the front door and specialty bed care settings. This took into account current nurse to bed ratios; application of the workforce tool (within ward areas); professional judgement and the impact of the single room environment within the CAUs.

Confirmation of the preferred option

14. In reviewing the OBC benefits, risks and economic appraisal the preferred option was confirmed as; Option 3 New build CAU at Crosshouse and New build ED at Ayr with the existing Ayr ED refurbished to provide a CAU.

Financial Appraisal

15. Capital costs have been established through a combination of the 'Target Cost' provided by Bam Construction, the Board's Principal Supply Chain Partner (PSCP), and associated NHS Direct Costs. This indicates the total FBC cost of £27.584m net of impairment and historical fees (up to and including OBC fees). This is a small reduction, £6k from the combined capital costs shown at OBC and addendum. This is funded by a central funding contribution from Scottish Government of £15.5m towards the Phase 1 and £8m for phase 2. The balance of £4.1m is being met from Board capital funds.
16. The revenue costing analysis has been undertaken to include the following:
    - Revised pay costs reflecting the output from the nursing workforce modelling
    - Revised non-pay cost reflecting the final building footprint
    - Revised depreciation charges arising from the final capital cost
17. The phasing of these costs is in line with the commission of new facilities and is shown below.

Table 2: Net Revenue Impact

	2013/14	2014/15	2015/16	2016/17	2017/18
Baseline pay	148,195	148,195	148,195	148,195	148,195
Baseline non-pay	8,535	8,535	8,535	8,535	8,535
Movement in pay	612	1,201	1,201	1,590	2,517
Movement in non-pay	-		110	254	289
Total pay / non-pay	**157,342**	**157,931**	**158,041**	**158,574**	**159,536**
Current depreciation	9,337	9,337	9,337	9,337	9,337
New depreciation	-	-	165	662	911
Total depreciation	**9,337**	**9,337**	**9,706**	**10,124**	**10,248**
Gross costs	**166,679**	**167,268**	**167,543**	**168,573**	**169,784**
Income	-1,274	-1,274	-1,274	-1,274	-1,274
Net costs	**164,405**	**165,994**	**166,269**	**167,299**	**168,510**
Current costs	164,793	164,793	164,793	164,793	164,793
Total revenue impact	**612**	**1,201**	**1,476**	**2,506**	**3,717**

18. The table above indicates the total recurring revenue consequences of the preferred option which results in a net cost of £3.717m. The full year impact of this will be in place from 2017/18 onwards.

19. The revenue consequences can be split into the following key components.

Table 3: Key components of revenue impact - £000

	£000
Depreciation	911
Nursing for front door	2,916
Released nursing from specialty bed reductions	(712)
Non-clinical costs (pay & non-pay)	602
Total revenue impact	**3,717**

20. These costs are a result of:
    - Depreciation as a result of investing in infrastructure without releasing any current estate and associated depreciation
    - Staffing to deliver the model of care at the front door and to deliver increased capacity to 2018 (Quality Premium associated with ensuring Right Staff in Right Place at Right Time to deliver new ways of working / pathways to meet projected patient demand)
    - Reduction in nurse staffing available to transfer (albeit at a reduced level when compared to OBC) from reduction in specialty beds
    - Non-clinical costs for pay and non-pay associated with the increased building footprint
21. Having considered the outcome from the workforce assessments and site visits supporting the planned improvement in staffing at the Front Door, the NHS Board has agreed that the resulting net revenue cost of £3.717m will be covered as an approved cost pressure for quality of care improvements in the forward Financial Plan.

Management Case

22. The FBC has set out the project management arrangements including the governance arrangements, key roles, responsibilities and overall project milestones.
23. An overview of the change management philosophy, impact of change and change management plan has been provided.
24. In developing the FBC further work was undertaken on the Benefits Realisation Plan in particular the construction of a Benefits Dependency Map (BDM) and supporting Benefit Profiles (shown in **Appendix D1 & J2**). This ensures there is a robust process in place for monitoring the delivery of benefits which will be used as part of the Post Project Evaluation.

1 INTRODUCTION

1.1 Purpose

1.1.1 This Full Business Case (FBC) sets out proposals for the re-development of the Emergency Department (ED) Unit at University Hospital Ayr (herein referred to as Ayr Hospital) and the development of Combined Assessment Units (CAUs) at both University Hospital Ayr (herein referred to as Ayr Hospital) and University Hospital Crosshouse (herein referred to as Crosshouse Hospital).

1.1.2 This represents the delivery of phases 1 and 2 of an Initial Agreement (IA) ‘Building for Better Care’ (BfBC), the implementation planning programme for the future delivery of urgent and critical care services across NHS Ayrshire & Arran, approved by the Scottish Government Health and Social Care Directorates (SGHSCD) Capital Investment Group (CIG) in June 2009.

1.1.3 An Outline Business Case (OBC), for Phase 1 of the Building for Better Care (BfBC) Programme, covering the redevelopment of the ED at Ayr Hospital and the development of the CAU at Crosshouse Hospital, was approved by the Scottish Government Health and Social Care Directorates in February 2013

1.1.4 An addendum to this Outline Business Case, comprising Phase 2 of the BfBC programme, put forward proposals for further investment into the development of a CAU at Ayr Hospital. This was approved by the Scottish Government Health Directorates in August 2013 and the Board was invited to develop a single FBC covering phases 1 and 2 of the BfBC programme

1.1.5 The remaining elements of the BfBC programme will be subject to further investment proposals within Phase 3 and include:

- Expansion of Intensive Care and High Dependency at University Hospital Crosshouse to support the integration of the Intensive Care Unit with Medical and Surgical High Dependency,
- Expansion of the existing Intensive Care and High Dependency at University Hospital Ayr

1.1.6 This remainder of this section of the FBC provides an overview of:

- The context for the proposed investment in front door services
- Relevant NHS Scotland Capital Investment Guidance
- Changes since Outline Business Case (OBC)
- The programme’s structure
- The structure and content of the FBC

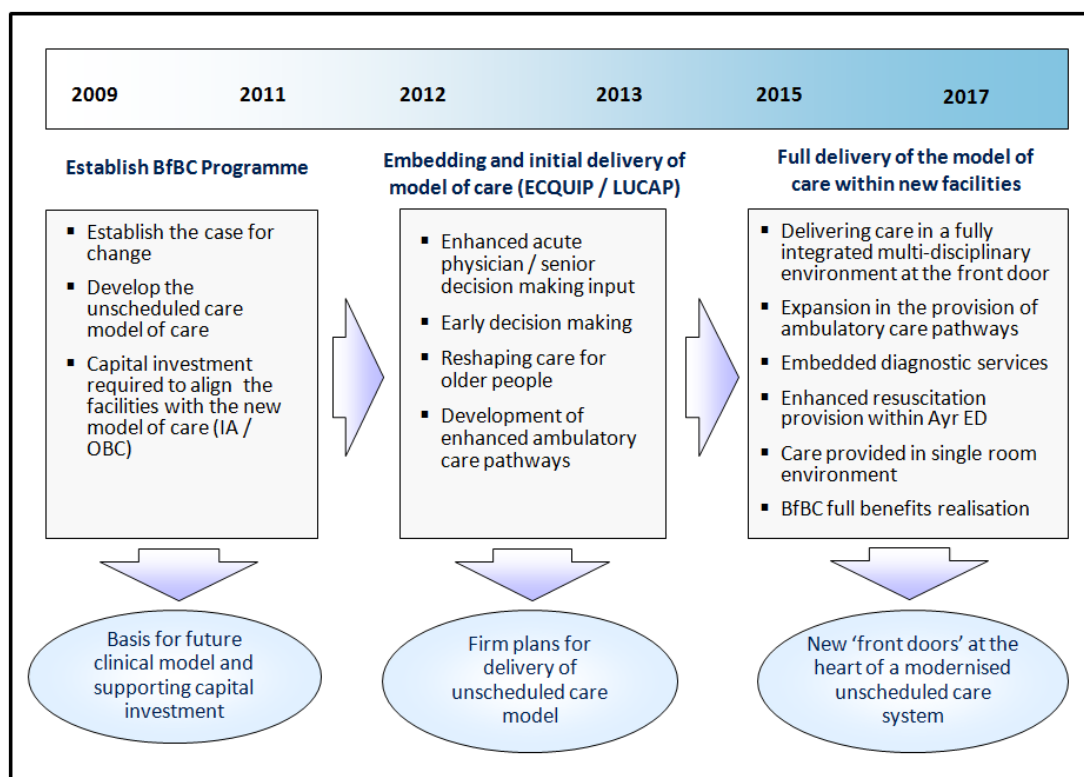
1.2 Context for the proposed investment

1.2.1 The proposals set out within this FBC are presented within the context of the Board's wider proposals for improving the management and delivery of unscheduled care across NHS Ayrshire and Arran.

1.2.2 The Building for Better Care programme is closely aligned to service improvements which are currently being developed through the Emergency Care Quality Improvement Programme (ECQIP) and detailed in the Local Unscheduled Care Action Plan (LUCAP). A number of these service improvements are precursors for the BfBC models of service delivery. These plans are described in more detail in Section 3

1.2.3 The unscheduled care improvement timeline exhibited below illustrates the development of the Building for Better Care programme within the overall context of unscheduled care planning and provision in Ayrshire and Arran. This highlights the origins of the new model alongside linked programmes of development and investment that support the new model and new ways of working. The resultant outcome is the establishment of fit for purpose new facilities at the centre of the Ayrshire and Arran unscheduled care system; promoting new ways of working and best, safe and effective person-centred care.

Figure 1: Unscheduled Care Timeline



1.2.4 The Board's LUCAP is supported by investment proposals which are predominantly around workforce change, particularly those relating to medical and support staff. The LUCAP does not provide for the capital improvements for the front door facilities, which include the provision of a Combined Assessment Unit for

each hospital to provide unscheduled care and the co-location with the Emergency Department.

1.2.5 The Building for Better Care Investment Programme provides for the future capital investment and associated nursing workforce required for the new Front Door service model to ensure that emergency care and assessment are delivered by the right people at the right time and in the right place. As such the FBC provides the capital solution required to most effectively support the delivery of the proposals set out within the Board's Local Unscheduled Action Plan (LUCAP).

1.2.6 The challenging financial outlook for the public sector for the foreseeable future will require fundamental change in the way NHS services are provided and new ways of working to achieve the Board's clinical strategies.

1.2.7 The financial case for the investment within Building for Better Care envisages improvements in the use of existing resources.

1.2.8 The foundation for these improvements has been derived from:

- significant staff participation in clinical review of processes / procedures (supported by the LEAN and Continuous Improvement Programme),
- agreement on change in admission policy from 'admit to decide' approach towards 'decide to admit' philosophy,
- improvements in workforce utilisation (right staff to be available in the right place at the right time),
- benefits from co-location of services / general environmental improvements in terms of more productive / contented workforce (with less non-productive time)

1.3 Compliance with National Capital Investment Guidance

1.3.1 The proposals are presented in the form of a Full Business Case (FBC) consistent with the requirements of the SGHSCD Capital Investment Manual issued via CEL 19 (2009).

1.3.2 The FBC framework allows the investment benefits, costs and risks to be identified and evaluated in a systematic way. It ensures that NHS Ayrshire and Arran's Board can demonstrate convincingly that the investment is economically sound and financially viable.

1.4 Developments since OBC

1.4.1 The most fundamental development since approval of the OBC in February 2013 is the expedition of phase 2 (development of Ayr CAU) which was approved by way of the addendum in August 2013.

1.4.2 Further developments following approval of the OBC include:

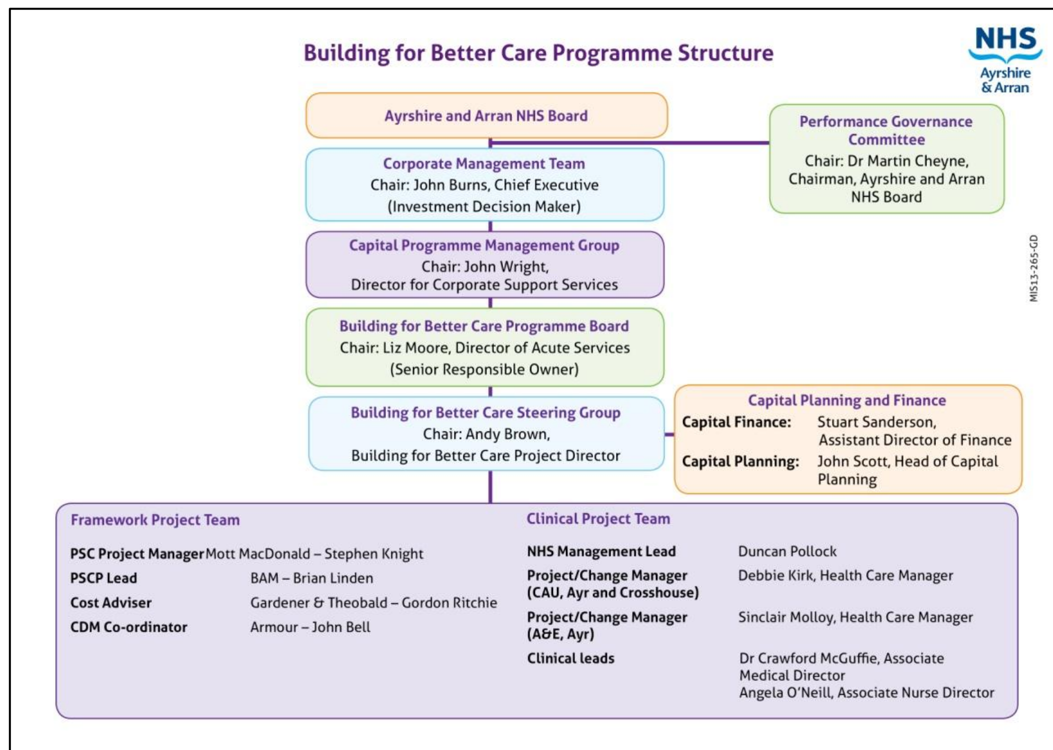
- Re-running of the bed modelling exercise using latest activity data - this was carried out for the Ayr site as part of the addendum and for Crosshouse as part of the FBC work
- Extensive user group involvement to the ongoing building design and development including sign off of 1:50 drawings
- Establishment of an Emergency Care Quality Improvement Programme (ECQIP) and development of the Local Unscheduled Care Action Plan (LUCAP) to progress the model of care as detailed within the FBC

- Attainment of cost certainty through the agreement of the Target Price
- Establishment and resourcing of a Project Office
- Submission of developed plans for Planning & Building Warrant approvals

1.5 Programme Structure

1.5.1 A summary of the programme governance structure is provided in the diagram below.

Figure 2: Governance structure



1.5.2 The Building for Better Care Programme Board is chaired by the Senior Responsible Officer who is in turn supported by an NHS Project Director and PSC Project Manager. There is also a Project Team which includes representation from each of the front door services and relevant clinical and non clinical support functions.

1.5.3 The membership of the Programme Board is set out in **Appendix A1** along with details of the membership of other key groups within the structure.

1.6 Structure of the Full Business Case Document

1.6.1 The structure and content of the FBC is outlined below. This structure reflects the '5 Case' approach as reflected in current Scottish Government Health and Social Care Directorates guidance and accepted best practice in Business Case development and presentation.

Figure 3 : Structure of the full business case

Case	Sections
The Strategic Case	**Section 2 - Profile of NHS Ayrshire and Arran:** provides an overview of the Board along with its purpose, commitments and values.
	Section 3 - Strategic Context: review of the case for change outlined at OBC highlighting any changes to the strategic drivers for the project
	Section 4 - Business Case Objectives and Scope: reviewing the business case objectives and scope outlined at OBC.
	Section 5 - Future Service Model: provides analysis of the revised bed modelling work
	Section 6 - Workforce Planning: provides analysis of the workforce planning, including details of the approach, requirements and how the workforce change will be managed
	Section 7 - Benefits, Risks, Constraints and Dependencies: reviews the OBC benefits and risks and updates the constraints and dependencies presented.
The Economic Case	**Section 8 - OBC Option Appraisal -** represents the OBC analysis and provides any further commentary on benefits and risks
	Section 9 - Economic Appraisal: provides an updated Net Present Cost (NPC) and Equivalent Annual Cost (EAC) analysis for the preferred option and do minimum.
	Section 10 - Preferred Option: confirms the preferred option
The Commercial Case	**Section 11 - Negotiated Deal & Contractual Arrangement:** describes the key commercial details of the agreed contract between the Board and its Principal Supply Chain Partner (PSCP) through the construction and commissioning of the new facilities.
The Financial Case	**Section 12 - Financial Case:** presents a profile of the capital and revenue costs of the preferred option and the associated projected impact on the Board's income and expenditure.
The Management Case	**Section 13 - Project Management & Project Implementation Timetable:** describes how the Board intends to manage the various phases of the project and sets out the proposed timetable and key milestones.
	Section 14 - Change Management: sets out the change management strategy framework and outline plans for the successful delivery of the preferred option.

	Section 15 - Benefits Realisation Plan: sets out the key benefits that will be delivered by the preferred option identifying the actions necessary to realise the benefits and explains how the benefits will be monitored and measured.
	Section 16 - Risk Management Plan: sets out the outline risk management plan for the preferred option going forward.
	Section 17 - Contract Management Arrangements: an overview of the contract management philosophy, roles and responsibilities and contract management plan.
	Section 18 - Arrangements for Post Project Evaluation (PPE): sets out the Board's proposed approach to PPE and its key phases.

1.6.2 Appendices to the FBC are contained within a separate volume.

1.7 Further Information

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STRATEGIC CASE

2 PROFILE OF NHS AYRSHIRE & ARRAN

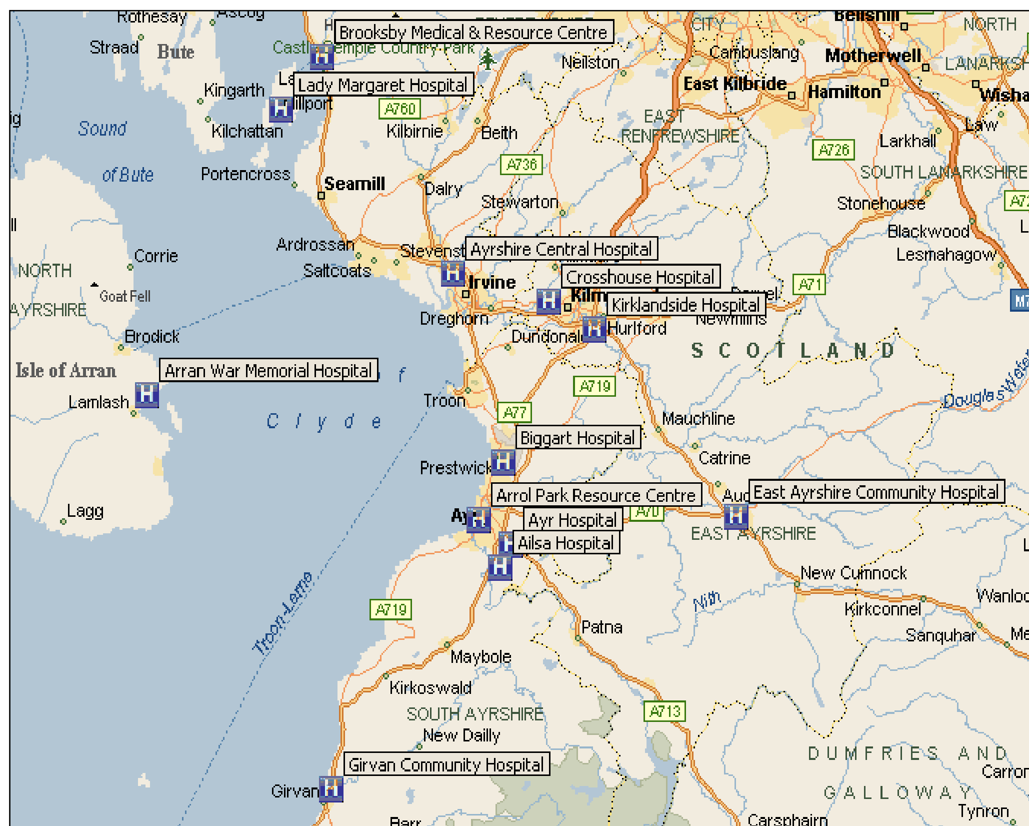
2.1 Overview

2.1.1 NHS Ayrshire and Arran covers an area of 2,500 square miles and serves a population of some 368,000, which is 7.3% of the population of Scotland. The majority of the population live in urban areas, of which Ayr, Kilmarnock and Irvine are the largest in the region.

2.1.2 The population varies from rural in the south, old coal mining areas in the east and industrial towns in the north. There are considerable health inequalities throughout Ayrshire and Arran – particularly in east and north Ayrshire, with a number of areas of high deprivation.

2.1.3 The Board provides a range of acute, community and primary care services from a variety of locations across Ayrshire and Arran. These are shown in the map below.

Figure 4: Location of health services in Ayrshire and Arran



2.2 NHS Ayrshire and Arran – purpose, values and commitment

2.2.1 In May 2013 NHS Ayrshire & Arran approved new purpose, values and commitment statements. These are set out within this section:

Figure 5: NHS Ayrshire & Arran - purpose

"Working together to achieve the healthiest life possible for everyone in Ayrshire and Arran"

2.2.2 The values established are, "caring, safe and respectful" further details are set out in the table below.

Figure 6: NHS Ayrshire & Arran Values

Caring, Safe, Respectful	▪ I will show concern for others and care about the health, safety, and wellbeing of everyone I come into contact with. ▪ I will do my job well, striving to learn and do things better, while taking responsibility for the quality, safety, and effectiveness of my actions. ▪ I will see everyone as an individual, be open, approachable, and treat everyone with dignity and respect.

