Dumfries and Galloway Health Board

Acute Mental Health Development

Full Business Case

November 2009

Modernising Mental Health Services

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1.0 Executive Summary

Introduction

The purpose of this Full Business Case (FBC) is to set out the progress made by NHS Dumfries & Galloway to achieve the creation of the new Acute Mental Health Development in Dumfries. The preferred solution for the project has been the subject of much activity since the submission, in September 2007, and subsequent approval of the Outline Business Case (OBC) for the project; this FBC seeks to set out the full position on the procurement of the facility for approval.

Strategic Content

The demographics of Dumfries and Galloway region are set out in Section 3. This shows that the level of elderly, retired and those living in remote and rural areas present challenges for the Health Service.

The main objectives of the Mental Health Service are:

- Continue with the programme to modernise specialist inpatient and community-based services, supporting people at home wherever possible guided by **Delivering for Mental Health** commitments and meeting agreed HEAT Targets.
- Provide a comprehensive mental health service working with primary care and other front-line services to implement Integrated Care Pathways (generic and condition specific)
- Improve the patient experience of hospital and ensure an effective and safe discharge reducing the need for any subsequent readmission
- Raise awareness of mental health issues through the delivery of Applied Suicide Intervention Skills Training (ASIST) and Mental Health First Aid Training to front line and specialist staff and the public.
- Provide specialist support to long-term residential social care for older people with mental health problems.
- Increase staff skills through the **10 Essential Shared Capabilities** (ESC) training, embedding Recovery and social inclusion concepts into every day practice and encouraging involvement through clinical governance and identification of best practice.
- Reviewing and updating policies consistent with delivering the new model of service.

The Need for Investment

Drivers for service development are set out in section 4. Clinical priorities are derived from the following guidelines and legislation:

- A Framework for Mental Health Services in Scotland (1997).
- A Joint Future (2000)
- Our National Health (2001)
- Partnerships for Care White Paper (2003)
- Mental Health (Care and Treatment Act) (Scotland) 2003
- Improving the Quality of Mental Health Services in Scotland (2005)
- Delivering for Health (2005)
- Delivering for Mental Health (December 2006)

Appropriateness of Current Inpatient Facilities

The current inpatient facilities are inappropriate to deliver a mental health service that meets higher expectations for all. The main issues are the lack of space, poor fabric and design of the current wards, along with having no local intensive care or high care facilities as described below:

- Occupancy rate too high on the adult acute wards, putting more strain on staff time. We aim to provide psychiatric intensive care beds that have 85% occupancy rates, to enable the service to respond to individual needs of patients in a therapeutic environment.
- The buildings are inadequate with a lack of space, basic necessities and arrangements for safety, privacy, dignity and comfort and therefore the inability to meet single sex accommodation standards. We aim to replace old and unsuitable accommodation on the Crichton Royal Hospital (CRH) site, enabling a service that does not institutionalise behaviour and that works towards earlier discharge from hospital care through the provision of fit for purpose inpatient accommodation that is appropriate for acute adult and older adult, inpatient rehabilitation and dementia assessment.
- There is a feeling of being in an unsafe and intimidating environment due to overcrowding, client mix and design. The new design is full of light and space. The accommodation will improve the amount of space for patients through the provision of therapeutic rooms, activity room, quiet and general sitting rooms and a public area cafe.
- Patients' care and progress is being compromised by having patients with intensive/ high care needs within an acute inpatient setting. Currently patients needing a higher level of care and treatment often have to be transferred to an out of region ICPU which takes up resources and disrupts the therapeutic relationship. The addition of an IPCU will make a big difference in our ability to care for the range of patients in the most appropriate settings.
- Patients requiring specialist eating disorder services needing to be cared for through out of area placements with associated costs. We aim to ensure there is flexibility within the design of each ward to care for patients safely attending to individual needs.
- Currently the mix of ages can be difficult to manage. We aim to build in flexibility to the ward design to better manage this: all services to be available regardless of age; for example: access to different parts of the service such intensive care, CATS, Rehabilitation and Dementia services – including appropriate care for early onset dementia assessment.
- The current isolated location and design of the rehabilitation units prevents patients with higher needs being admitted. There is poor observation and lack of therapeutic, occupational and recreational space. We aim to provide a rehabilitation unit that can flexibly meet a wide range of needs and that equips patients with the skills required to maximise their potential.
- There are currently no staff facilities for breaks, changing or storing belongings and no on-site duty doctor bedsit.
- There is no dedicated family visiting space.

Expectations of New Hospital Accommodation

Driven by legislation, national guidance and the service changes already achieved and in order to improve the patient experience of hospital and ensure an effective and safe discharge, reducing the need for any subsequent readmission, we conclude that there is a clear need for:

- Redesigned and modernised acute inpatient accommodation, with inpatient activity reduced to 85%.
- The establishment of an intensive care facility co-located with the acute inpatient service.
- A high care facility within the older adult inpatient service for people with dementia / organic illness.
- Provision of rehabilitation beds to be sited close to acute inpatient services and the development of community based rehabilitation.
- An overall better environment for staff to work in; for patients to recover in and for families, carers and visitors to come to.
- On-site Tribunal accommodation.
- Increased clinical areas comprising: intensive care unit, 2 adult acute wards, 1 older adult acute ward, 1 dementia/ organic ward, rehabilitation wards and flats, therapeutic and meeting rooms and staff facilities
- Increased patient areas comprising a gym, sitting rooms, dining rooms, meeting rooms, faith room, gardens and family visiting room.
- Increased public areas comprising café, main atrium, multi-faith room, gardens.

WARD BEDS	***CURRENT***	***OBC***	***FBC***
IPCU	0	6	6
ETTRICK ACUTE ADULT ADMISSION WARD(20) COVERING STEWARTRY/ANNANDALE/WIGTOWNSHIRE +(4) DETOX BEDS	20+4	16	17
NITHDSALE ACUTE ADULT ADMISSION WARDS COVERING UPPER NITHSDALE AND DUMFRIES	22	16	17
GLENCAIRN OLDER ADULTS ACUTE (FUNCTIONAL)	15	15	15
LAHRAIG REHABILITATION	16	16	14
CREE WEST OLDER ADULTS ACUTE ORGANIC	14	16	16
TOTALS	**91**	**85**	**85**

Engagement with Partners

There has been extensive consultation and involvement with the following partners in designing the new build and other service improvements such as the model of service & policy development:

- Engaging voluntary sector through the Mental Health Providers Forum
- Consultation with community groups through open days and displays in the foyers of both Crichton Hall and DGRI.
- Consultation with local authority through attendance at Area Committees in regard to the new Model of Service and latterly, keeping Nithsdale Area Committee updated of progress of design and development.