2.2.3 The commitments are set out in the table below.

Figure 7: NHS Ayrshire & Arran commitments

Commitments	Detail
To our service users and communities	We will work together with you and your family to: ▪ Promote and improve your health ▪ Improve your safety, outcomes and quality of experience while in our care ▪ Live up to our customer care commitments
To our workforce	We will work together to create an open, fair and just culture where: ▪ We are all valued, respected and developed to be our best ▪ We are all informed, involved, listened to and treated fairly and consistently ▪ We are all safe and are supported to improve our health and wellbeing

Commitments	Detail
To our partners	We will work together with partners to: ▪ Improve health, prevent disease and reduce inequalities ▪ Join up our service delivery to improve outcomes ▪ Make best use of our resources

2.3 Conclusion

2.3.1 This section has provided an overview of NHS Ayrshire and Arran in terms of:

- Healthcare provision
- Purpose, commitments and values

3 STRATEGIC CONTEXT

3.1 Overview

3.1.1 The Strategic context outlined at OBC remains valid with the key national priorities outlined within: "2020 Vision" (September 2011), "Quality Strategy" (May 2010) and "Reshaping Care for Older People" (2011).

3.1.2 The proposals set out within this FBC are presented within the context of the Board's wider proposals for improving the management and delivery of unscheduled care across NHS Ayrshire and Arran. Further details are provided in the following sections.

3.2 Emergency Care Quality Improvement Programme (ECQIP)

3.2.1 This was established in August 2012 in response to the increasing demands on ED services with the aim to improve patient experience and to improve performance in the 4 hours access standard as the key outcome measure.

3.2.2 The programme was planned around the patient journey and divided into 5 main streams:

- Staff engagement
- Demand
- New ways of working
- Discharge management
- Measurement framework

3.2.3 The programme of work is aligned with the recommendations from the Scottish Government Unscheduled Care Expert Group (UCEG) including the broad quality issues of right time, right place, right care. The 5 strategic themes are illustrated below:

- Making the Community the Right Place (Right Place, Right Care)
- Developing the Primary Care Response (Right Place, Right Time)
- Flow and Acute Hospital (Right time)
- Promoting Senior Decision Making (Right Care, Right Time)
- Assuring Effective and Safe Care 24/7 at the Hospital Front Door

3.2.4 There are a total of 28 projects within the programme that have been developed and are at various stages of implementation, reporting and measurement.

3.2.5 A number of the projects specifically support the redevelopments of front door services including:

- Improvements to the acute medicine model and senior decision making at both Ayr and Crosshouse sites
- Development of further ambulatory care pathways at both Ayr and Crosshouse sites
- Workforce Planning Group – development of workforce solutions to deliver integrated multi-disciplinary care pathways within the CAUs

3.3 Local Unscheduled Care Action Plan (LUCAP)

3.3.1 The Scottish Government Health and Social Care Directorates requested that all Health Boards submit a 3 year LUCAP by 30th June 2013 (with quarterly updates thereafter as appropriate) to deal with the challenges of meeting increasing demand on NHS Scotland Emergency Departments by delivering more integrated care across the whole unscheduled care pathway, including alternative pathways to hospital attendance and admissions.

3.3.2 The LUCAP is a timely stocktake of where NHS Ayrshire and Arran is with regard to unscheduled care and a reference point for future plans, developments and actions that will deliver a better quality unscheduled care for people of Ayrshire and Arran with an improvement in the 4 hours standard. The whole system approach across the five strategic themes is comprehensive and aimed at achieving a system balance. The Board's goal is to provide sufficient resources that are well organised and targeted in order that appropriate care is provided by the most appropriate staff with the right skill and aptitudes within the best setting, whilst making sure that all aspects of the system are complementary and supportive

3.3.3 The fundamental principles behind the LUCAP are directly related to the vision set out in our Building for Better Care Programme that sees a new and expanded ED at University Hospital Ayr and two new Combined Assessment Units, one on each main acute site, at the heart of a modern, integrated unscheduled care system.

3.3.4 As well as identifying a range of projects and improvements, the LUCAP sets out investment proposals. These include funding for additional clinical and non clinical support staff to deliver the new model of care. Finally the plan includes a number of key performance indicators which will be used to track progress.

3.4 Health & Social Care Integration

3.4.1 Since the formal publication of the Public Bodies (Joint Working) (Scotland) Bill in May 2013 NHS Ayrshire and Arran and East, North and South Ayrshire Councils have agreed and approved their joint approach to integration in the creation of a Health and Social Care Partnership in each of the three local authority areas.

3.4.2 The aim of the partnerships is to improve the quality of health and social care services in each area, and to enhance the experience of patients and service users. This will be done by developing a culture which is about giving people much more choice and control, so that they can live safe, healthy lives in the community.

3.4.3 Leadership arrangements are being put in place with the appointment of a Director of Health and Social Care within each partnership, who will report jointly to the Chief Executive of NHS Ayrshire & Arran and the Chief Executive of the council.

3.4.4 The health board and councils are already discussing how the partnerships will work in practice. The initial priority is to integrate services to improve outcomes for older people. Planning is likely to cover:

- "traditional" primary care and community services – for example, district nursing;
- services based in community facilities – for example, community hospitals;
- specialist services – for example, mental health and learning disabilities; and
- alignment of allied health professions and children's services.

3.5 Reshaping Care for Older People – Ten Year Vision for Joint Services

3.5.1 Ayrshire and Arran's Reshaping Care for Older people – Ten Year Vision for Joint Services, which was developed in partnership with NHS A&A, North, South and East Ayrshire Councils, the third and independent sectors and local older people, sets out the following high level vision, "*Older People in Ayrshire and Arran enjoy full and positive lives within their own communities*."

3.5.2 In relation to hospital services, the vision is that there will be more comprehensive assessment at the front door of the hospital and consideration of safe alternatives to admission including extra support and care at home if required, or a brief spell in an alternative care setting. In addition the older person will spend less time in hospital, with closer links between hospital and community services to ensure safe effective discharge arrangements. '

3.5.3 A joint Older People's Needs Assessment was carried out to provide a comprehensive overview of the issues relating to the demographic change and issues associated with the Ayrshire & Arran's ageing population. This highlighted key factors in relation to:

- Demographic change - e.g. one older person for every 2 working people
- Life circumstances – given increase in "solo living" services and activities focusing on overcoming social isolation and developing personal support mechanisms will become increasingly important for older people
- Lifestyle factors – e.g. 'Future' older people, have not tended to adopt healthy lifestyles
- Health status – rising trend in long term conditions with diagnosis earlier and patients managed better for longer
- Use of health and social care services – e.g. Around 1 in 50 emergency admission patients have had three or more previous emergency admissions
- Equity and healthy ageing - those most in need of care and services are least likely to access them

3.5.4 In response to the needs highlighted a range of changes to services have been planned around the following themes:

- Preventative and anticipatory care e.g. an increasing proportion of older people with high level needs cared for at home in relation to the proportion in long stay hospitals or care homes.
- Sustaining independence e.g. best use is made of Telehealth and Telecare to support people within their homes
- Effective care at times of transition e.g. home care services have a 're-enablement' focus which means encouraging confidence and independence for people who have been ill or injured
- Care homes e.g. a change in the way that care home places are used, with a reduction in long stay care home places and an increase in the number of beds used for respite and step up/step down care; and clinicians are available to offer support to staff and residents in Care Homes
- Hospitals e.g. reduced 'automatic admission' to hospital for older people who attend ED as there are safe alternatives at home

3.5.5 The plan makes specific reference to BfBC supporting the vision through supporting rapid access and treatment.

3.6 Conclusion

3.6.1 Following the submission of the OBC in February 2013 there have been a number of government led programmes focusing on unscheduled care. The Scottish Government has initiated a range of policy initiatives which will change the way healthcare services are provided in Scotland, making them more responsive to patients' needs.

3.6.2 NHS Ayrshire and Arran have embraced the spirit of national policy within its local development plans in shaping the way healthcare services will be provided in the future. Building for Better Care is at the heart of these proposals and represents a key part of the overall system for delivering high quality care to the local population.

3.6.3 The Board recognises the financial challenges it will face in the future and the need to ensure that the proposals can be delivered in an affordable manner whilst still delivering the key objectives of the programme.

4 BUSINESS CASE OBJECTIVES & SCOPE

4.1 Overview

4.1.1 This section of the FBC sets out the business case objectives and the scope of the project

4.1.2 The analysis contained within this section includes:

- Confirmation of the key Investment Objectives
- Confirmation of the scope of the project
- Summary of existing arrangements
- The case for change

4.2 Key Investment Objectives

4.2.1 The key investment objectives relate to the BfBC programme and therefore both OBC phases 1 and 2. They remain valid for the FBC and are shown below.

Figure 8: Key investment objectives

	Key Investment Objective
1	**Clinical Safe Effectiveness & Sustainability**: to ensure the hospital provides services that are clinically safe, effective and sustainable over the medium to long term
2	**Physical Environment:** to facilitate the provision of services in a high quality environment which is 'fit for purpose' for staff, patients and visitors.
3	**Capacity & Demand:** to ensure front door services in Ayrshire and Arran can respond to the demand from the local population
4	**Delivering models of care in line with the best practice:** to ensure that secondary care services facilitate joint planning in the development of patient centred services, in a primary and community setting.
5	**Access:** to maximise access to appropriate front door hospital services for the local population in the short, medium and long term
6	**Performance & Efficiency:** to ensure front door services are developed in such a way as to maximise performance and improve efficiency.
7	Recruitment and retention of staff and students: to ensure the Board is able to recruit and retain high quality skilled staff to support the delivery of high quality patient care.

4.2.2 As per SCIM guidance, the Investment Objectives have been reviewed by the Business Case Team to ensure they remain valid and are SMART (Specific Measurable, Achievable, Realistic and Time-constrained), giving baseline data against which the planned improvements can be assessed (**Appendix B1)**.

4.3 Project Scope

4.3.1 The proposed scope of services contained in this FBC, representing Phases 1 and 2 of the Building for Better Care Programme including:

4.3.2 For **Ayr Hospital**:

- The redevelopment of the Emergency Department to meet the latest Scottish Health Planning Note 22 standards with the provision of an appropriate configuration of Resuscitation Bays, High Care Areas, and cubicles, which is fully integrated with Minor Injury and NHS Ayrshire Doctors On Call (ADOC) services. These proposals were outlined within phase 1 BfBC approved OBC.
- The introduction of Combined Medical and Surgical Assessment Unit in line with the Royal College of Physicians, 2004, requirement that all hospitals should have an Acute Medical Unit to deliver safe and effective emergency medical care. This proposal was outlined within phase 2 BfBC approved Addendum.

4.3.3 For **Crosshouse Hospital**:

- The introduction of Combined Medical and Surgical Assessment Unit in line with the Royal College of Physicians, 2004, requirement that all hospitals should have an Acute Medical Unit to deliver safe and effective emergency medical care. These proposals were outlined within phase 1 BfBC approved OBC.

4.4 Summary of Existing Arrangements

4.4.1 The existing arrangements for the services within scope were fully detailed within the OBC; a summary is set out below.

Ayr Hospital

4.4.2 Ayr Hospital provides an emergency service for a population of 142,000 people. Emergency admissions are received and treated across a range of specialties including general medicine, general surgery, orthopaedic trauma as well as area services for vascular surgery, urology and ophthalmology.

4.4.3 In addition to the ED to which the majority of emergency admissions present, the emergency assessment and treatment facilities include the following:

- **Medical Admissions Unit (MAU)** – located within Station 7 on the 2nd floor of Ayr hospital. All general medicine admissions are admitted through MAU from GP, ED, Outpatient Clinics and hospital transfer. The aim is to assess the patient, initiate treatment, and to decide upon whether to admit or discharge the patient.
- **Medical Short Stay Area** – located within station 6 on the 2nd floor of Ayr hospital. The area is clinically led by the acute Physician, supported by specialty doctors and junior doctors in training. Patients are indentified by the Physician of the day at the post take review ward round before being moved to the Short Stay area. The Short Stay area is for patients with acute medical presentations thought suitable for potential discharge within 72 hours, with the aim of next day discharge, if possible. Patients who cannot be managed within these timescales are either integrated into the ward itself or transferred to an appropriate specialist ward

- **Observation Area** – located within Emergency Department, the ward mainly cares for patients with head injuries (often associated with alcohol misuse), post fracture sedation patients and frail elderly patients who have not sustained a fracture, but are immobile. In addition to the ED led work described above the Observation Ward provides care to patients awaiting transfer to the MAU as well as accommodating medical boarders from the medical wards who remain under the care of a physician.
- **Surgical Receiving Unit –** Located within station 3 on the 2nd floor of Ayr hospital. Some patients are admitted directly to the SRU from ED, clinic or following GP request. There are some patients that present to SRU that can be classified as short-stay patients. These patients are managed in the assessment room, where rapid assessment, diagnosis, treatment and discharge takes place to avoid full admission to the hospital

4.4.4 A diagrammatic of the current location of the assessment facilities is shown within **Appendix B2**.

4.4.5 Emergency orthopaedic admissions are managed within the Orthopaedic Trauma Unit.

4.4.6 The current service configuration is summarised by Clinical Area detailed in the table below.

Figure 9: Current service configuration at Ayr Hospital

Facility	Clinical Area	Total Spaces	Assessment / Treatment Rooms
ED	Resuscitation	2	
	Major	8	
	Minor	5	1 Eye room
	Paediatrics	3	
	Triage	1	
Observation Area	Observation Area	6	
Assessment	Medical Assessment	18	
	Medical Short Stay	6	
	Surgical Receiving *	24	1

**Note that the Combined Assessment Unit will only replace the short stay component of emergency surgical admissions and some trauma admissions, and thus will not replace these wards in their entirety. Total replacement of the Medical Assessment Unit, Medical Short Stay Area and the Observation Area is anticipated. Note activity going through current 6 observation beds is combined with projections for CAU*

Crosshouse Hospital

4.4.7 Crosshouse Hospital provides an emergency service for a population of 225,000 people. Emergency admissions are received and treated across a range of specialties including general medicine, general surgery, orthopaedic trauma, head and neck, gynaecology, paediatrics and psychiatry.

4.4.8 In addition to the ED, to which the majority of emergency admissions present, the emergency assessment and treatment facilities include the following:

- **Clinical Decisions Unit (CDU)** – located adjacent to the Emergency Department and led by ED consultants. Provides rapid access to emergency assessment and efficient diagnosis using fast track diagnostic techniques and appropriate intervention following evidence based care pathways; this facilitates clinical decision making, treatment intervention and follow on care.
- **Medical Admissions Unit (MAU)** – located within ward 3E on 3rd floor of Crosshouse hospital. The unit aims to assess patients; initiate treatment then either admit to downstream beds or discharge the patient from hospital. A wide range of patients are treated from all medical specialties with most general medicine admissions admitted through the MAU. The most common routes of entry are via GP referral, emergency department, outpatient clinics, dialysis unit, and hospital transfer.
- **Surgical Receiving Unit (SRU)** – located within ward 4A on 4th floor of Crosshouse hospital. Surgical emergency admissions may be admitted following self presentation at the ED, admitted directly from clinic, or following GP request. GP admissions are directed straight to the Surgical Receiving Unit and do not require assessment in the ED.
- **Medical Short Stay Ward (MSSW)** – is part of ward 3D located on 3rd floor of Crosshouse hospital. The ward aims to provide care for patients who require some form of medical treatment expected to last no longer than 72 hours. Patients are identified as suitable for the MSSW following initial assessment in the MAU and should be transferred to the MSSW with a treatment plan in place. Patients in the MSSW are normally under the care of the specialty doctor in acute medicine, with the consultant in acute medicine having overseeing senior responsibility.

4.4.9 A diagrammatic of the current location of the assessment facilities is shown within **Appendix B2**.

4.4.10 Emergency orthopaedic admissions are managed within the Orthopaedic Trauma Unit.

4.4.11 The current capacity configuration within emergency assessment and treatment in Crosshouse Hospital is set out in the table below.

Figure 10: Current assessment configuration at Crosshouse

Clinical area	Total spaces	Assessment / Treatment Rooms	Other
Clinical Decisions Unit *	7	-	Ambulatory Care Area
Medical Assessment Unit	25	-	
Medical Short Stay Ward	12	-	-
Surgical Receiving Unit **	29	1	-

** 7 physical spaces but only 6 funded*

*** Note that the new Combined Assessment Unit will only replace the short stay component of emergency surgical admissions, and thus will not replace these wards in their entirety. Total replacement of the Clinical Decisions Unit, Medical Assessment Unit and Medical Short Stay Ward is anticipated.*

4.5 Issues associated with existing arrangements

4.5.1 The existing arrangements outlined in the previous section support emergency admissions which operate 24 hours a day, 365 days a year. Whilst staff work to maximise the effectiveness of the current services the current set up has a number of significant limitations which impact on the overall process of patient assessment and treatment. These are set out below.

Fragmentation

4.5.2 The current service operates as a series of individual departments, where patients are passed from team to team. In addition to the risk that this introduces by way of multiple hand-offs, this also serves to limit the benefit of continuity of care.

4.5.3 A number of patients present with multiple co-morbidity, or complex clinical presentation which would benefit from close multi-specialty working, which is not provided by current working practices.

4.5.4 In terms of the Ayr Emergency Department there is a need to co-locate front door services including ED, minor injuries and GP out of hours (ADOC).

Physical Location

4.5.5 The issues arising from a fragmented assessment service can, in part, be attributed to the physical location of some of the facilities.

4.5.6 Specifically at each site there are risks including:

- **Ayr** - current ED and Medical Imaging are in close proximity on the ground floor. These are, however, remote from MAU and SRU, which are on the 2nd floor. Outwith normal working hours, laboratory specimens require to be transported to the main laboratory at Crosshouse Hospital for processing, which can impact on the delivery of timely care. There is a need to improve transit times from Ayr ED to assessment. Currently this is provided by nurse escorts which compromises staffing levels and results in delays in transfer.

- **Crosshouse** - good proximity between the ED and medical imaging and the laboratories. The MAU, SRU and MSSW, however are all located some distance from these services, and from one another. This can limit the opportunity for case discussion by senior colleagues which extends beyond the Emergency Department and includes decision making for medical imaging and laboratory testing

Staffing

4.5.7 Many services, with the exception of the ED, are staffed from 9am to 5pm, with on-call provision outside of these hours. This does not align with the 24-hour demand for assessment services and can lead to bottlenecks, increasing length of stay and possibly increasing admissions e.g. access to plain film imaging, laboratory services

4.5.8 Increasing sub-specialisation is also causing further limitation to the provision of services, particularly in the out of hours and weekend periods. This can lead to some services only being available at certain times, dependent on the member of staff rostered for that day.

Facilities

4.5.9 There are a number of constraints arising from the current facilities associated with the ED and emergency assessment and care. These are summarised below:

- **Ayr ED** – general lack of space within department especially in relation to the number of resuscitation rooms. Better facilities are required to stream minor illness/minor injury activity. There is a requirement to provide separate paediatric facilities which is not possible within the current layout.
- **Assessment facilities at Ayr & Crosshouse** - Current assessment facilities within ward based accommodation fails to meet current standards for single room accommodation. This creates infection control issues, as well as privacy and dignity of patient issues as the nature of the service means that there needs to be fluidity between male and female single-sex accommodation. The limited assessment and treatment space leads to a majority of cases being admitted regardless of condition. This leads to an 'admit to decide' approach. Provision of assessment rooms and 'chairs' will allow the ability to alter this approach to one of 'decide to admit'.

Conflicting Priorities

4.5.10 Some services have conflicting priorities for supporting the competing demands of both emergency and elective caseload. This is particularly the case with medical imaging where the current facilities do not support separate streaming of this activity. This can result in delays to a patient's overall pathway of assessment and treatment.

4.5.11 In summary the current arrangements for emergency assessment do not provide for a patient centred approach arising from the fragmentation and physical separation of the existing services. This leads to delays in the patient journey and in duplication of staffing resource. In addition the existing facilities do not meet current standards, in particular, they fail to provide an appropriate level of single room accommodation which impacts on patient privacy and dignity and also poses a control of infection risk.

4.6 The Case for Change

4.6.1 The case for change outlined within the OBC remains valid and is based on six key drivers taken from Building for Better Care outlined below:

Managing demand for unscheduled care

4.6.2 The increasing demand for unscheduled care continues to outstrip projected demographic change, placing increased pressure on front door services at both Ayr and Crosshouse. In 2012/13, NHS Ayrshire and Arran had an ED attendance rate of 2,641 per 100,000 population compared to a national average of 2,153, which is significantly higher than comparable Boards such as NHS Fife and NHS Forth Valley who reported respective attendance rates of 1,403 and 1,668 per 100,000 population.

4.6.3 Further to this, there is a marked difference in the percentage of patients admitted, 38.6% compared with a national rate of 25.2% and NHS Fife and NHS Forth Valley report much lower admission rates of 19.2% and 20.2% respectively.

4.6.4 This latter trend is illustrative of the 'admit to decide' approach as opposed to 'decide to admit' where much greater emphasis is placed on providing assessment and treatment at the front door thus avoiding the need for admission to a specialty bed.

4.6.5 The signs of escalating pressure in the system were recognised in Winter 2011/12 and in response to consistently not meeting the 4 hour standard the Board established a quality improvement programme to address the problem. The Emergency Care Quality Improvement Programme (ECQIP) established in August 2012 sought to ensure that unscheduled care was safe, effective and person centred, with an improvement in performance in the 4 hour access standard as the key outcome measure. The improvement descriptions and actions required to develop and sustain services are set out in the Board's Local Unscheduled Care Action Plan (2013) which brings forward developments to deliver the model of care described in this document which will be realised by the development of the new CAUs

4.6.6 The main conclusion is change is required in the way in which patients are assessed in the acute phase of their journey, with a distinct shift away from traditional methods of assessment and from over reliance on outdated batch based 'post take ward round' systems of medical assessment that, whilst once fit for purpose, are no longer effective. In addition, services that do not span 7 days of the week are now obstacles to patient flow and the delivery of consistent quality care.

4.6.7 The shift from traditional models of assessment is part of the Board's longer term Building for Better Care (BfBC) Programme that sets out a new vision for Unscheduled Care that is based on these new models of acute assessment and pathway driven care alongside direct admission to assessment areas and access to early senior decision making.

Responding to and managing future demographic change:

4.6.8 The population in Ayrshire and Arran is changing; a slight reduction in the size of the overall population is expected between 2013 and 2035 (2.6%). However an analysis of the structure of the population suggests a growing ageing population with a 15.4% reduction in the working age population (those aged 16- 65). Overall the over 65 age group is expected to make up 29.7% of the population by 2035 compared to 20.7% currently. This data reflects the general trends in dependency within Scotland.

4.6.9 The number of dependents per 100 population is projected to increase by 13.4% by 2035, of which the most significant increase is in the number of dependent pensioners, which will increase by 28.7%.

4.6.10 As well as an increase in the older population, the proportion of elderly people living alone is likely to increase dramatically by 2035. It is expected that 68% of the over 75 population will be living alone.

4.6.11 These population changes and living conditions have considerable importance when planning future services. To utilise health resources efficiently trends in the level of future patient demand for services need to be considered.

Epidemiology

4.6.12 The changes in population described above are already, and will continue to, impact on the pattern of illness and disease within Ayrshire and Arran. For health services to be effective there should be a balance of care between the prevention, diagnosis and treatment of illness and disease.

4.6.13 It is widely accepted that, with an increasingly elderly population, the challenge for the 21st century will be the management of chronic disease. In Scotland, findings from the 2011 Census highlighted that 54% of over 65s reported an illness or condition that limits the activities of daily living.

4.6.14 This figure increased to 75% in the over 85s, thereby reinforcing the link between an increasingly elderly population and the burden of chronic disease.

4.6.15 People living with a long term condition are acknowledged to consume a high proportion of available healthcare resources e.g. estimated to account for 80% of all GP consultations, are twice as likely to be admitted to hospital, stay in hospital disproportionately longer and account for 60% of hospital bed days

4.6.16 Whilst the Board can expect an increasing demand for healthcare from an ageing population, its effects are being exacerbated by the fact that our older people are on average less healthy than the average across Scotland. This is partially offset by the fact that generally, life expectancy in Ayrshire and Arran is improving, although at a slower rate than the Scottish average.

Provision of person centred, safe and effective care

4.6.17 The NHS Scotland Quality Strategy makes a specific reference to the need to respect individual needs and values and which demonstrate compassion, continuity, and clear communication and shared decision-making.

4.6.18 Furthermore it stresses that there be no avoidable injury or harm to people from healthcare they receive, and an appropriate, clean and safe environment will be provided for the delivery of healthcare services at all times.

4.6.19 Additionally it emphasises that the most appropriate treatments, interventions, support and services will be provided at the right time to everyone who will benefit, and wasteful or harmful variation will be eradicated.

4.6.20 As outlined within the OBC the current arrangements in place at the front door of both Ayr and Crosshouse Hospitals present significant barriers to ensuring that these requirements are met. This significantly impacts on the patient experience, causes delays in treatment and resources to be used ineffectively.

Workforce

4.6.21 The overall vision for the workforce is to ensure the right staff are available in the right place with the right skills and competences to deliver high quality care and services.

4.6.22 In order to realise this vision the workforce needs to be aligned with both service and financial plans to ensure affordability and sustainability over the long term.

4.6.23 The recruitment and retention of medical staff at consultant and specialty doctor grades across a number of key specialties – emergency medicine, radiology and medical specialties – poses a challenge to NHS Ayrshire & Arran especially as there are a number of posts that have been vacant for some time. This has necessitated the use of locums to ensure service continuity however this remains a challenge.

4.6.24 The redesign and configuration of services emerging from Building for Better Care is anticipated to provide the leverage of ensuring long term sustainability of services provided via reviewing roles, responsibilities and skill mix. There will be the potential to develop new multi specialty team approaches and develop advanced practice roles.

4.6.25 Underpinning the successful implementation of the proposed front door improvements will be a requirement to ensure that there is access to adequate levels of senior decision making input. This will ensure that timely decisions are made in relation to assessment and treatment and that this care is delivered in the most appropriate setting.

Current configuration and nature of front door services

4.6.26 The configuration and nature of front door services demonstrates a number of problems which mean that services are not currently delivered optimally. These include:

- **Integration of the ED with other services –** the current front door arrangements do not support integrated approaches with partners in primary care and social services which are essential to safe and effective care of older people. There are opportunities to improve interface and coordination of care both in hours and out of hours.
- **Admission rates** - The high rate of admission through ED is part of the cause of increasing workloads on existing assessment and specialty beds
- **Operational challenges** – there are particular challenges dealing with peaks and troughs in demand through the week, with long transit times, especially to MAU and the requirement for nurse escorts compromising staffing levels in the ED
- **Physical issues** – the co-location of the different elements of clinical services is not optimal and there are capacity constraints, particularly in Ayr ED

4.7 Conclusion

4.7.1 From the analysis it is evident that the existing model of acute care is experiencing difficulty coping with the demands placed on it by the current population. The changes in the structure of that population, combined with the likely future health profile, are likely to result in increased demand for healthcare. It is therefore unlikely that, in its current form, the model of healthcare provision in Ayrshire and Arran could continue to effectively meet the needs of the local population over the next 10 – 15 years.

4.7.2 The analysis of the drivers for change shows that:

- Existing acute services are already under pressure from high volumes of patients admitted into acute care through the EDs
- There will be significant pressure on healthcare services from changes in both demography and epidemiology
- There are a number of structural issues, including medical staffing that need to be addressed
- The existing configuration of front door facilities significantly compromises the ability to deliver effective high quality care in a manner which makes best use of the available resources

4.7.3 The implications of not redesigning front door services are that front door services will come under increasing strain in the coming years, particularly from:

- Demographic changes that will continue to increase the volume and acuity of patients presenting at EDs with no corresponding change to manage this increase in the volume and severity of caseload
- Pressure on acute services will also continue to increase because the default route for unplanned care is ED, followed by admission in a higher proportion of cases when compared with other health systems
- Operational challenges, particularly around managing peaks in demand will not be addressed
- Patients will not receive the highest quality of care possible as the assessment and admission process is not optimal

5 FUTURE SERVICE MODEL

5.1 Overview

5.1.1 This section of the FBC reconfirms the Model of Care developed as part of the OBC and outlines the results from the updated bed modelling exercise.

5.2 Proposed Model of Care

5.2.1 The ED department will form the main ‘front door’ to the hospital in terms of emergency and unscheduled care. The objective of the unit will be to ensure that all patients presenting, are assessed by Emergency Medicine specialty doctors and trainees, Emergency Nurse Practitioners and other ED nursing staff and, within a maximum of 4 hours, have undergone all investigations necessary to determine an appropriate treatment plan which will be initiated within the ED department.

5.2.2 The key planning assumptions for the proposed CAU and how it would link to ED include the following:

- Self referred medical and surgical patients will be directed through ED where they will be triaged and assessed within four hours. Patients needing treatment likely to take longer than four hours will be admitted to the CAU
- GP referred medical and surgical patients will be directly admitted to the CAU
- The ambulatory emergency care stream will be directed for admission and treatment within the CAU

5.2.3 In summary the key differences in the proposed model from the current arrangements are highlighted below.

- The CAU becomes the focal point for managing the initial assessment, treatment and management of unscheduled care
- Medical and surgical assessment is integrated into a single combined function located at the front door adjacent to ED, imaging and diagnostics
- Ambulatory emergency care is provided as an integral part of the CAU which aims to maximise the number of patients who can be treated on an ambulatory basis
- Patients are managed by a dedicated physician team, supported by other disciplines including input from health and social care staff to facilitate integrated decision making and ensure continuity of care

5.3 Bed modelling exercise

5.3.1 In establishing the future service requirements a number of dependencies and assumptions have been applied, which include:

- A baseline year of 2012 using admitted care patient data extracted from the Board’s patient administration system.
- An agreed range of specialties on admission that would be initially managed within the CAU as well as pathways that would bypass the front door (e.g. Stroke, MI etc).

- A tailored directory of conditions which can be effectively managed on an ambulatory care basis at the front door. Developing more ambulatory care pathways within the new proposed CAU will shift overnight emergency cases to same day discharges from the CAU. NHS A&A have reviewed the National Institute Directory of Ambulatory Care and set targets for same day discharges for a range of conditions
- The CAU would provide continuity of care for expected 24 to 48 hour lengths of stay with early decisions (within 24 hours) made on patients requiring specialty based care. Ambulatory patients would expect treatment to last less than 12 hours on average.
- Applied occupancy rates which allow the hospitals to deal with peaks in demand at the 95th percentile.
- Changes in future demand for healthcare aligned with demographic growth projected to 2016. No assumptions have been made regarding care delivered outwith the acute hospital setting which may reduce the demand placed on unscheduled care services.
- Benchmarking of specialty based care using the 75th percentile performance level of the agreed peer group comparators. Improvement in non-elective length of stay (LoS). NHS A&A have compared the overall LoS with the upper quartile performance of a peer group using the reported Health Resource Group (HRG).

5.4 Future capacity requirements

Ayr Hospital

5.4.1 The tables below show the modelled capacity requirements for Ayr to 2016 compared with the current configuration.

Figure 11: Summary of Ayr ED requirements

Room function	Current	Projected 2016 improved flows	Difference
Resuscitation	2	4	+2
Major & Minor	17	14	-3
Triage	1	1	0
Total	**20**	**19**	**-1**

5.4.2 The projections have been updated from the OBC (Phase 1) to develop an integrated configuration for both Ayr Hospital ED and CAU (phase 2). Activity for observation beds now factored in CAU rather than the ED to comply with 4 hour quality target and facilitate patient flow.

5.4.3 The projections to 2016 factor in population growth and the impact of GP referrals bypassing the ED to CAU. It does not factor in any impact of reducing Emergency Department attendances through the Board's Local Unscheduled Care Action Plan initiatives delivering alternative pathways.

Figure 12: Summary of Ayr capacity requirements

Bed Pool	Current	2016 projection	Difference
MAU	18	-	-18
Observation Area	6	-	-6
Medical Short Stay	6	-	-6
Surgical Receiving Unit	9	-	-9
New CAU trolleys	-	8	+8
New CAU beds	-	35*	+35
Sub-total Front Door**	**39**	**43****	**+4**
Medical and Care of the Elderly	126	137	+11
Surgical	86	81	-5
Orthopaedics	34	30	-4
Sub-total Inpatient	**246**	**248**	**+2**

**35 spaces make up from 29 CAU beds and 6 continuous assessment cubicles (one of which provides chair spaces)*

***In addition to the beds highlighted above there is provision for 2 initial assessment bays and 2 outpatient rooms*

5.4.4 The analysis shows that there is a requirement to expand the provision of assessment capacity by 4 beds / trolleys within the new CAU over what is provided within the current arrangements. This is contingent on both implementing the new model of care and ambulatory care targets developed during this process being met.

5.4.5 The benchmarking analysis projected inpatient bed requirements of 248 compared with 246 currently; a slight increase of 2 beds. Whilst this is minimal it reflects:

- the bed numbers to operate at a lower level of occupancy (allowing for variations in demand and to eliminate boarding)
- projected increase in demand for unscheduled care based on demographic change alone.

5.4.6 The modelling of surgical beds assumes an increase in day case provision. As there are no additional costs for increased day case provision within this FBC no reductions in surgical beds has been assumed.

Crosshouse Hospital

5.4.7 The figure below shows the future capacity requirements for the proposed CAU and the required inpatient and day care bed capacity in alignment with the CAU and with LoS improvements targeted by NHS A&A.

Figure 13 : Summary of Crosshouse capacity requirements

Bed Pool	Current	2016 projection	Difference
CDU	7[1]	-	-7
MAU (3E)	25	-	-25
Medical Short Stay (3D)	12	-	-12
Surgical Receiving (part of 4A)	12	-	-12
CAU Trolleys	-	11	+11
CAU Beds	-	42*	+42
Sub-total Front Door	**56**	**53****	**-3**
ED / Medical	120	193	-17
CoE/Stroke	90		
Surgical	68	54	-14
Orthopaedic/Trauma	58	58	0
Gynaecology	20	20	0
Sub-total Inpatient	**356**	**325**	**-31**

** 42 spaces make up from 35 CAU beds and 7 continuous assessment cubicles (one of which provides chair spaces)*

***In addition to the beds highlighted above there is provision for 3 initial assessment bays and 2 outpatient rooms*

5.4.8 Whilst there appears to be a reduction of 3 spaces in terms of assessment capacity, the new CAU will operate under a very different model of care to the current assessment facilities. It should also be noted that there is enhancement to the provision of ambulatory care from 7 (CDU) to 11 trolleys within the new CAU.

5.4.9 The analysis shows that there is potential for an overall reduction of around 31 inpatient beds as a result of both improvements arising from the new model of care for the front door and of moving to benchmarked performance for specialty beds.

5.4.10 The modelling of surgical beds assumes an increase in day case provision as a means of securing the reduction in surgical inpatient beds. As there are no additional costs for increased day case provision within this FBC no reductions in surgical beds has been assumed.

[1] Note nursing budgets based on 6 spaces however physical space is for 7 spaces

5.5 Conclusion

5.5.1 This section summarises the proposed model of care for front door services along with the results of the bed modelling exercise which show the associated physical capacity required to support the service to be provided within the scope of the FBC.

6 WORKFORCE PLANNING

6.1 Overview

6.1.1 This section of the FBC describes the approach taken in relation to workforce planning and how the workforce requirements of the new clinical model were evaluated and modelled. Specifically the section sets out the methodology employed and the way in which all stakeholders were involved in the development of the workforce plan.

6.1.2 Consideration is given to how the new model will be introduced and how these changes will we managed in the lead up to the opening of the new facilities. The new model of care specifically centres on the new CAUs and the operational staffing of these units is the core feature of the workforce plan.

6.2 Developing the workforce plan

6.2.1 Using the revised Scottish Government Workforce Planning Guidance 6 step methodology (CEL 32, 2011) as a framework methodology the existing multi disciplinary Workforce Planning Group developed an outline workforce plan for the new model of care and the new way services will be provided.

6.2.2 To develop the models the existing Workforce Planning Group (details of representatives shown in **Appendix C1**) undertook three key practical sessions described below to fully explore the new model of care and its requirements in terms of staffing and skills. The three practical exercises were as follows with further details of each stage outlined below:

- A table top exercise
- CAU patient journey modelling and
- The relationship of workforce to activity through time

6.2.3 The new patient journeys associated with the proposed clinical model allowed the Workforce Planning Group to identify the service changes required and define the workforce requirements. In practice this involved working through each of the main patient pathways, identifying all of the actions and activities required along the way, whilst assessing how existing roles and responsibilities should change to support the new way of working; identifying any gaps in provision that result. The brief was to develop workforce models for medical, nursing and for support staff, both clinical and non clinical.

6.2.4 Further details are provided below.

Table Top Exercise

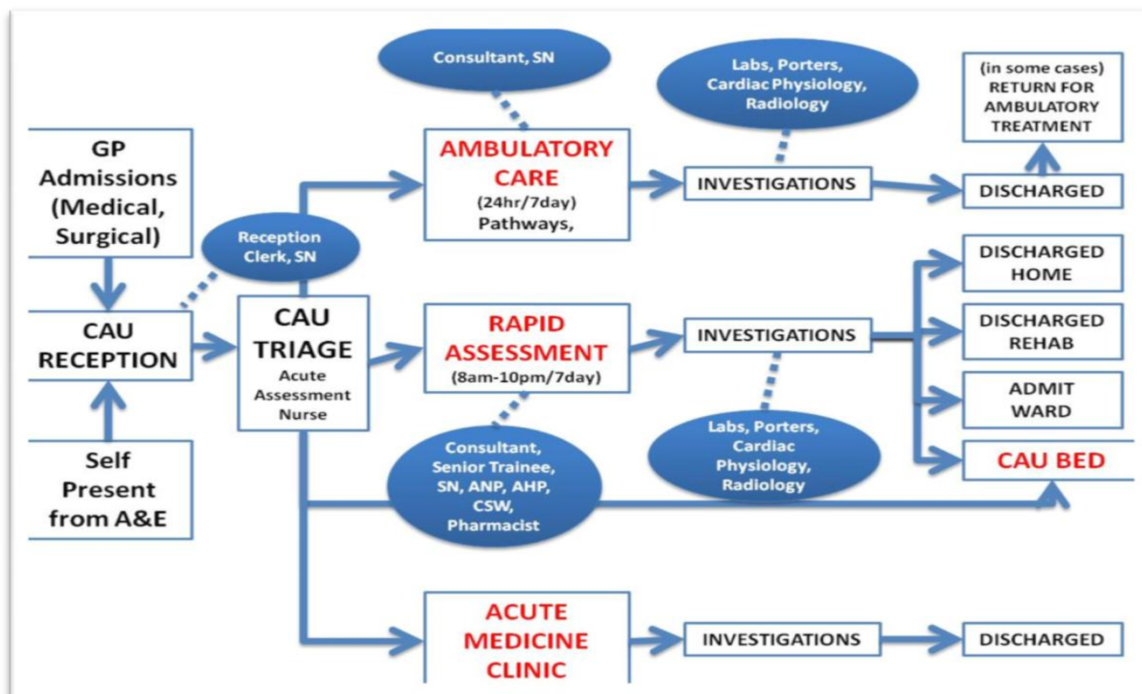
6.2.5 The table top exercise, involving more than thirty key stakeholders examined the function and layout of each area within CAU in relation to what could be envisaged as a normal working day. The different disciplines and functions represented were given the opportunity to put forward how they saw their staff functioning over the course of the notional working day, giving thought and consideration to the requirements of others. Importantly the exercise identified potential gaps in staff availability, areas of duplication and a range of issues that needed further consideration. These findings were summarised as a plan of action (shown in **Appendix C2**) to be addressed and considered within the workforce planning framework.

Patient Journeys through the CAU

6.2.6 As an output from the table top exercise, a document was drafted to describe the "patient journey through the CAU" (copy shown in **Appendix C3**). This document aimed to describe the various stages and activities occurring in the patient's journey, with a view to ensuring that all those involved shared the same vision.

6.2.7 Based on the above document a flow chart was produced to assist future discussions as shown below. This flow chart was then, through in depth discussion, used to map out the application of resources and determine where and when different staff and skills were required. In practice, the flow chart along with the output of the table top exercise, allowed the Workforce Planning Group to map out 'virtual patient' journeys and in doing so determine workforce requirements.

Figure 14: CAU Flow Chart



Timeline of anticipated activity

6.2.8 Activity data was analysed to describe the workflow of the new units in relation to patient presentations over the course of the typical working day and working week. (Further details provided in **Appendix C4**). The resultant activity distribution was then used to model specified workforce requirements in relation to demand with the goal of ensuring that appropriately skilled staff, in adequate numbers, would be available at required times.

6.2.9 The exercise was used to determine the workforce requirements for medical staff and advanced nurse practitioners (who will provide direct support to medical staffing), allowing gaps to be identified and highlighted for further consideration.

6.2.10 The three exercises described above along with linked work undertaken in regard to nursing provided sufficient information to outline approaches and planning considerations for the three main workforce groups i.e. medical staffing, nurse staffing and support staffing, both clinical and non clinical. The section below expands on these groupings

Nursing workforce

6.2.11 The Board's Associate Nurse Directors (ANDs) led the development of the nursing workforce plan focusing on the nursing requirements to safely staff the Combined Assessment Units. This reflected on both the new model of care and outputs from the bed modelling exercise in terms of size and configuration of the CAU and its implications for downstream specialty beds. This included consideration of:

- Current nurse to bed ratio within Acute Medical Admissions Unit (AMAU) and Clinical Decision Unit (CDU).
- Application of the Adult In-patient Tool for Acute Assessment areas
- Professional Judgment
- Impact of single room provision and geographical layout of the unit

6.2.12 Following exploration of each option the Associate Nurse Director's (ANDs) determined that application of a combination of all of these approaches was the only reliable way to review the workforce requirements thus ensuring that the ambitions embedded within the Quality Strategy have been fully considered.

6.2.13 A copy of the paper developed by the ANDs which sets out the methodology and results in more detail is shown in **Appendix C5**.

6.2.14 The planning was underpinned by the ethos that redesign of the current front door services would provide an opportunity for workforce planning and development across two distinct elements; Combined Assessment Unit incorporating ambulatory care and downstream wards. These are considered individually and are based on the agreed outline plans and current bed modelling outputs (as outlined in section 5).

6.2.15 A number of assumptions were made including:

- Significant reduction in patients admitted to in-patient beds based on assessment in CAU and definitive decision to discharge/admit
- Reduction in overall length of stay
- Maximisation of all alternatives to admission through developments within community services linked to the investment via the change fund
- Primary Care team fully engaged and committed to reducing hospital admissions
- Pathway development will be considerably enhanced
- Management of long term conditions will be improved with anticipatory care plans in place where appropriate. Patients will be better supported in self management.

6.2.16 The resultant impact on nursing staff is outlined within the economic appraisal (section 9).

Medical Workforce

6.2.17 The Medical Workforce planning exercise focused less on bed numbers and more on overall workload, time of presentation and the new aspirations of early senior decision making, continuous assessment and protocol driven pathways together with 7 day and extended day working. Activity flows were considered carefully and a tiered system of medical cover produced in response to the demands at various times along with the need to support ambulatory care.

6.2.18 Recruitment and greater numbers of Acute Medicine Consultants are the key changes to medical workforce together with support for this key group in terms of Acute Nurse Practitioners (ANPs) and middle grade staff doctors. This change is entirely consistent with original 2008 plans to expand Acute Medicine and now supported through the Board's Local Unscheduled Care Action Plan (LUCAP) and the investments planned as part of the Board's Emergency Care Quality Improvement Programme (ECQIP).

6.2.19 These parallel developments whilst linked to the proposed model of care are out with the scope of this FBC.

Clinical and non-clinical support staff workforce

6.2.20 The new clinical model and its new functions require different support, both clinical and non clinical. The emphasis on rapid, continuous assessment supported by senior decision making requires the clinical support functions to be responsive and flexible. It is therefore recognised that access to sufficiently skilled senior Allied Health Professionals and others will be required across core activity times to support the work of the CAUs and likewise that the rapid assessment and turnover of patients dictates a new approach in terms of housekeeping, domestic services and transport.

6.2.21 In line with the significant shift in activity from elsewhere in the hospital to the CAUs and the change in emphasis outlined above it is assumed that these functions, will in the main, be provided from within existing resources that these resources will transfer upon opening.

6.2.22 The ability to quickly diagnose, intervene and discharge is a key determinant in this transition with limited but focussed and decisive activity required within the planned 48hour maximum CAU stay, with many patients being signposted to enhanced community and primary care services.