Financial Impact

Capital Cost

A capital cost of £27.167m has been calculated for the proposal detailed in this FBC. This compares against the Capital Cost estimated in the OBC of £27.254m.

Revenue cost

Detailed in Section 7.

Project Plan and Key Dates

Health Board Approval	7 Dec 2009
CIG Approval	19 Jan 2010
Agreement of Stage 4 Contract	30 Jan 2010
Mobilisation of PSCP	Feb 2010
Formal Transfer of Land	Jan 2010
Construction Commencement	Mar 2010
Construction Completion	July 2011
Cleaning and Commissioning	Sept 2011
Equipping	Sept 2011
Migration	Oct 2011

Procurement

This project is being procured through the new NHS Framework for Scotland using the NEC 3 form of partnering contract. The detail of the Framework and the main provisions of the NEC 3 Contract are contained in Section 9.0.

Conclusion

The Full Business Case demonstrates:

- That the case for the new hospital has been revalidated and the preferred option has not changed since the OBC
- The project has strong support from key stakeholders
- There has been a robust project management structure put in place
- The project is affordable in Capital and Revenue terms
- There is a clear plan for ensuring that the planned benefits are realised

The formal approval of this Full Business Case is sought in order that NHS Dumfries & Galloway can enter the necessary contractual arrangements with their preferred Principal Supply Chain Partners.

2.0 Introduction

The purpose of this Full Business Case (FBC) is to set out the progress made by NHS Dumfries & Galloway to achieve the creation of the new Acute Mental Health Development in Dumfries. The preferred solution for the project has been the subject of much activity since the submission and subsequent approval of the Outline Business Case (OBC) for the project; this FBC seeks to set out the full position on the procurement of the facility for approval.

Therefore the main objectives of this FBC are to:

- Identify any changes to the project since OBC stage (Please refer to Section 5.0)
- Identify the development work carried out to the Preferred Solution for the proposed scheme (Please refer to Section 6.0)
- Identify Capital costs associated with the Preferred Solution (Please refer to Section 7.0)
- Develop the identified revenue costs related to the project to provide further clarity on the funding commitment to be made by NHS Dumfries & Galloway (Please refer to Section 7.0)
- Identify the share of revenue funding relating to the direct service provision to be funded by NHS Dumfries & Galloway (Please refer to Section 7.0)

2.1 Purpose and Structure of FBC

The FBC should convincingly demonstrate that the project is economically sound, is financially viable and will be well managed.

It should also be noted that this FBC has been structured to reflect the latest Business Case guidance directed by the Scottish Government and covers all of the requirements articulated in the SCIM guidance.

Accordingly, the FBC has been divided into 18 sections as follows:

Section 1.0: **Executive Summary:**
A summary of the Outline Business Case content.

Section 2.0: **Introduction:**
Setting the scene, the methodology followed in the preparation of this OBC.

Section 3.0: **The Strategic Context:**
Examination of the National and local issues and priorities in Mental Healthcare.

Section 4.0: **The Need for Investment:**
Examination of current accommodation and circumstances, identification of shortfalls in accommodation and constraints on future service delivery.

Section 5.0: **Summary of OBC :**
A summary of the OBC content with an examination of any changes since OBC production and an explanation of these.

Section 6.0: **The Preferred Solution:**
Examines the steps taken to realise the implementation of the Preferred Solution.

Section 7.0: **Financial Appraisal and Affordability:**
Examines the current position on costs and affordability.

Section 8.0: **Risk Analysis:**
Examines the steps taken in relation to risks identified at OBC stage.

Section 9.0: **Procurement Process and Summary of Contract Structure**
Examines the structure of the contract in the chosen procurement methodology.

Section 10.0: **Project Management Arrangements:**
Reiterates from OBC, the Project Management arrangements for the implementation of the project.

Section 11.0: **Benefits Assessment and Benefits Realisation Plan:**
Examines how the Benefits Criteria used to assess the Preferred Option will be realised and measured.

Section 12.0: **Risk Management:**
Examines treatment of major risks to the project.

Section 13.0: **Sustainability:**
Discusses the project team's approach to incorporating sustainability into the project

Section 14.0: **Post Project Evaluation Plan:**
Discusses post-implementation evaluation for the project.

Section 15.0: **IM&T Strategy:**
Examines IM&T strategy for the project.

Section 16.0: **Equipment:**
Examines equipment procurement for the project.

Section 17.0: **Human resource Issues:**
Discusses staffing issues associated with the operation of the new facility.

Section 18.0: **Conclusion.**

The figures and analysis underlying the calculations and the conclusions are displayed within the main body of the FBC and within the Appendices.

3.0 Strategic Context

3.1 Description of the NHS Board

Dumfries and Galloway Health Board provides care and treatment to meet the healthcare needs in hospitals, health centres, clinics and local communities throughout Dumfries and Galloway.

The Board has an annual budget of £276m for 2007/08 and employs around 3,481 wte staff (297 wte staff are in Mental Health and 39 wte staff in Psychology).

While the NHS Board is responsible for the management and provision of mental health services a framework and structure is in place to deliver on the Joint Future agenda. Mental Health Services are jointly delivered with Dumfries and Galloway Council.

3.2 Catchment Area & Catchment Population (2002 – 2016)

Dumfries and Galloway is a mostly rural region in south-west Scotland. It covers 6,426 square kilometres, with a population of approximately 148,580.[1] The region is divided into four traditional localities and NHS Local Health Partnerships (LHPs) and Council Areas are based on these:

- Wigtownshire
- Stewartry
- Nithsdale
- Annandale & Eskdale

The main towns are Dumfries (31,100 residents), Stranraer (10,900), Annan (8,400) and Locharbriggs (6,100). All other towns and settlements have populations of less than 5,000. At the 2001 Census, one third of people in Dumfries & Galloway were living in settlements with less than 500 people.