6.2.23 Many services are currently not fully configured across 7 days and out of hours periods. There is an increasing recognition nationally and locally, of the desire to move towards more consistent service delivery. This is being considered during workforce planning, and proposals to work towards delivery of 24/7 services are being developed and progressed in parallel with the Building for Better care workforce plans, but are outwith the scope of the FBC.

6.2.24 Similarly in the case of non clinical support services it is recognised that the new way of working will require a new approach and notwithstanding any efficiencies gained through co-location, further resources may be required. These possible requirements are subject to further consideration and beyond the scope of the FBC, with any resultant resource requirements being taken forward through existing routes and standing Board committees.

6.3 Management of the workforce change

6.3.1 The new model of care represents significant workforce change primarily resulting from the transfer of staff to the new front door from existing admissions areas and the requirement to work across an extended 7 day week.

6.3.2 A number of key changes in the model of care are already being implemented, in full or in part, in advance of BfBC. This is as part of the wider drive to improve unscheduled care through the Board's Emergency Care Quality Improvement Programme (ECQIP) and 10 year vision for reshaping care for older people.

6.3.3 Changes in relation to role development, skill mix change, shift pattern changes will be managed via the Framework for Managing Workforce Change policy in partnership with staff side colleagues

6.3.4 Taken altogether these changes will be supported by an overall Workforce Development Plan and Communications Strategy (draft copy within **Appendix C6**), both being fully developed in partnership with staff and the Board's Human Resources Directorate.

6.3.5 In this respect the following initiatives have already been undertaken.

- Staff Newsletter - the Board has utilised the existing Stop Press communication bulletins to provide the most up-to-date information on the programme. Through the series of articles outlining the ongoing work, staff will be encouraged to get involved in the project.
- Staff group meetings - Two well attended staff meetings, one on each site presented an overview and up to date summation of the project to date, informing staff about the scale and scope of the project as well as giving an indication of the buildings layouts and how they may look externally as well as their positioning on each site. The meetings concluded with in depth question and answer sessions allowing staff to ask a wide variety of questions. Further

communication events are planned; both all staff open events, as well as more targets meetings with the staff groups most affected by the changes.

6.4 Summary of key points

6.4.1 Workforce change is required to secure the identified benefits of Building for Better Care, but importantly many of these required changes are now being actively progressed, through linked programmes of work and change associated with the Boards own ECQIP and other major initiatives that are re-shaping the way unscheduled care is provided across Ayrshire and Arran.

7 BENEFITS, RISKS, CONSTRAINTS & DEPENDENCIES

7.1 Overview

7.1.1 This section of the FBC:

- Sets out the main outcomes and anticipated benefits of the project
- Highlights the main risks of the project
- Key project constraints
- Key Project dependencies
- Conclusion

7.2 Main Outcomes and Benefits

7.2.1 Further work has been undertaken on the benefits in particular in relation to developing the BRP (see section 15).

7.2.2 As part of this work a Benefit Dependency Map (BDM) was developed following two stakeholder events. The Benefits Dependency Map outlines the following areas:

- National strategic context
- Organisational Strategic objectives
- Project Objectives
- Benefits
- Outcomes
- Actions for change
- Enablers

7.2.3 The BDM provides a visual representation on a single sheet of paper to communicate to stakeholders the interdependences and provide a plan for the development of the BRP. It was used to involve the stakeholders and pool their knowledge.

7.2.4 The final agreed BDM is shown in **Appendix D1**.

7.2.5 Following on from the development of the BDM Benefit Profiles were developed for each of the benefits. See section 15 for further details. Each will be used to track and monitor progress against each of the benefits as they are realised.

7.3 Main Risks

7.3.1 The key risks highlighted include the following:

- Design and construction risks particularly in relation to the ability of the existing hospital infrastructure to accommodate the proposed developments – in particular the use of the existing Ayr ED for CAU
- Business continuity risks through failure to provide continuity of services during the construction period

- Revenue risks arising through costs being greater than anticipated and / or the inability to redirect resources to fund front door services. This has increased since OBC as a result of the increased scope within phases 1 & 2 and the updated bed modelling which has reduced the potential bed savings.
- Service and operational risks resulting from failure to adapt to the new models of care – this is a greater risk since OBC as the full new model of care is currently being established at Crosshouse and due to workforce pressures partially at Ayr
- Risk associated with provision of adequate car parking to meet planning consent

7.4 Key Project Constraints

7.4.1 The project constraints outlined at OBC remain valid:

- Final solution must be deliverable within the available capital and revenue resources
- Preferred solution should provide sufficient flexibility for future changes in service requirements.
- Service continuity must be maintained during construction / refurbishment
- Options must comply with Scottish Government Health and Social Care Directorates guidance regarding single room provision and patient environment

7.5 Project Dependencies

7.5.1 The key project dependencies remain valid from the OBC and include:

- The availability of adequate numbers of appropriately trained acute physicians who will be based in the CAU in particular to ensure access to specialist opinion in CAU in a timely fashion
- Timely and appropriately resourced access to diagnostics (e.g. imaging and laboratories)
- The need to deliver the necessary improvements in clinical performance required to release resources and redirect these to support the development of front door services

7.6 Conclusion

7.6.1 The expected outcomes and benefits as well as the main risks, key project constraints and project dependencies from this development have been identified, developed, agreed and confirmed by the Board during the development of this FBC.

ECONOMIC CASE

8 OBC OPTION APPRAISAL

8.1 Overview

8.1.1 This section of the FBC comprises:

- OBC Short listed options
- OBC Non-financial benefits & risk appraisal
- OBC Economic appraisal

8.2 OBC Short listed options

8.2.1 The OBC contained three short listed options in relation to Phase 1 covering the development of Ayr ED and Crosshouse CAU. The addendum covering Phase 2 concluded that there was only one feasible option for Ayr CAU – reconfigure the existing emergency Department area (vacated as part of phase 1) to provide a Combined Assessment Unit. This was therefore added to the option descriptions from OBC.

8.2.2 The table below summarises the resultant three shortlisted options

Figure 15: OBC option shortlist

Option	Description	Comment
1	Do minimum, backlog maintenance of Crosshouse assessment areas, Ayr Emergency Department & Ayr assessment facilities	This is the benchmark option, which will be used as a comparator
2	Build new Outpatient department, releasing space for provision of Combined Assessment Unit at Crosshouse. Build new Emergency Department at Ayr and reconfigure and expand existing ED area to provide Combined Assessment.	This is a more ambitious option, which exceeds the specification in the direction of travel by facilitating further developments of the hospital site in addition to the core front door services or reproviding facilities which are currently deemed fit for purpose
3	Build new Combined Assessment facility at Crosshouse site in main car park and link to existing hospital. Build new Emergency Department at Ayr and reconfigure and expand existing ED area to provide Combined Assessment.	This option represents the reference position, fulfilling the direction of travel set out in the IA

8.2.3 These options were formally taken forward in the option appraisal process.

8.3 Benefit & Risk Appraisal Results

8.3.1 As part of the development of the OBC a non-financial benefits assessment was carried out to assess the differing levels of benefits each option would deliver.

8.3.2 Similarly an assessment was carried out to assess the differing levels of risk each option could be exposed to.

8.3.3 A summary of the results is shown below.

Figure 16: Risk & Benefit appraisal of Phase 1 OBC shortlisted options

Option	Weighted Benefit Score (WBS)	Qualitative risk assessment
Do Minimum	100	238
Option 2	345	186
Option 3	350	170

8.3.4 The analysis shows that in terms of non financial benefits and risks Option 3 is and remains the preferred option.

8.4 OBC Economic Appraisal

8.4.1 An economic appraisal was carried out as part of the OBC. This allowed the different levels of costs to be assessed against each option and ultimately used as part of the value for money assessment to determine the cost per benefit point.

8.4.2 The summarised results are shown below:

Figure 17: Risk & Benefit appraisal of Phase 1 OBC shortlisted options

	Do Minimum	Option 2	Option 3
Benefit Points	100	345	350
Ratio of NPC (£000) to benefit points	31,503	8,942	8,807
Ranking NPC to benefit points	**3**	**2**	**1**

8.4.3 The results show that when comparing the relative costs and benefits of the alternative solutions, Option 3 has the lowest overall cost per benefit point indicating this option delivers the best value for money of the shortlisted options.

8.5 Conclusion

8.5.1 In overall terms the results of the benefits and risk scoring exercise were conclusive. Based on the composite scores:

- Option 3 delivers the highest level of non-monetary benefits when measured against the criteria and lowest level of risk;
- Unsurprisingly, the Do Minimum option results in the lowest level of overall benefits and highest level of risk.

8.5.2 These results remain valid for the FBC and therefore option 3 is taken forward into the remainder of the economic appraisal.

9 ECONOMIC APPRAISAL

9.1 Introduction

9.1.1 This section updates the economic appraisal of the preferred option and provides comparative analysis of OBC and FBC costs. It outlines the approach taken and assumptions made in deriving the capital and revenue implications and presenting this in the form of a discounted cash flow as represented by the Net Present Cost (NPC) analysis.

9.1.2 All current guidance has been followed in constructing the financial and economic appraisal, principally the latest Scottish Capital Investment Manual (SCIM).

9.1.3 The economic appraisal process utilises a number of key outputs from the process, namely workforce planning, capacity planning and design in establishing the capital and revenue implications of the proposals.

9.2 Capital Costing

9.2.1 The Board and its appointed cost advisors, in conjunction with the Principal Supply Chain Partner (PSCP), has prepared the capital costs based on the agreed Target Cost. Further enhancements to these capital costs will be made relating to the economic appraisal and these are discussed within the table below.

Figure 18: Capital cost details

- Based on target cost reached by both NHS Ayrshire & Arran and the PSCP. These have been reviewed by NHS Ayrshire & Arran's cost advisors Gardner & Theobald. A copy of the Target Cost report and capital cost schedule are shown in **Appendices E1 & E2**
- The phasing of the capital costs is based on the current project plan
- Includes allowances for inflation to construction completion date
- Includes allowance for Crosshouse car parking from within Board's capital plan note this was not previously identified as a cost to the project
- Equipment estimates have been provided by NHS Ayrshire & Arran in conjunction with Health Facilities Scotland (HFS). The BfBC capital costs include a contribution of £1.25m (plus VAT); around 35% of the total value. The remaining equipment will be provided through either transfer from existing locations or be funded through the existing replacement programme (both Electro Medical and Furniture and Equipment).
- Fees have been applied in consultation with PSCP/PSC partners reflecting actual costs to date for the FBC stage and projected for the remainder of the project. Separate non-cash funding has been identified through DEL which will remove all historical fees from NHS A&A work in progress further details are outlined in section 12. However to allow a like for like comparison all historical fees have been adjusted and removed from the bottom line capital costs shown below.
- VAT is allowed for at the 20% however there has been an element of VAT reclaim based on the discussions with HMRC which indicated a reclaim rate of 15.07%.

- Capital contingencies have been incorporated reflecting the quantified impact for both PSCP and Board retained risks (see **Appendix E3** for details)
- Includes direct Board costs in relation to project office and pathway facilitator posts approved by BfBC Programme Board in September 2013
- An updated assessment of optimism bias based on the analysis set out at Figure 19.
- During the FBC design development stage a number of workshops involving NHSA&A, BAM and the Design Team have been held chaired by DSSR as the appointed BREEAM Assessor. We remain on target to achieve a "Very Good" rating as indicated within the approved OBC. Full details of the current status on BREEAM is contained within **Appendix E4.**

Optimism Bias

9.2.2 In line with HM Treasury guidance and the Scottish Capital Investment Manual (SCIM) the Board has assessed the level of residual optimism bias.

9.2.3 This has been reviewed in light of the work which has progressed since OBC and the resultant final level of optimism bias shown below:

Figure 19: Optimism bias of short-listed options

Option	OBC Residual Optimism Bias	FBC Residual Optimism Bias	Movement
Preferred Option	9.00	2.00	7.00

9.2.4 The optimism bias has reduced as a result of sign off from user groups to the final design, concluding the schedule of accommodation and progress with planning submission.

9.2.5 The revised mitigation assessment is show within **Appendix E5**.

Resultant Capital Costs

9.2.6 Having applied the costing methodology, the resultant capital expenditure is shown below.

Figure 20: Capital costing summary £000

	Phase 1 OBC	Phase 2 OBC Addendum	Total OBC	FBC	Movement
New build	8,222	2,000	10,222		
Internal alterations / refurb	753	1,671	2,424		
On-costs	3,905	981	4,886		
Inflation adjustments	543	403	946		
Total construction costs (target cost)	**13,423**	**5,055**	**18,478**	**22,367**	**3,889**
Equipment costs	380	178	558	1,250	692
Board contingencies	644	233	877	532	(345)
Optimism bias	1,494	779	2,273	447	(1,826)
Design fees	2,696	870	3,566	1,933	(1,633)
NHS Direct costs (project support)	-	175	175	325	150
NHS Direct costs (Crosshouse parking)	-	-	-	188	188
VAT	2,992	1,129	4,121	4,253	132
Total capital costs	**21,628**	**8,420**	**30,048**	**31,295**	**1,247**
Removal of historical fees	(890)	-	(890)	(2,143)	1,253
Net capital costs	**20,739**	**8,420**	**29,158**	**29,152**	**(6)**

Source: NHS Ayrshire & Arran Capital cost schedule

9.2.7 The capital costs demonstrate that there has been no increase in the overall funding requirement from OBC and we now have cost certainty.

9.2.8 There has however been some expected movement in the individual elements of the total capital costs incorporating:

- Contruction cost – this has increased as a result of additional floor space and changes to the proposed layout reflecting the detailed plans developed as part of the on going user engagement. There has also been additional inflationary uplift as reflected in the latest construction cost indices.
- Equipment – this has increased as a result of moving from costs being based on a high level allowance to now reflecting specific requirements from the detailed equipment lists agreed with users.
- Contingencies / optimism bias – as expected these have reduced to reflect the greater degree of cost certainty arising from the sign off of the detailed plans. This partly offsets the increase in construction and equipping costs.
- Fees – the movement between OBC and FBC reflects the fact that PSCP fees are now included in the target cost (at OBC were included separately in fees).

9.3 Phasing of Capital Costs

9.3.1 The capital costs will be incurred over a number of years and the phasing of these (provided by the PSCP) is illustrated below. (Note this excludes the removal of historical fees)

Figure 21: Phasing of total capital costs (including all fees) £000

Year	Phase 1 OBC	Phase 2 OBC Addendum	Total OBC	As per FB form	Movement
2009/10	-	-	-	398	398
2010/11	-	-	-	855	855
2011/12	-	-	-	-	-
2012/13	388	-	388	890	502
2013/14	2,431	-	2,431	1,255	(1,176)
2014/15	12,335	-	12,335	9,016	(3,319)
2015/16	6,475	4,210	10,685	12,604	1,919
2016/17	-	4,210	4,210	6,277	2,067
Total	**21,628**	**8,420**	**30,048**	**31,295**	**1,247**

Source: NHS Ayrshire & Arran Capital cost schedule

** Total is pre-exclusion of historical fees*

9.4 Pay and Non-pay Costs of Short-listed Options

9.4.1 The pay and non-pay costs have been calculated based on the following assumptions.

Figure 22: Pay and non-pay cost details

General	
	▪ Costs are stated at 2013/14 price levels. ▪ Pay costs are based on current pay circulars and inclusive of full on-costs. ▪ Costs reflect outputs from the Nursing workforce modelling (as outlined in section 6. ▪ The phasing of the movement in costs reflects the current project plan for each of the relevant functions. ▪ No change to fixed overhead support costs such as HR, Finance & Corporate Services has been included. ▪ All other staff groups remain unchanged from current e.g. medical staff where additional posts as required have been funded through LUCAP

Cost Drivers	▪ Pay costs have been derived using a variety of cost drivers: ○ Ancillary (Domestic) - based on floor area ○ Ancillary (Catering) - based on patient days ▪ Movements in non-pay costs have been calculated using appropriate cost drivers for each expenditure type and location, these include: ○ Property maintenance costs – based on floor area ○ Heating, fuel and power – based on heated volume ○ Rates – based on floor area ○ Catering – based on patient days ○ General supplies based on patient days

9.5 Workforce Requirements and Costs

9.5.1 The table below shows the current and future nursing workforce resulting from the modelling undertaken.

Figure 23: Total workforce requirements – wte

Staff group	Site	Current	Future	Change
Nursing – front door	Crosshouse	82.38	118.34	35.96
	Ayr	53.28	100.20	46.92
Total front door		**135.66**	**218.54**	**82.88**
Nursing – specialty	Crosshouse	507.52	486.82	(20.70)
	Ayr	295.61	295.61	0.00
Total specialty		**803.13**	**782.43**	**(20.70)**

Source: Board Finance Department

9.5.2 A summary of the movement in workforce from current for both the OBC and addendum to FBC is shown below.

Figure 24: Change in workforce requirements from current – wte

Staff Group	Phase 1 OBC	Phase 2 OBC Addendum	Total OBC	FBC	Movement
Nursing - front door	35.84	46.92	82.76	82.88	0.12
Nursing - specialty	(46.41)	-	(46.41)	(20.70)	25.71
Domestic	6.20	2.71	8.91	15.94	7.03
Estate	1.02	0.37	1.39	1.54	0.15
Total WTE impact	**(3.35)**	**50.00**	**46.65**	**79.66**	**33.01**

Source: Board Finance Department

9.5.3 The Board has considered whether additional provision needs to be made within the FBC for enhanced staffing levels in clinical support functions (e.g. imaging, labs etc), particularly as this is a key component of the CAU model of care. It has concluded that continued service redesign will provide the basis for improving utilisation of the existing staff and facilities meaning that additional access to these services can be provided from within the existing resources or as part of more general planned expansion in service. These aspects will be separately addressed (outwith the FBC) as part of the Board's Emergency Care Quality Improvement Programme.

9.5.4 The Board's medium term financial plan includes funding for additional medical staffing/other associated implications in support of the emergency care action plan (LUCAP).

9.5.5 The change in Nursing / Facilities staff pay costs arising from the workforce changes directly associated with the FBC project are shown below against the relevant staff group.

Figure 25: Pay cost Impact £000

Staff Group	Phase 1 OBC	Phase 2 OBC Addendum	Total OBC	FBC	Movement
Nursing- front door	1,121	1,651	2,772	2,916	144
Nursing – specialty	(1,433)	-	(1,433)	(712)	721
Domestic	112	44	156	262	106
Estate	32	12	44	51	7
Total pay impact	**(168)**	**1,707**	**1,539**	**2,517**	**978**

9.5.6 Overall the staffing costs have increased by £978k between OBC (including the addendum) and FBC. This is due to reduced bed savings at specialty level as reflected in the updated bed modelling. As a result £721k of previous nurse staffing savings can no longer be realised.

9.5.7 As a result of the increase in the overall building footprint there have been increases in the associated domestic and estates staffing costs (circa £113k movement).

9.6 Non-pay Costs

9.6.1 The table below shows the non-pay costs impact of the redevelopment. As is the case with the pay costs, movements in costs are shown against the relevant expenditure heading.

Figure 26: Non-pay cost Impact of short-listed options £000

Expenditure Heading	Phase 1 OBC	Phase 2 OBC Addendum	Total OBC	FBC	Movement
Rates	61	16	77	97	20
Energy	98	15	113	147	34
Domestic supplies	10	1	11	13	2
Catering supplies	(33)	-	(33)	(33)	-
Estate supplies	45	12	57	64	7
Total impact	**182**	**45**	**227**	**289**	**62**

9.6.2 The non-pay costs have increased by around £62k since OBC and addendum as a result of the increased building footprint.

9.6.3 The table below shows the total pay and non pay revenue costs post development that have been prepared for the economic appraisal, hence capital charges are not included at this stage. This will be further evaluated within the affordability analysis presented within the Financial Appraisal section of the FBC.

Figure 27: Total impact £000

	Phase 1 OBC	Phase 2 OBC Addendum	Total OBC	FBC	Movement
Pay impact	(168)	1,707	1,539	2,517	978
Non-pay impact	182	45	227	289	62
Total impact	**14**	**1,752**	**1,766**	**2,806**	**1,040**

9.6.4 Overall the total monetary costs have increased by £1.04m since the OBC and addendum cost levels. This is mainly due to the movement in pay costs which account for over 95% of the change.

9.7 Methodology and Assumptions – Economic Appraisal

9.7.1 A discounted cash flow for each of the options has been undertaken over 30 years using a discount rate of 3.5% in line with the requirements of HM Treasury.

9.7.2 Both the Net Present Cost (NPC) and Equivalent Annual Cost (EAC) have been calculated. The EAC is used for comparison where the options have different life spans as it converts the NPC to an annual figure.

9.7.3 The key elements used in this analysis are summarised below.

Figure 28: Key assumptions used in the economic appraisal

- Base period (year 0) for the economic appraisal is 2013/14
- An appraisal period of 30 years including construction has been used for all options
- Cash flows are presented at 2013/14 outturn prices and where possible exclude VAT as this is a transfer payment
- Capital cost based on phasing outlined above and includes all pre-VAT expenditure and incorporate capital risks and optimism bias.
- Stage 1 building and maintenance lifecycle costs based on average replacement costs over 30 years as provided by PSCP Quantity Survey
- Equipment lifecycle costs based on 7 year replacement cycle using the initial estimated capital expenditure
- Building residual values reflect the net book value of the assets at the and of the appraisal period
- The value of quantified revenue risks has been applied to calculate a risk adjusted NPC and EAC

9.8 Results of the Economic Appraisal

9.8.1 A comparison of the net present cost from both OBC preferred option and do minimum against the FBC values. The results of which are shown below:

Figure 29: NPC and EAC for short-listed options £000

	Do Minimum	Preferred Option OBC	Preferred Option FBC
NPC over appraisal period	2,973,604	2,978,431	4,406,634
EAC	108,060	108,235	160,136

9.8.2 The higher NPC and EAC at FBC are as a result of including both phases 1 & 2. Note the NPC and EAC shown above in relation to the OBC do not include the addendum costs as no economic appraisal was carried out

9.9 Conclusion

9.9.1 A thorough economic analysis in compliance with HM Treasury and SCIM requirements has been performed.

10 PREFERRED OPTION

10.1 Overview

10.1.1 This section confirms the selection of the preferred option and outlines the key features and benefits of the preferred option.

10.2 Developments since Phase 1 OBC

10.2.1 Since phase 1 OBC there has been considerable work to finalise the preferred option through extensive user group meetings. This has allowed the design to be finalised and a Target Cost to be reached giving overall cost certainty to the project.

10.2.2 In addition there has been ongoing work to establish and resource a Project Office and to develop further the Benefits Realisation Plan.

10.3 Phase 1 OBC Option Appraisal Results

10.3.1 The phase 1 OBC identified option 3 as the preferred option as this option offered the greatest level of benefits and had the lowest cost per benefit point. This option can be delivered within the available capital funding envelope (further details are provided in the Financial Case) and therefore satisfies this key constraint.

10.3.2 The non financial benefits appraisal clearly demonstrates that the do minimum option is likely to offer substantially poorer scope to meet the overall objectives of the proposed clinical change and redevelopment proposals – in particular against the other options to offer limited benefits in terms of delivering the required improvements in front door services.

10.3.3 This option has the lowest benefit score and the highest net present cost. The benefit score reflects the fact that it does not provide an opportunity to enhance quality of care and improve the effectiveness of service delivery and is also highly disruptive. Whilst it has the lowest level of initial capital cost this is more than offset by the additional quantified risks over the project lifecycle which is reflected in the overall economic cost (NPC). As a result it provides by far the poorest ratio of NPC to benefits.

10.3.4 Therefore comparing the do minimum against Option 3 demonstrated it still offers the best value for money whilst meeting the constraints identified.

10.3.5 The Addendum developed for phase 2 reviewed the options and concluded that the only feasible option for Ayr CAU was to utilise the space vacated through the redevelopment of Ayr ED as part of phase 1.

10.4 Key Features and Benefits of Preferred Option

10.4.1 The preferred option, determined through the appraisal process, is Option 3. This option is able to deliver the project objectives, provide the best value for money within the constraints identified and delivers the model of care, required capacity and appropriate clinical environment for the Building for Better Care programme.

10.4.2 The key benefits of the preferred option are summarised below against each of the OBC benefit criteria areas.

Figure 30: Key benefits of the preferred option

Safe:

- Enables delivery of improved models of patient care built on established best clinical practice in managing front door services e.g. co-location of ED, combined assessment / ambulatory care
- Ensures that patients have access to appropriately staffed clinically effective assessment processes and rapid decision making so that as many patients as possible have their entire pathway of care delivered at the front door thus avoiding unnecessary hospital admission
- Provides front door care in improved facilities with appropriate use of single rooms thus improving the patient environment, reducing the risk of healthcare acquired infection and provide more flexibility in the use of beds
- Eliminates unsafe overcrowding and provides increased resuscitation capacity within Ayr hospital ED

Flexibility:

- Provides flexible front door services that allow patients to easily move between and within ED and CAU thus ensuring that care is appropriate to their needs
- Facilitates remaining phases of BfBC programme with minimal disruption to existing services

Sustainable:

- Services are sized to address demographic shift and changes in the pattern of care so that they can respond to need both now and in the future without the need for further significant changes in infrastructure
- Improves the utilisation of resources at the front door and, by optimising the assessment process, for enhancing the effectiveness of specialty based care and better use of staff and facilities

Accessible:

- Specifically in relation to Ayr ED:
  - Provides increased capacity within the emergency department to match future demand to capacity
- Specifically in relation to Crosshouse & Ayr CAUs:
  - Provides all front door services in a single integrated location so that patients access through a single portal and are then streamed to the most appropriate location
  - Patient flows within the CAU are improved with access to both bed based and ambulatory care. Patients requiring subsequent specialty admission are the subject of rapid and appropriate decision making within the CAU and early placement on the most appropriate patient pathway

10.4.3 Further supporting information is shown within the appendices in relation to: Final schedule of accommodation (**Appendix F1**), Final drawings (**Appendix F2**); Service Change assessment (**Appendix F3**), AEDET assessment (**Appendix F4**) and Equality Diversity Impact Assessment (**Appendix F5**).

10.5 Conclusion

10.5.1 Following a robust option appraisal process involving a wide range of stakeholders, the Board has determined that its preferred option for phases 1 and 2 of Building for Better Care is Option 3.

10.5.2 This solution provides the optimal value for money whilst addressing the key requirement for the programme to develop front door services across the Board's two main acute hospitals.

10.5.3 The preferred option delivers a wide range of benefits which are complementary with local and national service requirements as well as the delivery of a range of short to long term objectives for improving the provision of front door and associated services.

10.5.4 Subsequent sections of the FBC consider the optimal procurement route for the proposed programme as well as project management arrangements and project timetable.

COMMERCIAL CASE

11 NEGOTIATED DEAL & CONTRACTUAL ARRANGEMENTS

11.1 Overview

11.1.1 This section describes the key commercial details of the agreed contract between NHS Ayrshire and Arran and the Principal Supply Chain Partner (PSCP), BAM Construction Ltd. The PSCP will undertake a wide range of services and duties to assist and support NHS Ayrshire and Arran through the construction and commissioning of the new facilities at Crosshouse and Ayr hospitals.

11.1.2 This section outlines the commercial transaction that the PSCP and the Board will be asked to sign up to and serves to communicate the following:

- Agreed scope of services
- Agreed risk allocation
- Agreed payment mechanism
- Key contractual clauses
- Personnel implications (TUPE)
- Agreed procurement strategy and implementation timescales
- FRS5 accountancy treatment

11.2 Agreed scope of services

11.2.1 A full description of the services to be included in the Building for Better Care project is detailed within the Strategic Case.

11.2.2 The products and services under contract are for a single point deliverer. This offers a procurement vehicle with an integrated supply chain for the delivery of design, manufacture, construction and commissioning of the proposed developments at Ayr and Crosshouse hospitals.

11.2.3 In essence the PSCP will be responsible for providing all aspects of the design and construction of the Building for Better Care project, which consists of the following three facilities:

- A new Crosshouse Hospital Combined Assessment Unit;
- A replacement Ayr Hospital Emergency Department; and
- A new Ayr Hospital Combined Assessment Unit

11.2.4 The Board has agreed that the facility will be delivered by the PSCP under the Frameworks Scotland Agreement, NEC 3 Engineering and Construction Contract Option C: Target Cost with Activity Schedule. This delivery methodology will provide the following benefits:

- completion of the scheme to the standard and functionality that meets the requirements set out in the contract;
- Value for money (VFM), not only in the initial capital cost, but also for the whole life costs through the application of value management principles;
- certainty of delivery in terms of time and cost;
- consistent delivery in terms of quality in both design and construction;

- provision for continuous improvement through collaborative working and the adoption of benchmarking and performance management measures;
- improved management of risk; and
- optimised delivery of sustainable development

11.2.5 The project will be delivered through Frameworks Scotland Stage 4.

11.2.6 The Board and the PSCP have reviewed and agreed the following scope relating to Equipment:

- Group 1 items, which are generally large items of permanently installed plant or equipment, will be procured and installed by the PSCP or specialist sub-contractor.
- Group 2 items, which are items of equipment having implications in respect of space, construction and engineering services, will be procured by the Board and will be installed by the PSCP.
- Groups 3 and 4 items will be procured and installed by the Board.

11.2.7 Any new Group 2 to 4 equipment required for this project will be purchased by Health Facilities Scotland Equipping Services on behalf of the Board. This has been agreed by NHS Ayrshire and Arran as the most cost effective method for purchasing Equipment as Health Facilities Scotland Equipping Services has existing supply chains in place and can purchase Equipment at more favourable rates.

11.3 Agreed Risk Allocation

11.3.1 This section provides details of how the associated risks have been apportioned between the Board and the Principal Supply Chain Partner (PSCP). It also outlines the process used for identifying, assessing and apportioning the project specific risks.

11.3.2 The general principle is to ensure that risks should be passed to “the party best able to manage them”, subject to value for money (VFM).

11.3.3 The table below outlines the allocation of responsibility for key risk areas.

Figure 31: Risk allocation matrix

Risk Category	Allocation		
	Board	PSCP	Shared
1. Design Risk			✓
2. Construction & Development Risk			✓
3. Transition & Implementation Risk			✓
4. Availability and Performance Risk			✓
5. Operating Risk	✓		
6. Variability of Revenue Risks	✓		
7. Termination Risks			✓
8. Technology & Obsolescence Risks	✓		
9. Control Risks			✓
10. Residual Value Risks	✓		
11. Financing Risks	✓		
12. Financing Risk above Target Cost		✓	
13. Legislative Risks			✓
14. Other Project Risks			✓

11.3.4 The Project delivery risks are identified in an integrated Risk Register with inputs by the Board and the PSCP. The Risk Register has been developed using the NHS Ayrshire & Arran template and developed to incorporate the key aspects of the HFS risk register template.

11.3.5 An initial Full Business Case (FBC) Stage Risk Workshop was organised by the PSC Project Manager on 19 February 2013 attended by the key project members. The workshop focussed on developing and agreeing the key project risks to be incorporated into a formal register covering both construction and operational risks. The PSC Project Manager is responsible for updating the construction Risk Register and identifying key risks to the Board Project Director. The Clinical Project/Change Manager will be responsible for updating the operational Risk Register and identifying key risks to the Board Project Director

11.3.6 As the scheme developed through the FBC stage, risks have been identified, quantified and allocated to the party best placed to manage them. The PSC Project Manager has reviewed the construction Risk Register held risk reduction meetings as required to develop the risk costs and risk mitigations. The Clinical Project/Change Manager has reviewed the operational Risk Register held risk reduction meetings as required developing the risk costs and risking mitigations. The risks considered and quantified include both construction and operational risks.

11.3.7 The Risk Registers have been issued on a monthly basis to the Board's Project Director, indicating the changes to the top risks within the Risk Registers, ensuring all allocations of risk can be traced easily for audit purposes. Where there is movement of substantial amounts of risk allocation, further breakdown to this risk allowance have been shown within supporting sheets or the associated risk mitigation meeting record.

11.4 Agreed Payment Mechanism

11.4.1 The National Framework NEC3 Engineering and Construction Contract, Option C: Target contract with activity schedule, June 2005 (with amendments June 2006) utilises an auditable open book approach to quantify and manage payment.

11.4.2 At the pre-construction stages, payment was based on a fee forecast schedule, which was intrinsically linked to an agreed programme and set of deliverables and based on hours expended multiplied by the Framework agreed rates. The fee forecast schedule is supported by timesheets along with ancillary cost payments such as surveys. The incurring and payment of professional fees was managed throughout the pre-construction period by the Board and its advisors on a monthly basis.

11.4.3 The PSCP and its supply chain members' commercial rates and profit levels for duties undertaken during each of the pre-construction Business Case development stages was agreed as part of the framework selection process.

11.4.4 The Target Cost for the Construction and Handover stage of the project was established and agreed by both the Board and PSCP during the FBC development phase, with payment to be based on ledger cost from the PSCP. Payments made during Stage 4 - Construction and Handover will be checked and verified through the independent Board Cost Advisor.

11.5 Key Contractual Clauses

11.5.1 A template contract has been prepared for use on Frameworks Scotland based on the options contained within the NEC3 Engineering and Construction Contract, Option C: Target contract with activity schedule, June 2005 (with amendments June 2006). This has been adopted for use as the basis of all Frameworks Scotland project specific contract documents. The scheme development is incorporated into the contract by means of detailed requirements in the Works Information and establishing a realistic programme for execution – the Accepted Programme.

11.5.2 The style of Frameworks Scotland and the 'scheme contract' promotes the use of particular project management techniques. These are also applied to formulate the Target Total of Prices.

11.5.3 An overall contract is entered into at commencement of the PSCP's appointment following agreement of a Priced Activity Schedule and Accepted Programme. This contract is then reviewed, updated and new appendices added at the start of each project stage to incorporate a new Priced Activity Schedule and Accepted Programme. In this way the price included within the accuracy of the information within the contract is revised for each project stage. A copy of the summary contract is shown in **Appendix G1**.

11.5.4 A number of alterations have been made to the standard contract in order to tailor it to the requirements of Framework Scotland through the use of ‘z’ clauses. Key alterations include:

- Cash flow forecasts regularly updated by the PSCP and related to the programme (from the NHS Client’s perspective providing a positive basis for finance planning);
- Payment of accrued costs to the supply chain;
- Gain share potential for Client and the PSCP (but any overspend of the final target is funded by the PSCP); and

11.6 Personnel Implications (TUPE)

11.6.1 It is anticipated that TUPE (Transfer of Undertaking and Protection of Employee) will not apply to this investment as outlined above.

11.7 Agreed Procurement Strategy

11.7.1 The procurement strategy for the Building for Better Care project has followed the Frameworks Scotland procurement route.

11.7.2 The SCIM requires that, as part of the FBC development process, Boards undertake an assessment to establish the procurement route for the project. This should consider the most likely route to deliver the best overall value for money and that should include consideration to the potential for procuring capital investment projects through alternative financing arrangements under Public Private Partnership (PPP). Where PPP is assessed as not offering the best value for money procurement route for delivering the project, a clear justification should be provided.

11.7.3 In the event that a traditional procurement is adopted there is a range of options available to the Board in delivering the project and the assessment should again consider which of these is likely to best support the delivery of the requirements and offer the best value for money.

11.7.4 The Board sought to make this assessment at an early stage and as such, following the development of the Initial Agreement, formally considered the options for procuring the requirements in developing the facilities at both Ayr and Crosshouse Hospitals.

11.7.5 Given that alternative forms of finance will not meet the project requirements or offer value for money (VFM), the Board have considered alternative means of delivering the requirements through the use of capital finance. Delivery under this route provides two main options, namely:

- Conventional design & build approach
- Framework agreement

11.7.6 Having considered a conventional design and build route the Board concluded that the timescales associated with this approach were unlikely to deliver the improvements in a manner which meets the overall programme for the proposed developments.

11.7.7 Framework agreements provide an established route with suppliers who currently have operational and proven supply chains with a national best practice and knowledge transfer process. Additionally this route allows for early contractor involvement and use of an industry standard contract. The Board concluded that this approach was likely to be the best means of meeting their requirements for the proposed developments to front door services at Crosshouse and Ayr Hospitals.

11.7.8 The Board has therefore agreed to deliver the project in line with the guiding principles of the national Frameworks Scotland Agreement which is managed by Health Facilities Scotland (HFS) on behalf of the Scottish Government Health and Social Care Directorates.

11.7.9 The framework embraces the principles of collaborative working with the public and private sectors working together in an effective and efficient manner. It is designed to deliver tangible performance improvements due to repeat work being undertaken by the PSCP supply chains.

11.7.10 The Frameworks Scotland initiative guide, developed by HFS for use on all projects, highlights that the framework has been established to achieve the following key benefits:

- Earlier and faster delivery of projects
- Certainty of time, cost and quality
- Value for money (VFM)
- Well-designed buildings procured with a positive collaborative working environment

11.7.11 The Framework Scotland approach also has clear means for transferring risk during the construction phase, and also providing incentives to contractors to perform.

11.8 Agreed Implementation Timescales

11.8.1 The Building for Better Care Outline Business Case was approved on 14 February 2013.

11.8.2 The Building for Better Care Ayr Combined Assessment Unit Outline Business Case Addendum was approved 16 August 2013.

11.8.3 The programme for the delivery of the Building for Better Care project is as follows:

Figure 32: Programme Delivery

Activity	Timescale	
	Start Date	Finish Date
Crosshouse Hospital CAU enabling works	05/05/2014	22/08/2014
Crosshouse CAU new build construction	25/08/2014	31/07/2015
Crosshouse CAU short stay refurbishment works	03/08/2015	06/12/2015
Ayr Emergency Dept enabling works	05/05/2014	05/09/2014
Ayr Emergency Dept construction	22/08/2014	13/11/2015
Ayr CAU construction	16/11/2015	10/02/2017

11.9 FRS5 Accountancy Treatment

11.9.1 It is assumed that public funding will be allocated for this project and therefore capital will be included on the balance sheet. Refer to the Financial Case for further details.

11.10 Conclusion

11.10.1 The Board sought to establish the optimal procurement route for the proposed developments at an early stage in the capital investment process.

11.10.2 Having considered a range of options, including the use of private finance, the Board have agreed that the use of traditional capital finance offers the best overall value for money (VFM).

11.10.3 The Board have chosen to adopt the guiding principles of the national Frameworks Scotland Agreement which is managed by Health Facilities Scotland and have appointed BAM Construction Ltd as its PSCP.

FINANCIAL CASE

12 FINANCIAL APPRAISAL

12.1 Overview

12.1.1 This section considers the affordability analysis for the preferred option based on an analysis of the overall capital and revenue costs.

12.1.2 The Building for Better Care programme provides the opportunity for long lasting / sustainable improvements in clinical services to be introduced at reasonable additional cost to the Board.

12.1.3 The foundation for these improvements has been derived from significant staff participation in clinical review of processes/procedures (supported by the LEAN and Continuous Improvement Programmes), general agreement on change of admission policy from 'admit to decide' approach towards 'decide to admit' philosophy, improvements in workforce utilisation (right staff to be available in the right place at the right time), benefits from co-location of services/general environmental improvements in terms of more productive/contented workforce.

12.1.4 In considering the affordability of the proposals presented in this FBC it is necessary to look at the wider programme of improvements to front door services across both hospitals.

12.1.5 The analysis has been undertaken over the period to 2017/18 which accommodates both the total period of capital expenditure but also incorporates the first full year of revenue implications. These are then matched to the anticipated funding flows to demonstrate that the preferred options is affordable for the Board.

12.2 Capital Affordability

12.2.1 The capital affordability has been determined using the agreed target cost as outlined within section 9 with the following adjustments in relation to impairment (treated under annually managed expenditure AME) and historical fees in relation to work prior to the FBC (treated as non-cash departmental expenditure limit DEL) which are outlined below.

Impairment

12.2.2 In determining the overall capital affordability an asset impairment of 5% has been assumed for non value adding elements in line with the outcome from discussions with the Valuers, and, in line with other developments within NHS Ayrshire & Arran.

12.2.3 The impairment results from non-value adding elements of capital costs agreed in with the Board's Valuers (Valuation Office Agency) and requires to be charged to revenue costs as Annually Managed Expenditure (AME). A copy of the letter from the Boards' valuers indicating the likely impairment is provided at **Appendix H1**.

12.2.4 Under International Financial Reporting Standards (IFRS) this impairment will require to be accounted on completion of works.

Historical Fees

12.2.5 Fees in relation to pre-FBC activities are deemed non-value adding as they will not add to the asset valuation and have been overtaken by more detailed FBC plans. NHS Ayrshire & Arran have liaised with SGHSCD who has agreed that Non cash DEL funding accounted for these costs through the revenue account as a non-value adding expenditure.

12.2.6 The capital cost shown in section 9 included £2.143m in relation to historical fees and this has been deducted in the adjusted capital cost shown below. A similar prior year non-cash adjustment has been shown in the Board's Capital Investment Plan.

12.2.7 The accounting entries for this treatment of cost has been actioned in conjunction with the preparation of the FBC in financial year 2013/14 in line with IFRS guidelines.

Summary Capital cost profile

12.2.8 This overall capital impact of the proposed investment with these adjustments is shown below.

Figure 33: Capital cost profile £000

	2009/10 to 2012/13	2013/14	2014/15	2015/16	2016/17	Total
Crosshouse CAU		439	4,500	5,399	-	
Ayr ED		452	4,516	5,432	-	
Ayr CAU		364	-	1,773	6,277	
Total	**2,143**	**1,255**	**9,016**	**12,604**	**6,277**	**31,295**
Historical fees pre FBC stage	(2,143)					(2,143)
Less 5% AME impairment					(1,568)	(1,568)
Total BfBC Capital Impact	**-**	**1,255**	**9,016**	**12,604**	**4,709**	**27,584**

12.2.9 The table above indicates a total net capital funding requirement of £27.584m.

12.2.10 These projected capital costs for the Building for Better Care project are within the funding envelope contained with the Board's LDP approved Capital Investment Plan.

12.2.11 This includes a central funding contribution from Scottish Government of £15.5m towards the phase 1 and £8m for phase 2. The balance of £4.1m is being met from NHS Board capital funds.

12.2.12 The projected phasing of the Scottish Government Health and Social Care Directorates (SGHSCD) central contribution is shown in the Capital Investment Plan shown in **Appendix H2**.

12.2.13 It is estimated that the Phase 3 of the Building for Better Care programme will require £14m of capital funding investment to be covered by a further allocation from central capital contribution from Scottish Government. These aspects will be addressed in a separate OBC / FBC submission covering the proposed improvements to Critical Care Services at Ayr and Crosshouse Hospitals.

12.3 Revenue Affordability

12.3.1 The revenue affordability takes into account the following areas:

- Pay costs (primarily nursing and facilities staff),
- Non-pay premises costs,
- Capital charges,

12.3.2 Further details for each of these areas is outlined below.

12.4 Capital Charges

12.4.1 The capital charges are based on:

- Using capitalised amounts outlined including optimism bias and indexation
- Building depreciation based on remaining asset life of current site (Crosshouse 33 years and Ayr 40 years)
- Equipment depreciation based on an average 7 year asset life

12.4.2 It has been assumed that the construction costs will not be capitalised until the development is complete; depreciation will then be applied using the straight line method. The table below outlines the full value; which will be incurred from 2018/19 onwards.

Figure 34: Capital charges impact - £000

Expenditure Heading	Ayr ED	Ayr CAU	Crosshouse CAU	Total
Buildings	230	187	281	697
Equipment	77	62	75	214
Total	**307**	**249**	**356**	**911**

12.4.3 The table above indicates capital charges impact of £911k from 2017/18 onwards when the full impact of the capital investment has occurred.

12.5 Net Revenue Impact

12.5.1 The resulting net revenue impact from both pay, non-pay costs and capital charges is set out below (income has been assumed to remain the same as the baseline year). The phasing of costs reflects the anticipated profile of the capital expenditure and commissioning / operational go live of the new facilities.