The current population is already substantially different from the Scottish population profile, with a larger proportion of older people and a markedly smaller proportion of young people (see Figure 1) meaning there is an older population compared to the rest of Scotland. The average age in Scotland is 38.7 but in Dumfries and Galloway it is 42.2.

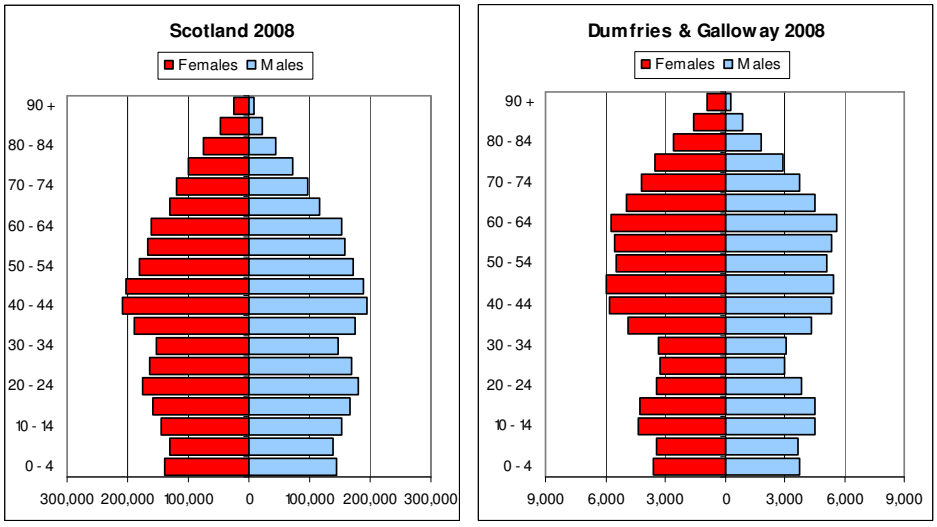


Figure 1: Population Pyramids for Scotland and Dumfries & Galloway, 2008[1]

The population of Dumfries and Galloway is split 48% males and 52% females.
The gender split increases with age, and in the over-65 age group is 40% males and 60% females.

Population forecasts issued by the General Register Office for Scotland (GROS) indicate that the

[1] General Register Office for Scotland. *Mid 2008 Population Estimates Scotland*. [online]. Edinburgh: GROS; 2009. Available from: http://www.gro-scotland.gov.uk/statistics/population [accessed 18 Nov 2009]

total population of Dumfries and Galloway is expected to decline from 148,580 in 2008 to 147,658 in 2016, a decrease of 0.6%. The latest 2006-based projections show that the gap between older and younger populations is likely to widen over time.[2] The over-65s population in Dumfries and Galloway is likely to grow by 26% by 2016 and 63% by 2031 (39% for those aged 65-74 and 93% in the over-75s). There is also expected to be a decline in the working age population from 63% to 51%.

The table below quantifies the anticipated population changes for Dumfries and Galloway at 5-year intervals up to 2031.

Table 3.1: Population Projections for Dumfries and Galloway[2]

Age Group	2006	2011	2016	2021	2026	2031
0-15	25,731	23,937	23,143	23,121	22,306	21,295
16-29	19,465	20,683	20,357	18,162	16,724	16,351
30-49	39,859	35,631	31,145	29,072	29,168	29,031
50-64	32,431	33,728	34,564	34,983	32,184	27,493
65-74	16,745	18,279	20,741	21,382	21,478	23,225
75+	13,799	15,425	17,708	20,581	24,348	26,666
All Ages	**148,030**	**147,683**	**147,658**	**147,301**	**146,208**	**144,061**

In addition to the number of older people increasing over time, the proportion of these living alone is also expected to dramatically increase. The latest GROS household composition projection has estimated that by 2031 there will be 13,000 people aged 75+ living alone, nearly half of all people in that age group.[3] These changes will result in substantially greater demands on the social and healthcare systems and a reduced work force that would normally be responsible for providing care.

3.2.1 Rurality

The Scottish Government has released a number of urban rural classifications since 2000 as part of a commitment to ensure that 'rural and remote communities have their distinct needs reflected across the range of government policy and initiatives'.

Nearly half of all people in Dumfries & Galloway live in areas classified as rural (with less than 3,000 residents). There are no large urban areas and over a quarter of the population live further than 30 minutes drive away from a large town

Table 3.2 below 6-Fold Urban Rural Classification, Percentage of Population[4]

Area	Large Urban Areas	Other Urban Areas	Accessible Small Towns	Remote Small Towns	Accessible Rural	Remote Rural
Dumfries & Galloway	0.0	28.3	9.7	13.0	19.6	29.3
Ayrshire & Arran	0.0	58.7	17.5	4.3	13.6	5.9
Borders	0.0	25.6	16.0	7.9	26.8	23.7
Scotland	38.9	30.3	8.6	4.1	11.2	7.0

[2] General Register Office for Scotland. *Population Projections Scotland (2006-based).* [online]. Edinburgh: GROS; 2008. Available from: http://www.gro-scotland.gov.uk/statistics/population [accessed 18 Nov 2009]

[3] General Register Office for Scotland. *Estimates of Households and Dwellings in Scotland, 2007.* [online]. Edinburgh: GROS; 2008. Available from: http://www.gro-scotland.gov.uk/statistics/household-estimates-projections [accessed 18 Nov 2009]

[4] Scottish Government. *Urban Rural Classification 2007-2008.* [online]. Edinburgh: Scottish Government; 2008. Available from: http://www.scotland.gov.uk/Publications [accessed 18 Nov 2009]

The main factors used to determine rurality are the size of a settlement and its distance (in drive time) to an urban centre; see the map legend in figure 2 overleaf.

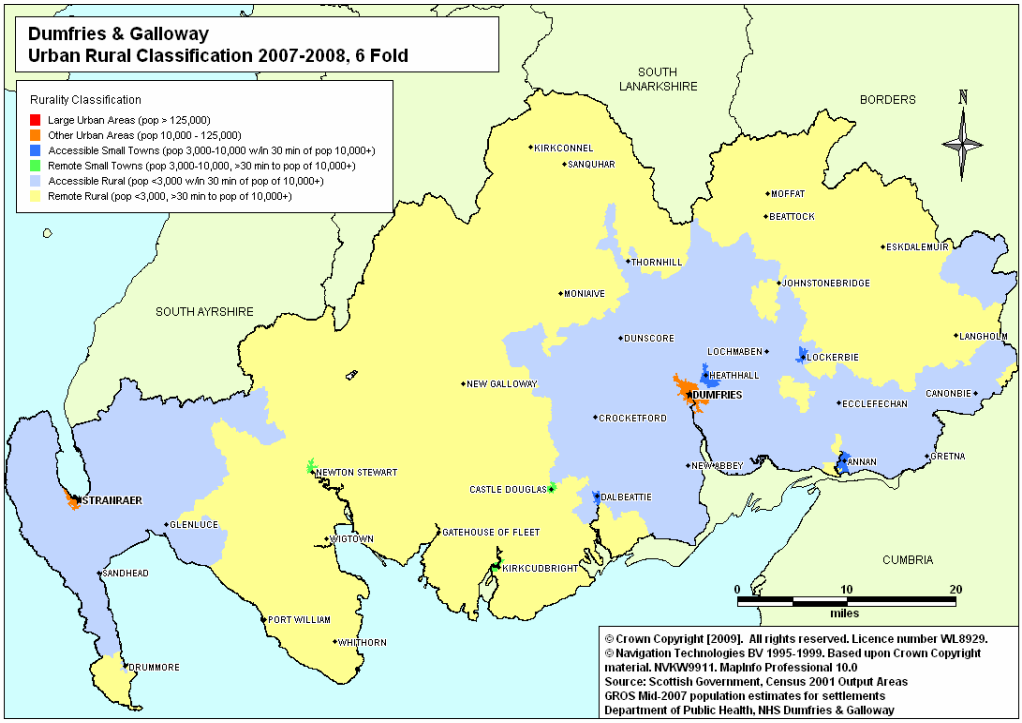


Figure 2: Scottish Government 6-Fold Urban Rural Classification 2007-08[8]

3.2.2 Deprivation in Dumfries and Galloway

Deprivation is a term used to indicate the level of disadvantage for individuals or areas. It can be measured in terms of wealth, opportunities or other aspects of need but it is always difficult to measure because advantaged and disadvantaged people can live side by side. Deprivation is, however, known to have a strong link with disease and death rates, regardless of how it is measured.

The latest way of measuring area deprivation (by neighbourhoods rather than by individual) is the Scottish Index of Multiple Deprivation 2009 (SIMD2009), published by the Scottish Government.[5] The SIMD2009 uses categories such as income, education, unemployment, health, access to services, housing and crime to calculate the average deprivation for small areas called data zones. It is presumed that by using very small areas, the people within these neighbourhoods will be similar to each other.

Dumfries and Galloway has 20 data zones that are in the 20% most deprived in Scotland. This is equivalent to a 1.5% share of all the worst areas in Scotland. The number of people who live in these most deprived areas is approximately 14,956, which is 10.4% of the Dumfries and Galloway population. The figure for Scotland is 20.0% of the population in the 20% most deprived areas, so there are significantly fewer people living in the worst areas.

[5] Scottish Government. Scottish Index of Multiple Deprivation. [online]. Edinburgh: Scottish Government; 2009. Available from: http://www.scotland.gov.uk/Topics/Statistics/SIMD/ [accessed 18 Nov 2009]

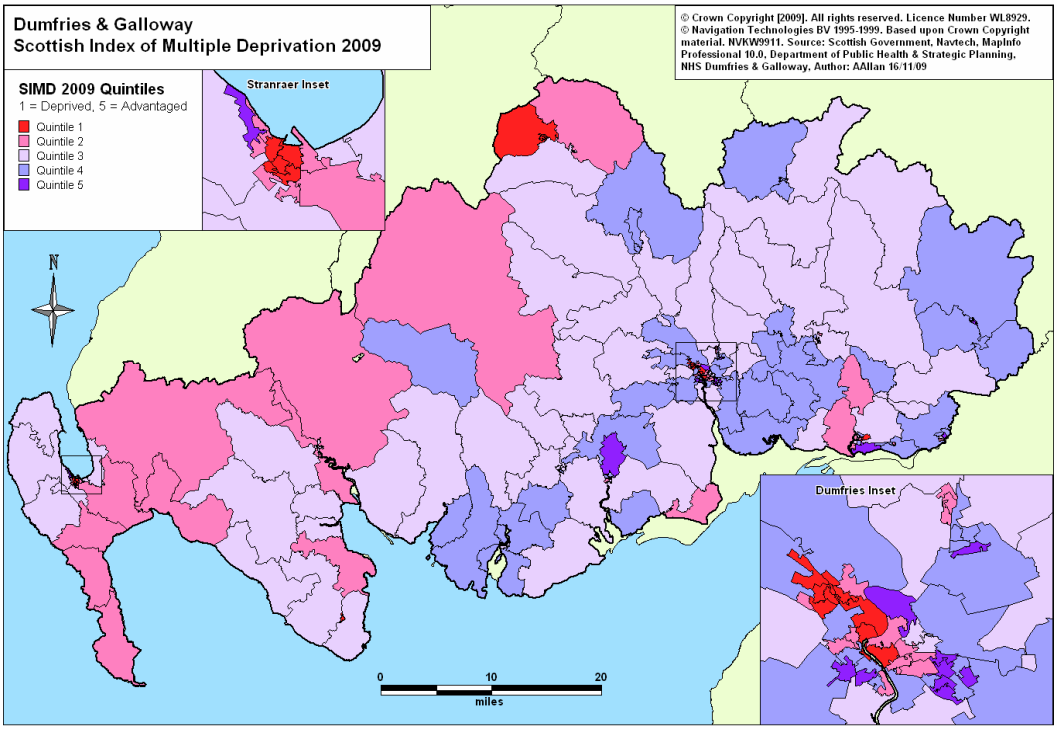


Figure 3: Map of Dumfries and Galloway showing Scottish Index of Multiple Deprivation 2009 ranks[9]

Using SIMD2009, there are six areas of relative deprivation in the region: central Dumfries and part of Annan as well as the previously recognised areas in northwest Dumfries, Upper Nithsdale, the Machars and Stranraer.