Figure 35: Total revenue impact £000

	2013/14	2014/15	2015/16	2016/17	2017/18
Baseline pay costs	148,195	148,195	148,195	148,195	148,195
Baseline non-pay costs	8,535	8,535	8,535	8,535	8,535
Movement in pay costs	612	1,201	1,201	1,590	2,517
Movement in non-pay costs	-	-	110	254	289
Total pay / non-pay costs	**157,342**	**157,931**	**158,041**	**158,574**	**159,536**
Current depreciation	9,337	9,337	9,337	9,337	9,337
New depreciation	-	-	165	662	911
Total depreciation	**9,337**	**9,337**	**9,502**	**9,999**	**10,248**
Gross Costs	**166,679**	**167,268**	**167,543**	**168,573**	**169,784**
Income	-1,274	-1,274	-1,274	-1,274	-1,274
Net costs	**165,405**	**165,994**	**166,269**	**167,299**	**168,510**
Current costs	164,793	164,793	164,793	164,793	164,793
Total revenue impact	**612**	**1,201**	**1,476**	**2,506**	**3,717**

12.5.2 The table above indicates the total recurring revenue consequences of the preferred option which results in a net cost of £3.717m. The full year impact of this will be in place from 2017/18 onwards. The intermediate years 2013/14 to 2016/17 include funding secured from the unscheduled care plan (LUCAP & ECQIP) and outlined within the Board's medium term financial plan; this is in relation to investment associated with the new model of care which is being implemented across this planning timeframe.

12.5.3 The revenue consequences can be split into the following key components.

Figure 36: Key components of revenue impact - £000

	£000
Depreciation	911
Nursing for front door	2,916
Released nursing from specialty bed reductions	(712)
Non-clinical costs (pay & non-pay)	602
Total revenue impact	**3,717**

12.5.4 These costs are a result of:

- Depreciation as a result of investing in infrastructure without releasing any current estate and associated depreciation
- Staffing to deliver the model of care at the front door and to deliver increased capacity to 2018 (quality premium associated with ensuring right staff in right place at right time to deliver new ways of working / pathways to meet projected patient demand)
- Reduction in nurse staffing available to transfer (albeit at a reduced level when compared to OBC) from reduction in specialty beds
- Non-clinical costs for pay and non-pay associated with the increased building footprint

12.5.5 Having considered the outcome from the workforce assessments / benchmarking work and site visits supporting the planned improvement in staffing at the front door, the NHS Board has agreed that the resulting net revenue cost of £3.717m will be covered as an approved cost pressure for quality of care improvements in the forward Financial Plan.

12.6 Impact on the Balance Sheet

12.6.1 The Board's valuers have reviewed the proposed plans and identified that life expectancy for Crosshouse and Ayr hospitals will not be materially changed through this investment.

12.6.2 The valuer's have also determined that the vast majority of the investment will be value adding in terms of the asset valuations with non-value adding impairments quantified at 5% of the capital costs. Under IFRS this impairment will require to be recognised on completion of construction works. It is assumed that the valuer's assessment will be undertaken post completion and therefore the balance sheet impact is likely to be in 2017/18. This has been included in the AME asset impairment returns to SGHSCD.

12.6.3 The project impact on the balance sheet over the period to 2017/18 years is shown below.

Figure 37: Projected balance sheet impact of the scheme to 2017/18 £000

	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
Existing Land	2,500	2,500	2,500	2,500	2,500	2,500
Existing Buildings	104,776	104,776	104,776	104,776	104,776	104,776
External works	10,268	10,268	10,268	10,268	10,268	10,268
New Buildings	-	-	1,255	10,271	22,875	29,152
Historical fees	2,143	-	-	-	-	-
Assets under construction	-	1,255	9,016	12,604	6,277	-
Impairment	-	-	-	-	-	(1,568)
Non-cash DEL funding	(2,143)	-	-	-	-	-
Total relevant assets	**117,544**	**118,799**	**127,815**	**140,419**	**146,696**	**145,128**

12.7 Summary of Key Points

12.7.1 This section has set out the overall capital and revenue affordability for the preferred option. This indicates a requirement for:

- Total capital funding of £27.584m inclusive of optimism bias; funded by traditional public capital funding from the central contribution from Scottish Government Health and Social Care Directorates and the NHS Board's capital allocation.
- Additional annual net revenue costs of £3.717m from 2018/19 onwards. This will be covered from cost pressure funding in the NHS Board's Financial Plan.
- Non-recurring revenue funding to cover anticipated impairment of £1.568m, to cover the impairment on completion of the works will be provided by SGHD for this to be accounted for as Annually Managed Expenditure (AME)
- Non-cash DEL revenue funding of £2.143m to cover non-value adding historical fees up to and including OBC stage being accounted as revenue non-cash DEL in 2013/14

MANAGEMENT CASE

13 PROJECT MANAGEMENT & PROJECT IMPLEMENTATION TIMETABLE

13.1 Overview

13.1.1 This section provides an update to the project management arrangements set out within the FBC. This includes updates to the following key areas

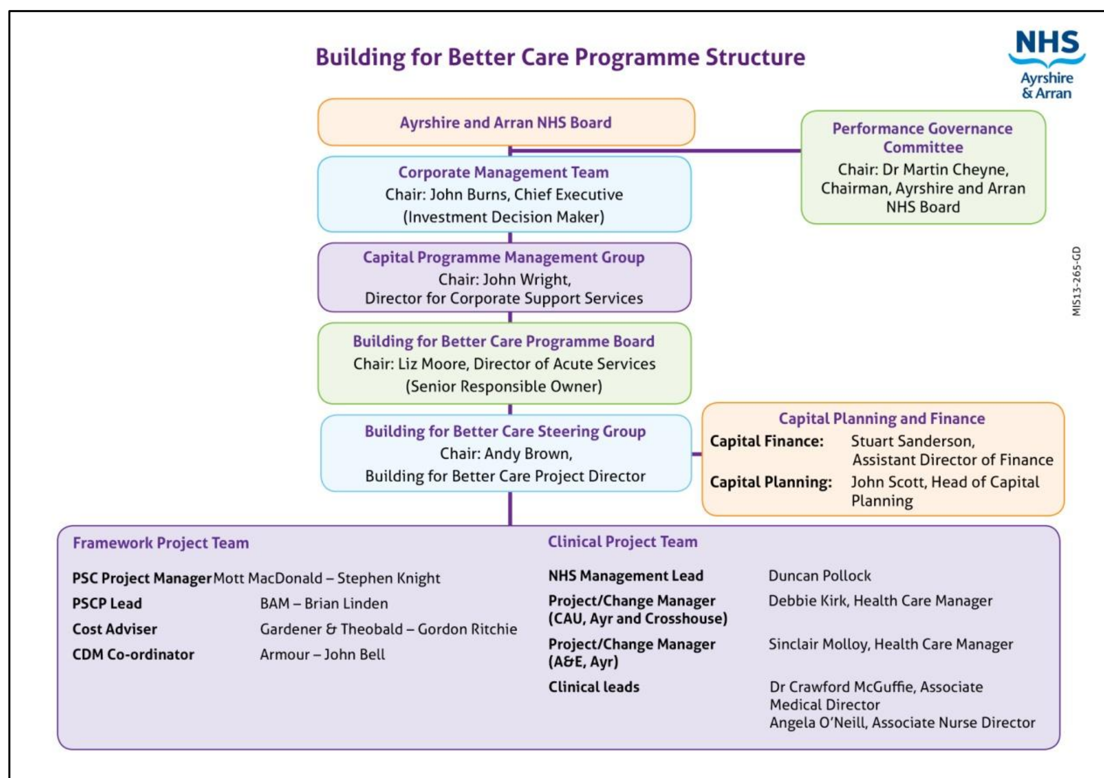
- The project framework
- Project roles and responsibilities
- Updated project plan
- Project communication and reporting arrangements
- Gateway review

13.2 The Project Framework

13.2.1 The diagram below sets out:

- The overall governance structure
- How the Building for Better Care Programme Board and the Project Teams fit into this structure
- The key roles for the redevelopment – the Senior Responsible Owner (SRO), Project Director and the appointed Professional Service Consultants (PSC) Manager

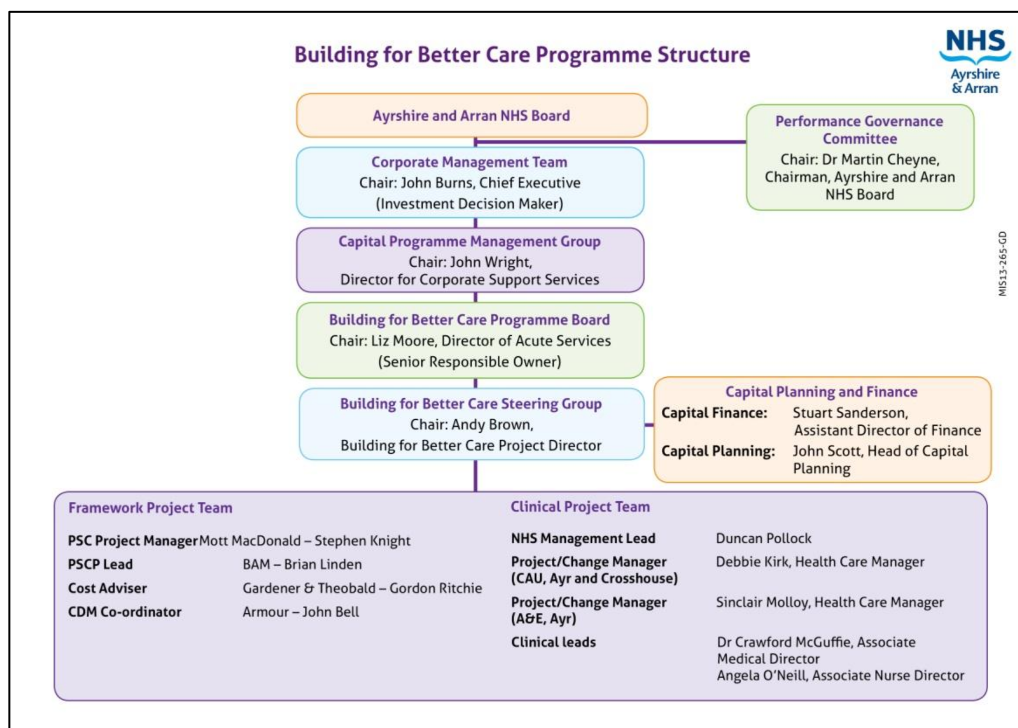
Figure 38: Governance Structure



13.2.2 The Senior Responsible Owner (SRO) chairs the Building for Better Care Programme Board. The NHS A&A Board Project Director and PSC Project Manager work collaboratively ensuring effective progress of the project and jointly lead the project team.

13.2.3 To support the delivery of the programme the following programme team has been established.

Figure 39: Programme Team



13.2.4 To supplement the team, four appointments / secondments were agreed by the BfBC Programme Board in relation to:

- NHS Management Lead
- Two Pathway Facilitators
- Administration Assistant

13.2.5 The posts were drawn from within the existing NHS Ayrshire & Arran staff complement and funded through the BfBC programme.

13.3 Project Roles and Responsibilities

13.3.1 The detailed roles and responsibilities of the Boards and Teams within the project structure are set out in the table below.

Figure 40: Roles and responsibilities

Team or Group	Responsibilities
NHS Ayrshire & Arran Board	▪ Oversee the project ▪ Review the progress ▪ Approve the business case ▪ Resolve matters outside Board's delegated authority
Corporate Management Team	▪ Deliver the service modernisation programme ▪ Develop vision of NHS A&A overall clinical services strategic direction ▪ Agree and prioritise the Capital Plan ▪ Maximise the integration of development opportunities across directorates and with external partners ▪ Authorise mandate for capital planning programme i.e. initial agreements, and submit to CPMG to ensure strategic fit ▪ Endorse bids for capital allocation, ensuring that they are processed in line with Standing Financial Instructions (SFIs) and where appropriate submitted to Finance Committee for approval for those projects in excess of £1.5m ▪ Report to Audit Committee on the process and outcome of gateway reviews ▪ Ensure the Capital Plan is aligned to support service development priorities ▪ Monitor progress of programme against programme objectives ▪ Resolve issues which need the agreement of senior stakeholders to ensure progress of programme ▪ Provide recommendations to the NHS Board on Property Strategy ▪ Provide commitment and endorsement of programme at communication events ▪ Support the Senior Responsible Officer (SRO) ▪ Exercise leadership/ championing the Capital Plan ▪ Confirm sign off at programme closure
Capital Programme Management Group	▪ Accountable and responsible to Corporate Management Team delivery of individual projects / programmes within agreed timescales and costs ▪ Monitor and investigate variances ▪ Define acceptable risk profiles and thresholds for the

Team or Group	Responsibilities
	programme ▪ Ensure programme is delivered within agreed parameters (cost, timescale) ▪ Resolve strategic issues between projects which need the agreement of senior stakeholders to ensure progress of programme ▪ Provide assurance of operational stability and effectiveness throughout the programme delivery lifecycle ▪ Overall management of requests for changes to office accommodation
Building for Better Care Programme Board	▪ Establish project organisation ▪ Agree and prioritise the Project Capital Plan ▪ Maximise the integration of development opportunities across directorates and with external partners ▪ Authorise the allocation of project funds ▪ Monitor project performance against strategic objectives ▪ Resolve strategic issues which need the agreement of senior stakeholders to ensure progress of project ▪ Maintain commitment to the project ▪ Promote the project at communication events ▪ Produce the FBC document ▪ Manage the governance structure ▪ Co-ordinate submission of Papers
Building for Better Care Programme Steering Group	▪ Meet as required to report and review progress. ▪ Agree responsibilities for the production of information and documentation. ▪ Receive and agree actions on reports from the User and Project Groups, Adviser Team and other bodies. ▪ Prepare and develop the Brief ▪ Agree the content of operational policies. ▪ Agree the schedules of accommodation. ▪ Agree the provision of equipment. ▪ Agree the risk models including transferred and retained risks. ▪ Agree the design proposals. ▪ Make recommendations for approval to the Building for Better Care Programme Board.

13.3.2 The key roles are those of the Investment Decision Maker, Senior Responsible Owner, Board Project Director PSC Project Manager and Change Managers. These are summarised and named individuals outlined in the table below with further details in **Appendix A1**.

Figure 41: Key roles

Role	Named Individual	Summary of Role
Investment Decision Maker (IDM)	**John Burns, Chief Executive**	Decides whether to invest financial and human resources in any given project, and correspondingly will have ultimate responsibility.
Senior Responsible Owner (SRO)	**Liz Moore, Director of Acute Services**	The SRO is the Project lead from the outset. Accountable directly to the Capital Programme Board and provide the strategic direction, leadership and ensure that the business case reflects the views of all stakeholders.
Board Project Director	**Andy Brown**	The Board Project Director is the Project Lead from the outset, and provides the strategic direction, leadership and ensures that the business case reflects the views of all stakeholders.
PSC Project Manager	**Stephen Knight , Mott MacDonald**	The PSC Project Manager works collaboratively with the Board Project Director in ensuring the step to step delivery of the project and managing the Project Team.
Board Project / Change Managers	**Debbie Kirk (CAU)** **Sinclair Molloy (ED)** **Duncan Pollock (Management lead)**	Working collaboratively with the Board Project Director and as an integral part of the Clinical Project Team in ensuring that the required changes associated with the proposed service models in their respective service areas are successfully implemented and that assocated benefits realised

13.3.3 There are three other parties involved in the project, whose roles are summarised in the table below.

Figure 42: Other parties' roles and responsibilities

Role	Key responsibilities
Health Facilities Scotland Team	▪ Manage the strategic direction of the framework ▪ Ensure appropriate support is provided to NHS clients ▪ Co-ordinate and provide training ▪ Collate and review performance data ▪ Ensure best practice is shared throughout Scotland and the UK ▪ Specifically supports the identification of equipping needs
Principal Supply Chain Partner – BAM Construction	▪ Work as a partner with the NHS Ayrshire and Arran Board and lead the process of design development, procurement, construction and commissioning applying the principles of Framework Scotland ▪ Undertake the role of Principal Contractor responsible for the management and coordination of design and construction activities ▪ Providing scheme deliverables including but not limited to design of the works; cost planning; value engineering and all other associated activities typically undertake by a competent design and build contractor with early involvement
PSC Cost Consultant – Gardiner Theobald	▪ Engage, manage and monitor consultants, contractors and suppliers necessary for the completion of the Project, in conjunction with the Board Project Director and PSC Project Manager ▪ Implement the Project Execution Plan ▪ Carry out the duties identified in the Management of the Project in accordance with all Health Facilities Scotland directorates and guidance

13.3.4 The project management approach also sets out the level of responsibility for tasks throughout the project. The four categories of responsibility are set out below:

- **Accountable "A"** - The individual/organisation who is ultimately accountable for the activity. Has yes or no authority and veto power. Only one "A" can be assigned to an activity
- **Responsible "R"** - The individual(s) / organisation(s) who perform the activity and do the work. Responsibility can be shared. The degree of responsibility is determined by "A"

- **Consulted "C"** - The individual(s) / organisations(s) that need to be consulted prior to a final decision or action. This is a two way communication process
- **Informed "I"** - The individual(s) / organisations(s) that need to be informed after the decision or action is taken. This is a one way communication process

13.3.5 **Appendix I1** summarises the tasks with associated level of responsibility at FBC stage, as well as the Design, Construction and Handover stages. The appendix sets out who is responsible for the task and the level of responsibility of each of the parties. Responsibilities at Commissioning and Project Completion have been allocated but are not shown in this document for brevity.

13.4 Project Plan

13.4.1 The dates detailed in the table below highlight the key milestones for the project.

Figure 43: Project milestones

Milestone	Responsibility	Date
Submission of FBC to BfBC Programme Board	BfBC Steering Group	13th November 2013
Approval of FBC by BfBC Programme Board	BfBC Programme Board	20th November 2013
Submission of FBC to Capital Programme Management Group (CPMG)	BfBC Programme Board	27th November 2013
Approval of FBC by Capital Programme Management Group	CPMG	4th December 2013
Submission of FBC to Corporate Management Team (CMT)	BfBC Programme Board	10th December 2013
Approval FBC by CMT	CMT	17th December 2013
Submission of FBC to Performance Committee	BfBC Programme Board	18th December 2013
Approval FBC by Performance Committee	Performance Committee	13th January 2014
Submission of FBC to NHS A&A Board Approval	BfBC Programme Board	13th January 2014
NHS A&A Board Approval	A&A Board	3rd February 2014
Submission of FBC to SGHSCD CIG	BfBC Programme Board	4th February 2014
SGHSCD CIG FBC Approval	SGHSCD	11th March 2014
Construction commence (enabling works)	PSCP	May 2014
Construction complete	PSCP	February 2017
Post project evaluation	BfBC Steering Group	August 2017 *(6 month following completion)*

Milestone	Responsibility	Date
Post occupancy review	BfBC Steering Group	February 2019 *(2 years following completion)*

13.4.2 The detailed project plan is shown in **Appendix I2**.

13.5 Project Communication and Reporting Arrangements

13.5.1 A meeting schedule has been developed for the engagement and management of stakeholders. This includes details of all planned meetings in order to ensure effective communication.

13.5.2 All formal communication between representatives shall be issued through the PSC Project Manager or Board Project Director.

13.5.3 The main method of communication of records will be via e-mail. All e-mails will be copied to the Board Project Director for record purposes.

13.5.4 Regular meetings have been arranged in order to manage, control and monitor issues throughout the FBC process.

13.5.5 Minutes will be taken at all meetings to ensure the task-focus of the project, prior to the closure of each meeting, an agreed action list will be circulated and agreed by all team members.

13.5.6 NHS Ayrshire and Arran have undertaken a progressive and constructive consultation process in developing this FBC and preparing for the redevelopment of both the Ayr and Crosshouse Hospitals. The following parties have been key in the stakeholder consultation:

- NHS Ayrshire & Arran Board;
- The Principal Supply Chain Partner and their contractors;
- Public & Patients; and
- Local Authority

Board and the PSCP or their contractors and other NHS Ayrshire and Arran Stakeholders

13.5.7 NHS Ayrshire and Arran have conducted a series of consultations with relevant NHS stakeholders and Health Facilities Scotland. These are listed in **Appendix I3**.

13.5.8 The comments and output from these consultations have been considered throughout preparation of this Full Business Case.

Staff

13.5.9 The Board have held two staff events to share information on the project including the new model of care, bed modelling work undertaken and to table the latest plans and drawings.

13.5.10 Staff were able to view "fly through" videos of the latest plans and had the opportunity to seek clarity on any aspect of the programme.

13.5.11 Further staff awareness sessions are planned following FBC approval.

Public & Patients

13.5.12 Public and patient engagement is critical to the success of the project and as such NHS Ayrshire and Arran have implemented a robust consultation process with the public as end users of both the Ayr and Crosshouse Hospital redevelopments.

13.5.13 On a wider Ayrshire and Arran basis the Board carried out a series of road shows, "Bringing your NHS to you" over the summer. They were designed to highlight the range of activities underway to support and improve health and wellbeing, share the purpose, values and commitments and provide the opportunity to meet Directors and non-executive board members.

13.5.14 The summer edition of "Healthwise" the quarterly health news publication contained a wide range of details from the Building for Better Care programme including an outline of the new facilities and draft timescales.

13.5.15 Further public engagement is planned following FBC approval including the establishment of information boards outlining the plans at both hospital foyers.

Local Authorities

13.5.16 There is ongoing informal and formal dialogue with the Local Authorities as part of the submission process for planning permission and building warrants.

13.6 Project Reporting Arrangements

13.6.1 The internal reporting arrangements and responsibilities including links with the Principal Supply Chain Partner are as follows:

- All members of the Building for Better Care Programme Board / Steering Group will have individual responsibilities for cascading project information through their respective service functions
- The Board Project Director and coordinators will be responsible for producing a monthly progress report to their own organisations and to the Project Board on progress, opportunities, any potential problems and project risks
- The PSC Project Manager will produce a monthly progress report in advance of the monthly progress meeting including a summary of the current status of the project and any key issues that have arisen

- The PSC Cost Consultant will produce a monthly report including a financial analysis of approved and forecast project expenditure for monthly progress meetings and Board Advisors Meetings
- The Board SRO will be responsible for producing formal Board Reports
- The Board SRO will be responsible for producing ad hoc reports to the Building for Better Care Programme Board

13.6.2 Hard copies of all documents will be maintained by those parties responsible for document control.

13.6.3 The external reporting arrangements and responsibilities are as follows:

- The Board Project Director will be responsible for providing the key link with major stakeholders not represented on the Building for Better Care Programme Board to report progress
- The Board Project Director will be responsible for the inclusion of the public in the proposed developments
- Any required media management will be in accordance with the Board's media policy
- The Building for Better Care Programme Board will consider the production of a regular newsletter for internal and external communication purposes. Responsibility for production and frequency (if required) to be identified

13.6.4 A copy of the Project Execution Plan is shown **in Appendix I4** which provides full details of the project management arrangements.