These areas include people living in relatively deprived circumstances. However only a minority of income-deprived and employment-deprived people live in these areas of relative deprivation. The majority (80% of income-deprived and 82% of employment-deprived people) live outwith these areas of relative deprivation.

3.2.3 What does this mean for the future?

We face considerable challenges in improving health and providing health services to meet the needs of our population. While we can expect an increasing demand for healthcare from an ageing population, its effects are being offset by the fact that our older people are on average healthier than they have ever been.

- The biggest single factor influencing social care and health needs in the future is expected to be the substantial rise in the number of older people.
- Fewer people of working age means it is likely to become increasingly difficult to attract the skilled professional and care staff that will be needed.
- There will be more cases of certain diseases associated with older age (for example, cancer, dementia, osteoarthritis, and diabetes).
- We need to develop more services to prevent unnecessary admissions into hospital. The work of the Long Terms Condition Collaborative in supporting the delivery of sustainable improvements in patient centred services for people living with long term conditions is crucial for timely, safe, effective and efficient services and to deliver Better Health, Better Care in Scotland.[6]

[6] Scottish Government. *Better Health, Better Care: Action Plan.* [online]. Scottish Government : 2007. Available from: http://www.scotland.gov.uk/Publications/2007/12/11103453/0 [accessed 18 Nov 2009]

- We also need to continue to tackle other lifestyle factors, including smoking, diet, physical activity, alcohol and drug use, in order to help prevent disease and disability in older people, so that as people live longer they do so in good health
- We need to tackle specific health issues, such as continuing to improve the death rates for cancer and stroke towards the United Kingdom and European average.

Evidence shows that the main impact of the ageing population is therefore on the type of demand we face, since older people have a higher prevalence of chronic disease and on average a greater number of long term conditions. By the age of 65, nearly two-thirds of people will have developed a long term condition and 27% of people aged 75-84 have two or more such conditions.[7]

3.2.4 Increased Risk Factors for Mental Health Problems

Groups that may be at higher risk of developing mental health problems are highlighted by the Scottish Public Health Observatory Health & Wellbeing Profiles 2008. There were 30,460 individuals, (20.6% of the population in Dumfries & Galloway) with a limiting long-term illness (2001 Census). Self-assessed health was classified as 'not good' in 9.5% (14,078) of the population (2001 Census). Adults claiming incapacity benefit/severe disability allowance accounts for 6.1% (7,510) of the population (Quarter ending February 2007, DWP/SNS).

In terms of individual level deprivation measures 11.6% of the population (17,112) are income deprived (2005 SIMD2006) and 11.4% of the working age population (9,885) are employment deprived (Quarter ending February 2007, DWP/SNS). These populations would also be at increased risk of developing mental health problems.

It is estimated that 7.9% (12,011 individuals) of the Dumfries & Galloway population are being prescribed drugs for anxiety, depression or psychosis (2006, Information Services Division Scotland Prescribing System, CHI). The three year age-sex standardised rate for numbers discharged from a psychiatric hospital was 762.2 per 100,000 (2002-04, ISD SMR04). The five year average age-sex standardised rate of suicides is 11 per 100,000 population (2002-06, GROS). Prescribing, hospital discharge rate and suicide rate were all very close to the all Scotland averages for the comparable years.

3.3 NHS Dumfries and Galloway and its Strategic Partners

The NHS and Council are co-terminus and as such are better able to provide services across whole systems within which strategic partners (NHS, Council, Police, Voluntary Sector) all work. The strategic partners share similar aims (see Table 3.3 overleaf) and at delivery level, often share premises, making joint working easier.

NHS Dumfries and Galloway Statements of Intent	Dumfries and Galloway Council Common aims with NHS
Empower members of the public, patients and carers to maximise their own health and manage problems.	Making decisions locally, not centrally.
Expand primary care to provide the most prompt, clinically effective and cost effective services.	Enabling staff to make the best use of their potential.
Develop intermediate community and home based care and integrated care between hospitals and home.	Providing best value.
Provide superb hospital services.	Building on Partnership Relationships

[7] Scottish Government. *Improving the Health & Wellbeing of People with Long Term Conditions in Scotland: A National Action Plan.* [online]. Scottish Government: 2009. Available from: http://www.sehd.scot.nhs.uk/mels/CEL2009_23.pdf [accessed 18 Nov 2009]

3.4 Single Outcome Agreements (SOAs)

Dumfries and Galloway Council and its strategic partners are working together to set out areas for improvement in delivering public services in the region that should make a real difference to people's lives and make Dumfries and Galloway the best place in Scotland to live, learn, work, visit and grow. The SOA will:

- Support delivery of the shared Dumfries & Galloway 2020 vision, and the new Community Plan 2009-2012.
- Establish shared outcomes to be achieved in Dumfries & Galloway and the indicators that will measure progress and achievement.
- Set out how partners and national government will work with the local authority to deliver the shared outcomes.
- Support the new relationship built on partnership and mutual respect established in the Concordat between Scottish government and COSLA and underpin funding to be provided to local government over the period 2008-2011.
- Provide a clear link between the Scottish Government's strategic objectives and national outcomes and the specific needs of the rural communities of Dumfries & Galloway, by translating national priorities into local outcomes.

NHS Dumfries and Galloway and the mental health service has a clear role in contributing towards the achievement of SOAs particularly in relation to:

- Achieving good mental well being
- Caring for vulnerable people
- Access to quality health and care services.

3.5 NHS Dumfries and Galloway Strategic Commitments

NHS Dumfries and Galloway has recently reviewed its clinical strategy which is currently being consulted upon across the region. The table overleaf sets out the NHS strategic commitments and those for the mental health service:

Your NHS, Your Future Care	**Mental Health Service Specific**
• Provide healthcare in the most appropriate settings • Reduce reliance on DGRI for non-emergency and longer term care • Deliver healthcare through staff who are appropriately skilled, experienced and motivated • Develop a seamless journey for patients so they benefit from a unified health system and • Work with our partners e.g.: social services so that patients receive the best possible outcomes	• Provide healthcare in the most appropriate settings • All admissions should be agreed as the most appropriate option to meet identified need. All efforts will be made to ensure safe, appropriate and timely discharge home. • Deliver healthcare through staff who are appropriately skilled, experienced and motivated • Develop a seamless journey for patients so they benefit from a unified health system and • Work in partnership with patients, carers, social work services and commissioned services so that patients receive the best possible outcomes.