13.7 Gateway Review

13.7.1 The OGC Gateway Review process examines programmes and projects at key decision points in their lifecycle. It looks ahead to provide assurance that they can progress successfully to the next stage. Gateway reviews deliver a "peer review" in which independent practitioners from outside the programme / project use their experience and expertise to examine the progress and likelihood of successful delivery of the programme or project.

13.7.2 At Full Business Case stage in the investment cycle the relevant decision point relates to Gateway 3 "Investment Decision". It investigates the Full Business Case and the governance arrangements for the investment decision to confirm that the project is still required, affordable and achievable. The Review also checks that implementation plans are robust.

13.7.3 The dates for Gateway 3 assessment of this project are 27th and 28th January 2014.

13.8 Conclusion

13.8.1 This section of the FBC shows that NHS Ayrshire & Arran have developed a robust project management framework outlining the project strategy and methodology based on best practice, the roles and responsibilities of key project members, the project communication and reporting arrangements and the project plan including key project milestones.

13.8.2 Scottish Government Gateway Review support will be provided to the project.

14 CHANGE MANAGEMENT

14.1 Overview

14.1.1 This section sets out NHS Ayrshire & Arran's approach to change management and how it helps to deliver the preferred option, discussing:

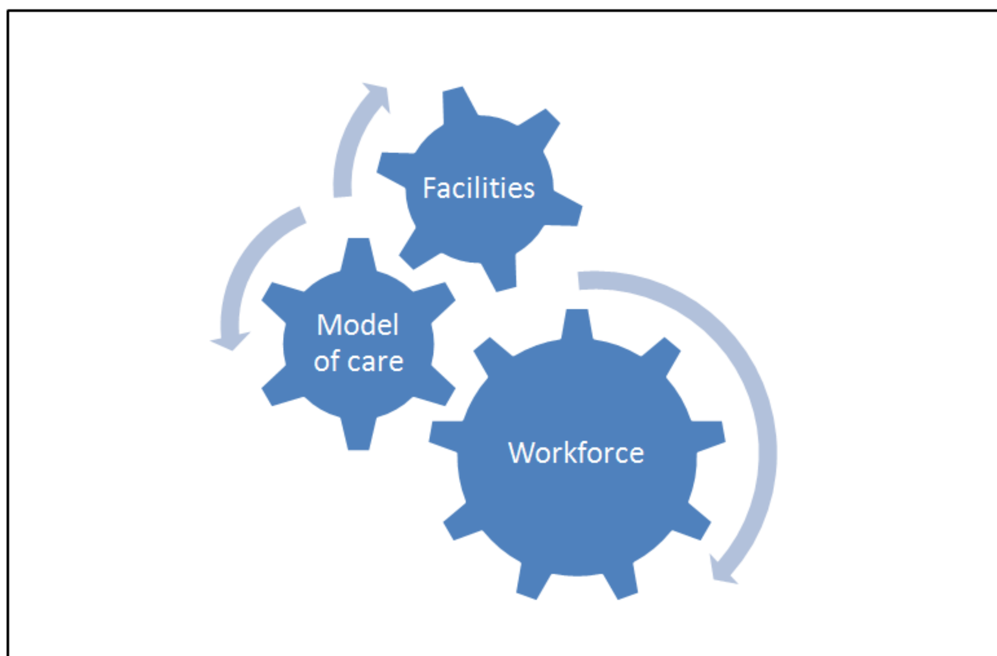
- Change management philosophy
- NHS Change Management model
- The current change management plan

14.2 Change Management Philosophy

14.2.1 The redevelopment of front door services at Ayr and Crosshouse hospitals represents a significant change point for the Board. The change to the physical infrastructure is simply an enabler to a more fundamental change in the way that healthcare will be delivered for the residents of Ayrshire & Arran.

14.2.2 The simplified diagram below shows the three key elements encompassed

Figure 44: Scope of change



14.2.3 The impact of the change on these three aspects of the organisation will be fundamental. The table below summarises some of the main impacts of the changes across four areas as indicated below.

Figure 45: Impact of change

Area	Impact
Culture	The culture of the organisation will change from one where care is provided in an acute focused silo to one where the patient is seen as being at the centre of care, irrespective of the extent of the contribution of acute care to the overall treatment and patient pathway. The need for improvements in quality, will sit at the heart of these changes. These changes will impact upon culture and therefore staff right across the Board.
Systems	Systems will be more responsive and geared to supporting the new models of care, both within the hospital and across acute and primary care. In particular more emphasis will be placed on good communication and effective handover between acute and primary care to make the patient experience seamless.
Processes	New models of care will introduce new clinical processes and change roles and responsibilities of clinical staff. The emphasis of the clinical processes will be a speedier treatment without compromise on patient quality. The physical environment will also improve the way care is delivered and mean that some of the approaches adopted in the past because of restrictions in physical configuration
People	There will be changes to roles and responsibilities, particularly for clinical staff. Some of this will arise from clinical process within the hospital, whereas other changes in roles will come from the way the focus of care will shift from purely acute to more pathway based care.

14.2.4 The Board's change management philosophy is to:

- Recognise the significance of the change
- Embrace the change, taking the opportunity to improve the quality of healthcare to maximise benefits realisation from the investment
- Implement the change in a structured and well managed way to empower staff to succeed

NHS Change Management Model

14.2.5 The NHS Change Model has been created to support the NHS to adopt a shared approach to leading change and transformation. It brings together what makes change happen and informs how we make change happen and who needs to be involved and is shown below:

Figure 46: NHS Change Model

14.2.6 NHS Ayrshire & Arran have reviewed the NHS Change Model and used each of the eight components to shape the way in which the process is managed. In particular evaluating the BfBC programme against each area:

- **Our shared purpose** - does this improvement meet our shared NHS purpose? The new front door facilities delivered through BfBC support the NHS Ayrshire & Arran purpose of, "Working together to achieve the healthiest life possible for everyone in Ayrshire and Arran". The proposed investment provides modern, fit for purpose facilities which allow the latest model of care to be fully implemented
- **Leadership for change** - do all our leaders have the skills to create transformational change? Leadership is at the centre of the BfBC programme and the development of the new model of care. This is provided from the clinical leads for both medicine and nursing and the change managers.

- **Engagement to mobilise** - are we engaging and mobilising the right people? The programme has been the subject of wide engagement e.g. the development of the workforce planning included representatives from a wide range of clinical services.
- **System drivers** - are our processes, incentives and systems aligned to enable the change? Supporting workstreams managed through Service Futures to deliver the changes in the model of care for unscheduled care
- **Transparent measurement** - are we measuring the outcome of the change continuously and transparently? Project leads have identified measures for each of the model of care improvements
- **Rigorous delivery** - do we have an effective approach for the delivery of the change and monitoring of progress towards our planned objectives? Project office established to use best practice project management techniques to deliver the change.
- **Improvement methodology** - are we using an evidence-based improvement methodology? Adoption of best practice and Kaiser techniques
- **Spread of innovation** - are we designing for the active spread of innovation from the start? Wide use of knowledge transfer/peer group review from other areas for example direct admission from GP assessment taken from clinicians work elsewhere

14.2.7 The change management philosophy and change management principles are being communicated to all staff as part of the launch of the change management process.

14.2.8 The Board has designed a change management approach that encompasses the philosophy and principles outlined above and has already made progress in delivering a Core change management plan to implement the changes required to make the redevelopments a success.

14.3 The Current Change Management Plan

14.3.1 A core change management plan has been developed that sets out the key tasks for the project's change management plan.

14.3.2 The table below sets out the core plan and the main tasks identified.

Figure 47: Core change management plan

Area	Key tasks
Ongoing work	▪ Appointment of pathway facilitators to begin to implement the new model of care ahead of the new facilities opening ▪ Continued engagement with key stakeholders and interested parties both within and outside hospital e.g. recent engagement with Scottish Ambulance Service ▪ Refine plan in more detail, identifying high level milestones for change management plan, mapped to the overall project plan ▪ Continued input from workforce change as the Workforce Plan is further developed
Communications and stakeholder engagement	▪ Confirm communications lead and protocols (route and timing of approval of comms messages) ▪ Develop communications routes, including face to face briefings (whole Board, individual groups, and 'surgeries'), bulletins, intranet pages ▪ Formulate and agree key communications messages against high level milestones ▪ Set up stakeholder map and engagement plan ▪ Formal launch of the change programme ▪ Ongoing communications work
Training and development	▪ Complete detailed workforce planning to identify 'shadow' structures, roles and competencies for those roles ▪ Identify training and development required to fulfil roles and competencies within new model of care and new facilities ▪ Develop training plan, aligned to pilot work and overall milestones in implementation plan ▪ Link training and development into communications plan

Area	Key tasks
Piloting	▪ Identify lessons learnt from pilots and put in place plans to roll out ▪ Confirm schedule of pilot work, mapped against high level project and change management milestones ▪ Agree feedback arrangements from pilots and how this links into training/development, communications and overall change management plan ▪ Execute pilots, feedback and report progress
Full Implementation	▪ Identify scheduling/phasing of full implementation of the model of care at both Ayr and Crosshouse sites ▪ Using results of piloting and training work, develop detailed implementation and transition plan, mapped to project phasing ▪ Discussion and agreement with key staff ▪ Execute Implementation and transition plans

14.4 Conclusion

14.4.1 The Board has:

- A sound change management philosophy, underpinned by specific change management principles.
- Developed a clear approach to change management, to facilitate effective delivery.

15 BENEFITS REALISATION PLAN

15.1 Introduction

15.1.1 NHS Ayrshire & Arran have developed a robust framework for measuring the benefits which is largely based on the principles and practical steps outlined in the Scottish Capital Investment Manual (SCIM) and associated workshop material provided by Scottish Government.

15.1.2 This section provides details of the process undertaken and the framework developed to measure the benefits.

15.2 Background to the Benefits Realisation Process

15.2.1 A BRP is the process of organising and managing the identified benefits during project implementation, such that the potential benefits arising from the planned investment are actually realised.

15.2.2 A BRP needs to be explicit, and proactively managed, in order for the organisation to be capable of realising the wide range of potential benefits of the project (as well as avoiding possible negative impacts).

15.2.3 The BRP is used to identify what benefits will result from the Project and how these will be measured. This provides evidence that the investment has been worthwhile to the local health economy post project implementation.

15.2.4 Additionally, all benefits identified should be defensible against third party scrutiny.

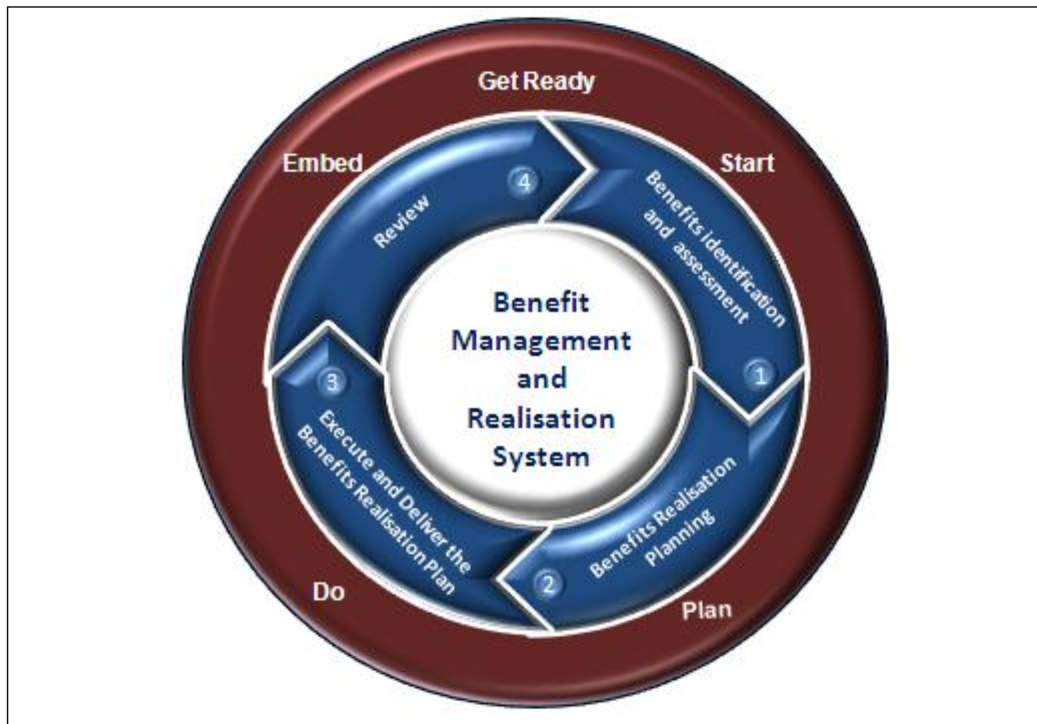
15.2.5 This section of the report outlines the benefits realisation process, describes its key elements and sets it in the wider context of benefits management.

15.3 Benefits Management

15.3.1 Benefits management is the overarching process of continuous review which incorporates the BRP as part of a process of continuous improvement. It takes due account of changes in the project during the delivery phase which impact on, or alter the anticipated benefits.

15.3.2 The benefits management approach is a cycle of selection, planning, execution and review as illustrated below.

Figure 48: Benefits management approach



15.3.3 Further details of each stage is provided below.

- Stage 1 - Benefits Identification and Assessment: Selection of appropriate and significant benefits that makes the best use of scarce resources
- Stage 2 - Benefits Realisation Planning: Rational decisions about how, when, and by whom benefits will be delivered, with clear ownership, accountability and timetable
- Stage 3 - Execute and Deliver the Benefits Realisation Plan: Successful delivery of the Benefits Realisation Plan

  Stage 4 - Review: Input to a culture of continuous improvement either through incremental change to the existing system or by triggering the inception of new programmes / projects

15.4 Benefits Realisation Workshops

15.4.1 In follow up to the earlier benefits realisation work undertaken as part of the FBC, two specifically tailored benefits realisation workshops were organised and run to further develop the chosen benefits management approach.

15.4.2 Involving a representative range of key stakeholders the workshops helped to identify, assess and organise all expected benefits into a comprehensive Benefits Map which in turn provided the basis of the project's overarching Benefits Realisation Plan that fully addresses each stage of benefits management and realisation system outlined above.

15.4.3 Further details of each workshop and the outputs are shown below.

Workshop 1 – Identify Benefits and developing the Benefits Dependency Map

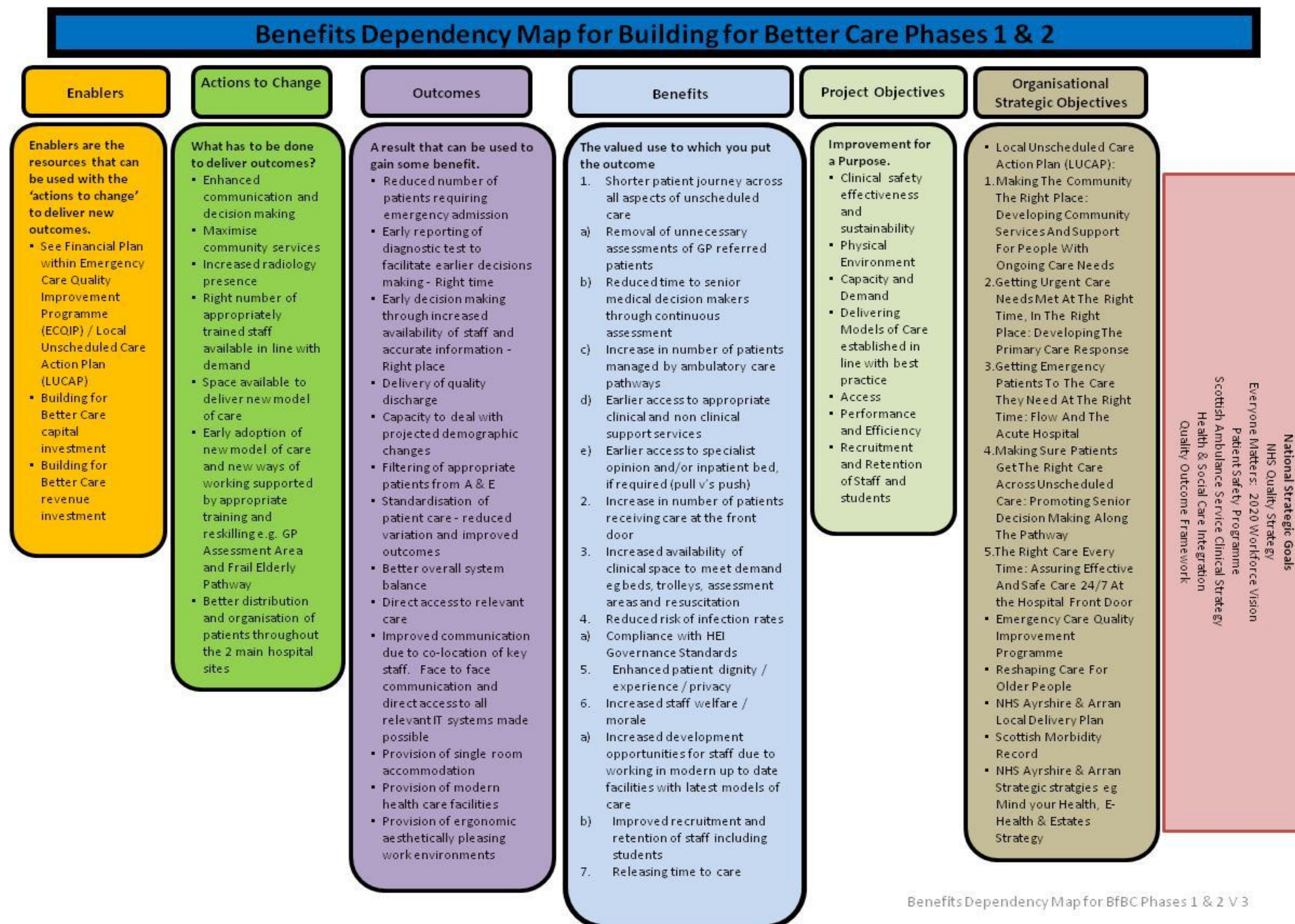
15.4.4 The purpose of the first workshop, held in August 2013 was to develop an expansive appreciation of all possible benefits organised under the Project's seven investment objectives so all possible advantages and merits of the project could be assessed for inclusion and potential realisation. To assist in this regard and to make best use of the collective time invested in the workshop a pre-populated table mapping the benefits against the project's investment objectives was circulated to the participating group.

15.4.5 The attendees were asked to review the contents of the table and assess each benefit in terms of suitability for inclusion, relevance to the project and the assigned investment objective. Further to this attendees were asked to identify any other benefits and suggest refinements to those already identified for inclusion.

15.4.6 The overall direction from the group was that fewer benefits should be included and that those benefits considered as being more significant should be organised and described in a clear concise fashion. This guidance informed the development of a concise draft benefits map that clearly sets out the main benefits. Those who attended and participated in the first workshop are listed in **Appendix J1**.

15.4.7 To provide further refinement and clarity the management lead for the project used the material to develop a Benefit Dependency Map (BDM) which is shown below:

Figure 49: Benefits Dependency Map



15.4.8 The draft BDM was used to connect the following key information and provide the basis for the second benefits workshop where participants were asked to endorse the contents and layout of the draft benefits map and provide clear details about how, when, and by whom benefits will be delivered (to clarify ownership), and accountability of individuals to deliver the changes and benefits within the prescribed timeframe.

15.4.9 The contents of the draft BDM were organised under the headings below.

- **Objectives** - describe the purpose of the programme or project and provide an overall measure of its success. Three levels of objectives were identified, namely:
  - National
  - Organisational NHS Ayrshire & Arran
  - Project specific

- **Benefits** - describe what specific stakeholders value about achieving the objectives and about any outcomes required to achieve the objectives.
- **Outcomes** - describe specific aspects of the 'future-state' which need to be in place or happening for other outcomes to be delivered and/or for the objectives to be achieved. Each outcome will specify how it differs from the status quo – in most cases this difference will be an improvement. As noted above, outcomes will be used to identify stakeholder benefits.
- **Actions to Change** - describe the change projects and/or work packages required to deliver the outcomes
- **Enablers** - describe existing (or anticipated) capabilities which can be used or exploited to support delivery of the outcomes.

Workshop 2 - Refining the BDM and developing Benefit Profiles

15.4.10 Participants at the first workshop requested an updated and more concise list of identified benefits based on their feedback as the prime output from the first benefits workshop. This direction resulted in the development of the draft BDM outlined above.

15.4.11 Those in attendance endorsed the new approach and welcomed the clear layout of the BDM whilst acknowledging the relevance of the headings and their attendant definitions. Thereafter the group discussed the BDM in detail refining points along the way and suggesting presentational changes that informed the final version of the BDM. Moreover the group was asked to consider each benefit in turn to identify ownership and those best placed to make the changes that will secure realisation of the benefit within the required timeframe.

15.4.12 The ensuing discussions yielded clear views around ownership allowing draft benefits profiles to be developed for each benefit that clearly set out each benefit in terms of what will happen or be different, what will enable the change, what needs to change organisationally, how the benefit will be measured, the risks involved and perhaps most importantly who is accountable for realising the change and its benefits.

15.4.13 Thereafter draft benefits profiles were refined in conjunction with the identified owners and finalised for inclusion in this FBC. Please see **Appendix J2**.

15.5 Conclusion

15.5.1 The Board has a robust benefits management strategy in place that will secure the improvements required and ultimately the overall objectives of the planned investment.

15.5.2 A review of best practice methodologies has been undertaken and the principles contained with Government guidance have been adopted.