3.6 The Mental Health Service Strategic Aims.

In order to meet the above commitments, the Mental Health Service strategic aims are to:

- Modernise our mental health services to establish the right balance between services that build healthy communities and provide quality front-line, specialist community based and inpatient services
- Deliver a whole systems approach across prevention, intervention and recovery that focuses on person-centred approaches that support people to recover and live full, active and productive lives.
- Provide effective screening and early identification of illness. In this way, anyone who needs it will receive the right treatment, at the right time, as near to their home as possible, and from staff skilled at the appropriate level of intervention.
- Value staff working across the range of community and inpatient services through leadership, mentoring, quality supervision and training. NHS Dumfries and Galloway is committed to high quality staff governance.
- Optimise team and partnership working to maximise the benefit to service users.

3.7 Tiered Model of Mental Health Care

The model of service provision to achieve a whole systems approach to addressing mental heal across the region is as indicated in the table below.

Tier	Level of care
1	Community level services mental health and well-being
2	Front-line Primary Care Services
3	Community Based Specialist Mental Health Services
4	Inpatient Wards both within or outside of the Region

The model for mental health services is one where Tier 1 is firmly rooted in the community, with services and activities that contribute towards positive mental health and well-being. At Tiers 2 and 3 the aim is to enhance professional and timely community based service provision.

For this to be effective there must be access to first class, modern, specialist acute and rehabilitation inpatient services that work with the most ill people. Providing specialist care and treatment, and working jointly with enhanced community services will aid reduction in length of inpatient stay and therefore least disruption to the lives of both users and carers.

3.8 Mental Health Service Objectives

- Continue with our programme to modernise specialist inpatient and community-based services, supporting people at home wherever possible guided by **Delivering for Mental Health** commitments and meeting agreed HEAT Targets.
- Provide a comprehensive mental health service working with primary care and other front-line services to implement Integrated Care Pathways (generic and condition specific)
- Improve the patient experience of hospital and ensure an effective and safe discharge reducing the need for any subsequent readmission

- Raise awareness of mental health issues through the delivery of Applied Suicide Intervention Skills Training (ASIST) and Mental Health First Aid Training to front line and specialist staff and the public.
- Provide specialist support to long-term residential social care for older people with mental health problems.
- Increase staff skills through the **10 Essential Shared Capabilities** (ESC) training, embedding Recovery and social inclusion concepts into every day practice and encouraging involvement through clinical governance and identification of best practice.
- Reviewing and updating policies consistent with delivering the new model of service.

4.0 The Need for Investment

4.1 Legislation and Government Directives and Guidance

The introduction of the **Mental Health (Care and Treatment) (Scotland) Act 2003**, provided the 'framework' for other legislation and for service developments that meet the requirements of the Act and the Principles that guide decision-making within mental health legislation. It has been an exciting journey working with people who use mental health services, carers, staff and other partners to modernise mental health services in line with the commitments and HEAT Targets identified within Delivering for Mental Health. Two projects of which we are particularly proud are the development of Integrated Care Pathways and an Admission, Transfer and Discharge Policy, both of which have been achieved by close partnership working.

Mental health remains a clinical priority in Scotland as set out in:

- A Framework for Mental Health Services in Scotland (1997).
- A Joint Future (2000)
- Our National Health (2001)
- Partnerships for Care White Paper (2003)
- Mental Health (Care and Treatment Act) (Scotland) 2003
- Improving the Quality of Mental Health Services in Scotland (2005)
- Delivering for Health (2005)
- Delivering for Mental Health (December 2006)

4.2 Changes to the Pattern of Services

Since the OBC was approved in 2007, there have been many changes to the way services are delivered and where they are delivered. We have progressed and managed change toward community focused services which are responsive and able to provide assessment and treatment; care and support across a spectrum of care provision.

Where inpatient care is needed (a decision usually made in the person's community and only after all other options have been explored) the standard of care is vastly improved. Most important of all, decisions about discharge back home are made with the patient, their families and all other people or services relevant to that person's care as soon as possible after admission.

A key element in the way changes are being brought about is that there is a fundamental culture change taking place among staff that is rising to meet the increased expectations of patients and families.

Over the past five years Dumfries and Galloway Mental Health Service has responded to government guidance and the principles to be found underpinning legislation in developing the following services:

- Development of a Crisis, Assessment and Treatment Service (CATs) in Nithsdale that is intended to be rolled out across the region. A pilot has been operating in the west of the region for the past 18 months.
- Access to community based crisis bed within a commissioned service has reduced the need for short term (2-3 days) admission to hospital and offered a useful alternative to hospital. This is managed by the CATs team.
- Redesigned inpatient rehabilitation service, placing greater emphasis on home treatment and community rehabilitation.
- The implementation of a psychological therapies strategy to ensure that patients can, as required, access psychological therapy either in the community or inpatient facilities.
- Provision of specialist mother and baby inpatient beds out of the region and the development of an Integrated Care Pathway (ICP) for perinatal mental illness.

- The development of a region wide eating disorder service that better manages patients/ clients through an ICP as close to home as possible. This has reduced the number of patients requiring specialist out of region treatment.
- Increased staff skills to better manage complex presentations and behaviours such as substance misuse/mental health, physical ill health/mental health, as well as being able to deliver a range of interventions such as psychological therapies.
- The development and implementation of operational policies for all areas of the service: Inpatient, Community Mental Health Teams (CMHTs), and Rehabilitation Services.
- Early diagnosis and intervention for people with dementia has been implemented through the development of an ICP for Dementia, enhanced teamwork, memory clinic development and the adoption of person centred care through the use of life stories.
- Effective provision of mental health liaison nurse services between Dumfries and Galloway Royal Infirmary (Adult and Older Adult), Substance Misuse and Child and Adolescent Mental Health Services (CAMHS).
- A forensic service is currently being developed with supporting ICP for mentally disordered offenders and operational policies.

Current facilities within the Crichton Hall (outwith ward areas) include rooms available for Tribunals. New build plans include a more suitable, on-site tribunal suite.

Electro Convulsive Therapy (ECT) is provided within the current ward environment. However, guidance from the Royal College of Anaesthetists about patient safety indicates that this will be required to be delivered within acute hospital setting with intensive care facilities available.
By ensuring that all services are patient focussed, understanding that people live in communities and the means of entering and leaving hospital care is through Community Mental Health Teams, the balance of health care will shift away from an institutional base. A clear process for assessment, care and treatment is essential to facilitate an effective and smooth transition back to the community. While work has been in place to realise this, it is important to recognise the value of treating patients in a good quality environment.

4.3 Appropriateness of Current Inpatient Facilities

The current inpatient facilities are inappropriate to deliver a mental health service that meets higher expectations for all. The main issues are the lack of space, poor fabric and design of the current wards, along with having no local intensive care or high care facilities as described below:

- Occupancy rate too high on the adult acute wards, putting more strain on staff time. We aim to provide psychiatric intensive care beds that have 85% occupancy rates, to enable the service to respond to individual needs of patients in a therapeutic environment.
- The buildings are inadequate with a lack of space, basic necessities and arrangements for safety, privacy, dignity and comfort and therefore the inability to meet single sex accommodation standards. We aim to replace old and unsuitable accommodation on the Crichton Royal Hospital (CRH) site, enabling a service that does not institutionalise behaviour and that works towards earlier discharge from hospital care through the provision of fit for purpose inpatient accommodation that is appropriate for acute adult and older adult, inpatient rehabilitation and dementia assessment.
- There is a feeling of being in an unsafe and intimidating environment due to overcrowding, client mix and design. The new design is full of light and space. The accommodation will improve the amount of space for patients through the provision of therapeutic rooms, activity room, quiet and general sitting rooms and a public area cafe.

- Patients' care and progress is being compromised by having patients with intensive/ high care needs within an acute inpatient setting. Currently patients needing a higher level of care and treatment often have to be transferred to an out of region ICPU which takes up resources and disrupts the therapeutic relationship. The addition of an IPCU will make a big difference in our ability to care for the range of patients in the most appropriate settings.
- Patients requiring specialist eating disorder services needing to be cared for through out of area placements with associated costs. We aim to ensure there is flexibility within the design of each ward to care for patients safely attending to individual needs.
- Currently the mix of ages can be difficult to manage. We aim to build in flexibility to the ward design to better manage this: all services to be available regardless of age; for example: access to different parts of the service such intensive care, CATS, Rehabilitation and Dementia services – including appropriate care for early onset dementia assessment.
- The current isolated location and design of the rehabilitation units prevents patients with higher needs being admitted. There is poor observation and lack of therapeutic, occupational and recreational space. We aim to provide a rehabilitation unit that can flexibly meet a wide range of needs and that equips patients with the skills required to maximise their potential.
- There are currently no staff facilities for breaks, changing or storing belongings and no on-site duty doctor bedsit.
- There is no dedicated family visiting space.

4.4 Rationale For Changes

Driven by legislation, national guidance and the service changes already achieved and in order to improve the patient experience of hospital and ensure an effective and safe discharge, reducing the need for any subsequent readmission, we conclude that there is a clear need for:

- Redesigned and modernised acute inpatient accommodation, with inpatient activity reduced to 85%.
- The establishment of an intensive care facility co-located with the acute inpatient service.
- A high care facility within the older adult inpatient service for people with dementia / organic illness.
- Provision of rehabilitation beds to be sited close to acute inpatient services and the development of community based rehabilitation.
- An overall better environment for staff to work in; for patients to recover in and for families, carers and visitors to come to.
- On-site Tribunal accommodation.
- Increased clinical areas comprising: intensive care unit, 2 adult acute wards, 1 older adult acute ward, 1 dementia/ organic ward, rehabilitation wards and flats, therapeutic and meeting rooms and staff facilities
- Increased patient areas comprising a gym, sitting rooms, dining rooms, meeting rooms, faith room, gardens and family visiting room.
- Increased public areas comprising café, main atrium, multi-faith room, gardens.

The balance between community and hospital based services reflects the guidance given by Dr Sandra Grant in "The **National Mental Health Services Assessment (2004), Locality Report for Dumfries and Galloway"** regarding the services' readiness to implement the Mental Health (Care and Treatment) Act (Scotland) 2003.

4.5 Expectations of New Hospital Accommodation

To deliver the objectives of the strategy the development of fit for purpose inpatient facilities will allow us to achieve best professional practice through the following:-

- A safer environment for patients and staff
- Better space for improved therapeutic regimes
- Modern, fit for purpose buildings, that will value staff by improving their working environment
- Improved ward based care environments that are fit for purpose
- Meet government standards for single sex accommodation
- Complies with Mental Health Act and Disability Discrimination legislation and services consistent with the principles of the Mental Health (Care and Treatment Act) (Scotland) 2003 such as:
  ~ Respect for diversity
  ~ Reciprocity
  ~ Least restrictive alternative
  ~ Equality
  ~ Benefit
  ~ Respect for Carers.
- To improve recruitment and retention of high quality staff
- Provision of an IPCU facility will allow safe, local and appropriate management of highly disturbed patients
- Meet government standards for hospital acquired infection and patient safety
- Improve the flow of patients through the spectrum of care allowing for more efficient use of inpatient resources
- Supports us to provide patient centred care through the provision of a more flexible and broader range of care options
- To improve the quality of inpatient care, in terms of the ward environment, with staffing numbers and skills available to provide more therapeutic patient care.
  The bed complement to achieve the required occupation levels has been planned.

4.5.1 Adult Acute Accommodation

Acute inpatient care for Adults is provided in two general admission wards, Ettrick and Nithsdale Wards, located in the Hospice Block. Ettrick ward has 24 beds, four of which are for detoxification of patients with substance misuse. It admits patients from Wigtownshire, Annandale and Eskdale and Stewartry localities. Nithsdale ward has 22 beds and admits patients from Nithsdale and Dumfries Burgh localities. Both wards admit patients between 18 and 65 years of age with a broad range of mental health problems and diagnoses.