16 RISK MANAGEMENT PLAN

16.1 Overview

16.1.1 This section sets out NHS Ayrshire & Arran's approach to risk management, discussing:

- Risk management philosophy
- Categories of risk
- The current risk management plan
- Responsibility for managing the Risk Register
- The current Risk Register

16.2 Risk Management Philosophy

16.2.1 The Board's philosophy for managing risks is a holistic approach, seeing effective risk management as a positive way of achieving the project's wider aims, rather than simply a mechanistic 'tick box' exercise, to comply with guidance. The organisation regards risk as the mirror opposite of benefits. Inadequate risk management would therefore reduce the potential benefits to be gained from the project.

16.2.2 The Board recognises the value of putting in place an effective risk management framework to systematically identify, actively manage and minimise the impact of risk. This is done by:

- Identifying possible risks before they crystallise and putting mechanisms in place to minimise the likelihood of them materialising with adverse effects on the project;
- Putting in place robust processes to monitor risks and report on the impact of planned mitigating actions;
- Implement the right level of control to address the adverse consequences of the risks if they materialise;
- Having strong decision making processes supported by a clear and effective framework of risk analysis and evaluation.

16.2.3 The response for each risk will be one or more of the following types of action:

- Prevention, where countermeasures are put in place that either stop the threat or problem from occurring, or prevent it from having an impact on the business or project.
- Reduction, where the actions either reduce the likelihood of the risk developing or limit the impact on the business or project to acceptable levels.
- Transfer, the impact of the risk is transferred to the organisation best able to manage the risk, typically a third party (e.g. via a penalty clause or insurance policy).
- Contingency, where actions are planned and organised to come into force as and when the risk occurs.

- Acceptance, where the BfBC Programme Board decides to go ahead and accept the possibility that the risk might occur, believing that either the risk will not occur or the potential countermeasures are too expensive. A risk may also be accepted on the basis that the risk and any impacts are acceptable.

16.3 Categories of Risk

16.3.1 In developing the FBC, the Board examined three categories of risks. These are set out in the table below, together with a summary of how these were assessed.

Figure 50: Risk areas

Area	Description	How assessed	How managed
Capital risks	Capital risks relate to unknown or unidentifiable factors that increase the cost and time of the project construction. Note these are split into risks held by the PSCP and those held by the Board.	Qualitative and quantitative risks assessed by PSCP and PSC	Allowance within the target cost for both but separately identifiable
Optimism bias	Optimism bias is the demonstrated systematic tendency for appraisers to be over optimistic about key project parameters. This creates a risk that predicted outcomes do not fully reflect likely costs	Standard methodology to identify extent of optimism bias, with mitigating factors confirmed through Board assessment in conjunction with their cost advisor	% allowance included in the final target cost
Revenue risks	These are risks relating to everyday management encompassing cost and activity as well as external environmental factors	Risks identified, with quantitative and qualitative assessment through workshop	Managed through risk management plans.

16.3.2 The risk values were identified and evaluated as part of the assessment process in choosing the preferred solution. Although the focus of this section is on the approach to managing the risks of the preferred solution, the scope of risk management will continue to cover all three areas of risk.

16.4 The Current Risk Management Plan

16.4.1 The Board has developed a risk register that will enable effective management of the risks identified in the risk analysis. The risk register covers all areas of risk, both those assessed and measured and wider project risks, and has been developed through a series of workshops, meetings and discussion with key project members to provide a mechanism for managing the projects risks even at this early pre approval stage.

16.4.2 The Board has designed a simple risk management framework that focuses on effective identification, reporting and management of risks. There are only three roles in the risk management process, which are summarised below.

Figure 51: Risk management roles

Role	Responsibility	Reporting & accountability
Risk management lead	Manages the process for identifying and addressing risk, maintaining the risk register on a day to day basis	SRO and BfBC Programme Board
Risk management sub group	Brings together key risk owners to co-ordinate the identification and assessment of risks plus the management of key risks	Project Steering Group and BfBC Programme Board
Risk owner	Individual or group responsible for developing and implementing risk mitigation measures for individual risks they are responsible for	Risk management lead and Risk management sub group

16.5 Responsibility for Managing the Risk Register

16.5.1 The responsibility for managing the risk register lies with the PSC Project Manager who will review the risk register and where necessary hold risk reduction meetings as and when required. Otherwise, the risk register will be issued on a monthly basis with updated changes.

16.6 The Current Risk Register

16.6.1 The risk register has been regularly reviewed and updated to determine the potential cost associated with each risk (see **Appendix E3)**

- A description and cause of the 110 risks that have been identified (note separately identified for each site – 53 Crosshouse & 57 Ayr)
- A description of the potential impact associated with each risk
- The risk assessment for each risk using a Probability x Impact score to categorise them;
    - **Red** (score >12) – 3 (3%) of total risks

- **Amber** (score 9-12) – 14 (13%) of total risks
    - **Green** (score <6) – 93 (84%) of total risks
- The risk action plan and progress
- The mitigation, status and due date
- Ranking order of the risks
- The risk owner and individual responsible for taking action - now identified for all risks

16.6.2 The risk register is already being regularly monitored to identify the change in the potential impact of the risk.

16.6.3 This is a normal risk pattern at this stage of the project and the active monitoring of risks will continue throughout the project. Where new risks are identified, these are communicated to the BfBC Programme Board and the risk register is updated.

16.7 Conclusion

16.7.1 The Board has:

- A sound risk management philosophy that is based on effective risk management
- A clear risk management framework, whose simple structure will facilitate effective risk management
- Already made considerable progress in identifying, evaluating and addressing the risks for the preferred solution

17 CONTRACT MANAGEMENT ARRANGMENTS & PLAN

17.1 Overview

17.1.1 This section sets out NHS Ayrshire & Arran's

- Contract Management Philosophy
- Roles & responsibilities
- The current contract management plan

17.2 Contract management philosophy

17.2.1 The primary aim of Contract Management is to ensure that the needs of the project are satisfied and that the NHS Ayrshire and Arran Board receives the service it is paying for, within the boundaries of the Contract whilst achieving value for money. This means optimising efficiency, effectiveness and economy of the service or relationship described in the contract, balancing costs against risks and actively managing the client - contractor relationship.

17.2.2 The contract management for this project is based on collaborative working and joint decision making. Whilst the NHS Ayrshire and Arran Board is the Client and as such responsible for setting and agreeing the scheme objectives, the partnership approach enjoys the benefit of the Client and Contractor working together to resolve problems and objectively develop the best Value For Money (VFM) solutions.

17.2.3 Contract Management also involves recognising the balance of the roles and responsibilities as defined within the contract and aiming for continuous improvement over the life of the Project Term.

17.2.4 Good Contract Management will:

- Maximise the chances of contractual performance in accordance with the contract requirements by providing continuous and robust contract management which supports both parties;
- Optimise the performance of the project;
- Support continuous development, quality improvement and innovation throughout the Project Term;
- Ensure delivery of best Value for Money (VFM);
- Provide effective management of commercial risk;
- Provide an approach that is open to scrutiny and audit;
- Support the development of effective working relationships between both parties;
- Allow flexibility to respond to changing requirements;
- Demonstrate clear roles, responsibilities and lines of accountability, and
- Ensure that all works and services are in compliance with the Authority's Requirements, current legislation, relevant changes in Law and Health & Safety requirements, and NHS Scotland policies and procedures.

17.2.5 In terms of good Contract Management, the NHS Ayrshire and Arran Board will ensure that competent and appropriate management resource is allocated to make sure that the Scope of Work agreed within the contract is delivered as outlined within the associated project programme.

17.3 Roles & responsibilities

17.3.1 The governance structure outlined within section 13 (Figure 38) has been utilised for all stages of this contract and will continue into Stage 4 – Construction and Handover, providing a clear and concise process for the flow of information and identifiable organisational governance arrangements within NHS Ayrshire and Arran.

17.3.2 The Board Project Director is accountable for the delivery of the Project to meet the strategic and business needs of the NHS Ayrshire and Arran Board. The Board Project Director reports to the Building for Better Care Programme Board and leads the Steering Group. Membership of the Building for Better Care Programme Board is indicated below and the key responsibilities are outlined in **Appendix A1**.

Building for Better Care Programme Board

17.3.3 The Building for Better Care Programme Board will produce the Full Business Case document.

17.3.4 The Building for Better Care Programme Board have set up the governance structure, established the user groups, provided supporting information for the business case, and coordinated submission of papers to the relevant NHS Ayrshire and Arran Boards.

17.3.5 The membership of Building for Better Care Programme Board is outlined in **Appendix A1**.

17.3.6 Building for Better Care Board meetings are held regularly and dates are presented in the latest meeting schedule, located in **Appendix K1**.

Building for Better Care Steering Group

17.3.7 The Building for Better Care Steering Group is the forum to review and action all relevant technical design and project management issues related to the Building for Better Care project. This information is then collated by the Board Project Director and presented to the Building for Better Care Programme Board.

17.3.8 The membership of Building for Better Care Steering Group is outlined in **Appendix A1**.

17.4 The current contract management plan

17.4.1 A template contract has been prepared for use in all Frameworks Scotland Contract based on the options contained within the NEC3 Engineering and Construction Contract, Option C: Target contract with activity schedule June 2005 (with amendments June 2006). This has been adopted for use as the basis of all Frameworks Scotland project specific contract documents. The scheme development is incorporated into the Contract by means of detailed requirements in the Works Information and establishing a realistic programme for execution – the Accepted Programme.

17.4.2 The style of Frameworks Scotland and the 'scheme contract' promotes the use of particular project management techniques. These are also applied to formulate the Target Total of Prices.

17.4.3 An overall contract is entered into at commencement of the PSCP's appointment following agreement of a Priced Activity Schedule and Accepted Programme. This contract is then reviewed, updated and new appendices added at the start of each project stage to incorporate a new Priced Activity Schedule and Accepted Programme. In this way the price included within the accuracy of the information within the contract is revised for each project stage.

17.4.4 The Form of Scheme Proposal for Stage 4 – Construction and Handover consists of the completed Works Information, a detailed Activity Schedule with associated Target Price and a stage delivery programme.

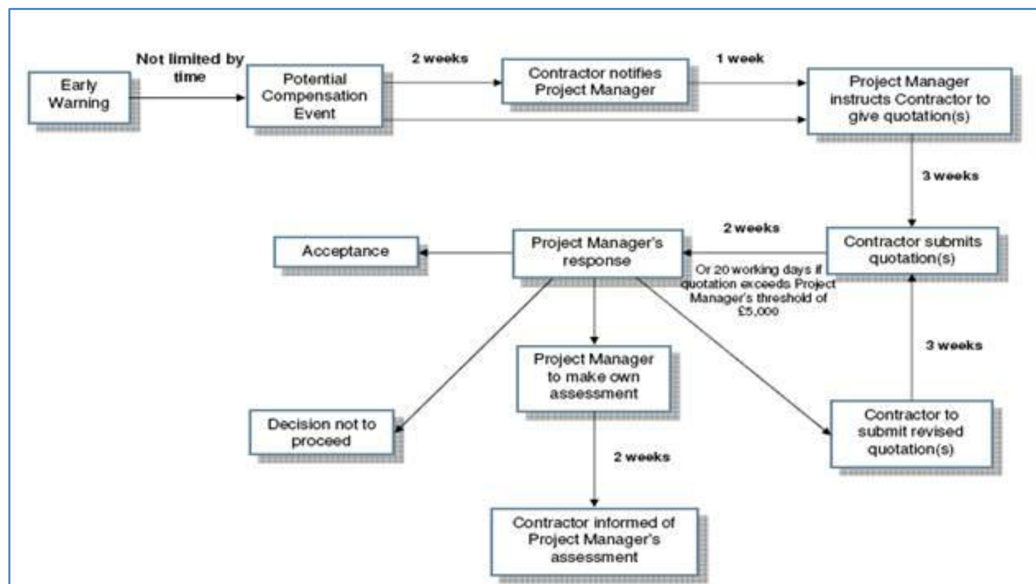
17.4.5 The contract is currently managed through the use of regular one-to-one progress meetings between the NHS Ayrshire and Arran Project Team and the PSCP. Any potential risks are recorded and reviewed to determine the most effective and efficient mitigations for approval by the client. The formal contract management is undertaken using the NEC Contract Administration Pro-Forma (CAT), detailed below.

Contract Administration

17.4.6 All contract administration is being carried out in accordance with the Frameworks Scotland Project Procedures – NEC Contract Administration Pro-Forma (CAT) – as recommended for use with the NEC form of Contract.

17.4.7 All contractual notices are actioned in accordance with the Frameworks Scotland user guidelines. The chart below demonstrates the maximum timescales for response/action to contractual notices:

Figure 52: Contract Notices Procedure



17.4.8 To support the CAT process a Master Register records all Contractual Notices under this Contract and can be reviewed as part of any audit.

17.5 Conclusion

17.5.1 This section of the FBC shows that NHS Ayrshire & Arran have developed a robust contract management framework with clear roles and responsibilities.

17.5.2 The section has outlined the contract management plan and provided details in relation to the contract administration.

18 ARRANGEMENTS FOR POST PROJECT EVALUATION

18.1 Overview

18.1.1 This section sets out the plans which the Board has put in place to undertake a thorough and robust post-project evaluation (PPE). The areas covered are:

- The requirement for Post-Project Evaluation
- Framework for Post-Project Evaluation
- The expected timing of the evaluation stages

18.2 The Requirement for Post-Project Evaluation

18.2.1 Sponsors of capital projects in NHS Scotland are required by the Scottish Government to evaluate and learn from their projects. This is mandatory for projects with a cost in excess of £1.5million and should be applied as best practice for all projects.

18.2.2 The requirements are set out in detail within the SCIM Post Project Evaluation Manual.

18.2.3 The aim of this post project evaluation is to assess the impact of the project within a year of it becoming operational.

18.2.4 It involves consideration of the economy, efficiency and effectiveness of the project to determine whether the original objectives, as identified in the business case, have been achieved. The PPE identifies the lessons learnt in order to inform future decision making.

18.2.5 Business cases for capital projects will not be approved unless post-project evaluation has been properly planned in advance and suitably incorporated into the Full Business Case.

18.2.6 Therefore NHS Ayrshire & Arran have an evaluation framework in place as follows:

- A post project evaluation will be carried out 6 months after occupation.
- The benefit realisation register detailed in the FBC will be used to assess project achievement.
- Clinical benefits through patient and carer surveys will be carried out and review against baseline surveys undertaken in 2013.

18.3 Framework for Post-Project Evaluation

18.3.1 The Board is committed to ensuring that a thorough and robust post-project evaluation is undertaken at key stages in the process to ensure that positive lessons can be learnt from the project.

18.3.2 To ensure maximum pay-off from evaluation, the following criteria are deemed as important:

- The evaluation is viewed as an integral part of the project and it is planned for at the outset.
- The evaluation will be costed and resourced as part of the project.
- There is commitment from senior managers within the organisation.

- All key stakeholders are involved in its planning and execution.
- Relevant criteria and indicators will be developed to assess project outcomes from the outset of the project.
- Mechanisms will be put in place to enable monitoring and measurement of progress.
- A learning environment will be fostered to ensure lessons are heeded.
- Feedback to Frameworks Scotland monitoring groups.

18.4 Key stages

18.4.1 Although evaluation will be carried out continuously throughout the life of a project to identify opportunities for continuous improvement, evaluation activities will be undertaken at four main stages shown below:

Figure 53: The four stages of PPE

Stage	Evaluation undertaken	When undertaken
1	Plan and cost the scope of the PPE work at the project appraisal stage. This should be summarised in an Evaluation Plan.	Plan at OBC, fully costed at FBC stage
2	Monitor progress and evaluate the project outputs	On completion of the facility
3	Initial post-project evaluation of the service outcomes	Six months after the facility has been commissioned
4	Follow-up post-project evaluation (*or post occupancy evaluation - POE*) to assess longer-term service outcomes two years after the facility has been commissioned. Beyond this period, outcomes should continue to be monitored. It may be appropriate to draw on this monitoring information to undertake further evaluation and benchmarking	2 years

18.4.2 At each of these stages, evaluation will focus on different issues. In the early stages, emphasis will be on formative issues. In later stages, the main focus will be on summative or outcome issues.

- **Formative Evaluation** - As the name implies, is evaluation that is carried out during the early stages of the project before implementation has been completed. It focuses on ‘process’ issues such as decision-making surrounding the planning of the project, the development of the business case, the management of the procurement process, how the project was implemented, and progress towards achieving the project objectives.

- **Summative Evaluation** - The main focus of this type of evaluation is on outcome issues. It is carried out during the operational phase of the project. Summative evaluation builds on the work done at the formative stage. It addresses issues such as the extent to which the project has achieved its objectives; how out-turn costs, benefits, and risks compare against the estimates in the original business case; the impact of the project on patients and other intended beneficiaries; and lessons learned from developing and implementing the project

18.5 Stage 1 – Evaluation Plan

18.5.1 The table below sets out what will be included in the Evaluation Plan:

Figure 54: Evaluation Plan

What	How
A clear view of the objectives and purpose of the evaluation.	▪ Who is the audience for the evaluation? ▪ What are their information needs? ▪ What decisions will the evaluation inform?
Consideration of the structural context	▪ What is the baseline situation (status quo)? ▪ What are the internal and external constraints? ▪ What are the desired outcomes?
Inclusion of a comparative element	▪ Are there plans to conduct a 'before and after' assessment? ▪ Is it clear what would have happened in the absence of the project?
Coverage of all relevant project impacts (outcomes and processes)	▪ Is there a plan to assess immediate, intermediate and ultimate outcomes? ▪ Does the plan take into account the processes by which the outcomes are generated? ▪ Does the plan consider the impact of the project on patients, staff and other stakeholders?
An emphasis on learning	▪ What are the lessons? ▪ Is there a plan to disseminate the lessons learnt? ▪ Is there an action plan to ensure the lessons are used to inform the project or future projects?
Recognition of need for robustness and objectivity	▪ Is the evaluation team equipped with the skills and resources to undertake the evaluation? ▪ Should the evaluation be conducted by external contractors? What should be the role of in-house staff? ▪ Are there suitable arrangements to quality-assure the findings?

What	How
Sound methodology	▪ What methods of data collection will be used to undertake the study? ▪ Are the proposed methods appropriate to meet the objectives of the evaluation?

18.6 Conducting the evaluation

18.6.1 There are a number of factors to consider in judging the importance of evaluation including:

- Likely benefits – Is there scope to feedback any lessons from evaluation into the improvement of the project? Does the project have the potential to provide useful lessons to the wider NHS?
- Interest – Is the project of major interest to senior managers, policy-makers, ministers, and the public? Is it likely to attract much media coverage? Are there signs or risks of something going wrong?
- Ignorance and novelty – do we have comprehensive and reliable information about the performance and results of the project?
- Corporate significance – how important is the project to stakeholders? Is it likely to have a major impact on how services are delivered?

18.6.2 Government recommendation is that the Logical Framework should continue to be used for evaluation of NHS capital schemes. This is a matrix listing project objectives against indicators and measures for assessing outcomes. The underlying assumptions and risks are also considered.

18.6.3 The technical issues arising from application of the Logical Framework include:

- the merits and demerits of different data collection methods
- the role of different participants in the data collection process
- sampling methods
- sample size
- questionnaire design (types of questions, etc)
- piloting
- how to achieve a satisfactory response rate
- security and confidentiality of data
- data analysis and report writing

18.6.4 The potential value of an evaluation will only be realised when action is taken on the findings and recommendations emanating from it. We will require the adoption of processes to ensure that this happens.

18.6.5 To promote consistency, the content of the evaluation report should, as far as possible, address the following issues:

- Were the project objectives achieved?
- Was the project completed on time, within budget, and according to specification?

- Are users, patients and other stakeholders satisfied with the project results?
- Were the business case forecasts (success criteria) achieved?
- Overall success of the project – taking into account all the success criteria and performance indicators, was the project a success?
- Organisation and implementation of project – did we adopt the right processes? In retrospect, could we have organised and implemented the project better?
- What lessons were learned about the way the project was developed and implemented?
- What went well? What did not proceed according to plan?
- Project team recommendations – record lessons and insights for posterity. These may include, for example, changes in procurement practice, delivery, or the continuation, modification or replacement of the project.

18.6.6 Evaluation results will then be signed off by senior management or at Board level.

18.6.7 The results from the evaluation should generally lead to recommendations for the benefit of the organisation and wider NHS.

18.6.8 These may include, for example, changes in procurement practice; delivery; or the continuation, modification, or replacement of the project, programme or policy. The results should be widely disseminated to staff concerned with future project design, planning, development, implementation, and management.

18.7 Expected Timings

18.7.1 The timings of the different stages of the PPE process are set out in the table below.

Figure 55: Timing of key stages of the PPE process

Stage	Requirement	Timing
1	Produce a costed Evaluation Plan which is incorporated into the FBC. This includes: ▪ Confirming objectives, benefits and risks of the project ▪ Considering whether the evaluation will be carried out in house or by an external party ▪ Agreeing participants in the Evaluation Steering Group and Evaluation Team, including patient and public representatives ▪ Costing the process, including requirements to backfill staff time	Completed
2	Monitor progress and evaluate the project outputs. This includes: ▪ Monthly monitoring of construction and other elements of project delivery ▪ Formal reporting at key milestones of the project plan ▪ Production of completion report once construction work has been completed	Within six to eight weeks of the completion of the facility
3 (PPE)	Initial post-project evaluation of the service outcomes. This includes: ▪ Review of the Project Objectives and BRP to measure the extent to which they have been achieved ▪ Evaluation of the project management and control processes to assess whether they have worked satisfactorily ▪ Submission of the PPE to the SGHSCD	Six months after the new facility has been commissioned

Stage	Requirement	Timing
4 (POE)	Follow-up post-project evaluation (*or post occupancy evaluation- POE*) to assess longer-term service outcomes. This will include: ▪ Clinical evaluation – whether the model of care has been successfully implemented and maintained ▪ Quality evaluation – whether the anticipated patient outcomes and benefits have been realised ▪ Overall benefits assessment – whether the full range of projected benefits in the benefits realisation plan have been realised ▪ Financial evaluation – whether the overall costs of the scheme have remained within the expected cost envelope	Two years after the facility has been operative.

18.8 Conclusion

18.8.1 The Board has identified a robust plan for undertaking PPE in line with current SCIM guidance, which is fully embedded in the project management arrangements of the project.