The building was constructed in the 1930s and has poor accommodation for daytime activities and sleeping, with a mixture of single, double and four-bedded rooms. It does not meet mixed-sex accommodation standards and contains shared sanitary accommodation. The service does not incorporate an IPCU.

The new accommodation will be purpose built and has involved all stakeholders including staff. This will allow for staff to engage with patients and carers, thus building the therapeutic relationships necessary to enhance the patient experience and journey to recovery. The design provides us with flexibility to safely manage vulnerable patients according to their needs such as age, condition-specific or complexity within the acute ward environment e.g.: people with an eating disorder (who previously needed to go out of region).

Improved inpatient design will enable the adult acute service to provide better space for activities (occupational, recreational or therapeutic), quiet space, access to a large gym, good quality outside space including safe areas within courtyards, a café a multi-faith space and family visiting room.

Local access to IPCU means patients and families will not need to go out of region for this service. The introduction of an IPCU facilitates better management of more vulnerable patients both in the unit and within the acute ward environment. The introduction of these facilities will have a positive impact on the acute ward in terms of improved safety and reduced levels of disturbance and noise. In the IPCU the staff will be able to engage with patients in more positive ways rather than simply containment and also reduces disruption to the therapeutic relationship.

4.5.2 Inpatient Rehabilitation Accommodation

The inpatient rehabilitation unit is based in the central location of Dumfries, off the CRH site. Lahraig had 20 longer-term rehabilitation beds and Wellgreen had 12 shorter stay rehabilitation beds. Although these units were purpose built at the time of the retraction of the CRH site, the model of service for rehabilitation has moved on and the redesign of services required a move to enhanced and dispersed community services and less reliance on NHS inpatient beds. Since the OBC was approved in 2007 Wellgreen unit has been integrated into Lahraig with a reduction of 16 beds and the closure of the Wellgreen unit. Community rehabilitation services are being built up across the region, co-located in CMHT – where they will probably be managed once the community rehab service has developed its identity sufficiently. A number of clients continue to move into the community in a range of accommodation options, with staff providing rehabilitation services, working with them in the community.

There is an expectation that patients will move into inpatient rehabilitation in a more timely manner, which will also mean that their presentation may not be as stable as the current client group and the challenges for the service will be higher. Rehabilitation will continue to be the cornerstone of our services that supports step-down from higher levels of security and other out of region options (i.e. eating disorders). It is expected that the new build will continue to cater for this wide range of patients requiring inpatient rehabilitation services.

Rehabilitation services will be admitting people with more complex conditions and will therefore need to be located near to the adult acute services for ease of movement and to facilitate the safety of both patients and staff. Being in close proximity will allow assistance to be given if required. Shared expertise across the units will also be beneficial for the care, treatment and rehabilitation of patients.

A key part of the rehabilitation redesign process is the development of a broader range of inpatient rehabilitation resources by having six purpose built bedsits in addition to more traditional ward environments. Flexibility to accommodate different levels of abilities and needs has been a key consideration in the design. This will allow patients to rehearse rehabilitation skills in safer and more appropriate environments before moving into their own homes.

4.5.3 Older Adult/ Dementia Accommodation

Glencairn Ward is a 15-bedded unit located in the Hospice Block. It provides care for patients over 65 years of age from anywhere in the region who have functional mental illness. It shares the disadvantages set out above.

Cree West is a 14-bedded ward located in Crichton Hall. It provides assessment and care for patients over 65 years of age with organic illness/ dementia, from anywhere in the region. Cree West is a sprawling, poorly laid out ward with mainly single rooms which are unfit for purpose when reviewed against standards for mixed sex accommodation. The bathrooms and toilets are inadequate in number and are mainly too small to allow lifting or handling equipment with enough space for nurses to move freely.

The new accommodation will be purpose built to provide us with the right facilities to provide a comprehensive and holistic assessment. The involvement of the older person and their Carers is an integral part of the assessment in the discharge process.

The principles that underpin dementia services will be realised, for example: a friendly, non-threatening environment that enables a patient-centred approach, focussing on recovery to be taken, where we aim to improve independence, quality of life and dignity with due regard to the patient's safety while providing therapeutic interventions and activities relevant to their needs. Dementia service provision will accommodate younger adults as well as people over 65.

Older Adult Acute Inpatient Services will be sited close to Dumfries and Galloway Royal Infirmary (DGRI) to enable ease of access to general health services and investigative procedures. By being located in this way they will also be located near to the adult units enabling shared access to facilities.

4.5.4 Investment in Community Service Provision

Investment in community services supports operational delivery of inpatient services. National guidance, legislation and local need all indicate the requirement for access to community crisis assessment and treatment services. This will enable people to be assessed swiftly and be treated in the community as an alternative to admission, or for earlier discharge from inpatient care, if their presentation allows. It will also help to reduce inpatient activity and prevent disruption to the lives of both users and carers.

Development of community rehabilitation services for both rehabilitation patients who could be discharged and also people currently living in the community who require a high level of continuing specialist support will be enabled by redirecting resources from the current rehabilitation inpatient service. This will enable people with complex and enduring mental health problems to maintain a community based lifestyle. Further investments to support the effective and efficient working of the inpatient services includes:

- Redesigned community and intermediate care services for older adults, to provide a service that is equitable across the region and available in each locality, giving improved access to resources.
- Extend CATS across the region.
- Enable the development of quality community based care that prevents admission where possible and facilitates swifter discharge from hospital.

4.5.5 Midpark House Facilities

The proposal includes the provision of office accommodation already on-site at Midpark House. This affords the benefits of:

- Relocating key clinicians and mental health service management
- Relocating key support services (secretarial and Medical Records)
- Relocating Allied Health Professionals (Dietician, Pharmacy)
- Increases the flexibility of the site (emergency vehicle access)
- Extended amenity ground

4.6 Bed Modelling

The level of investment in inpatient services has been identified through a bed-modelling process that takes account of demographic changes, activity trends and service developments.

The proposed bed numbers are:

IPCU	6 Beds
Adult Acute	2 x 17 Beds
Elderly Functional	15 Beds
Elderly Organic	16 Beds
Rehabilitation	14 Beds
TOTAL	**85 Beds**

Assumptions made within the bed modelling process have been made using statistical data and clinical judgement and are based on a fully operational crisis service and access to community based crisis beds. The planned bed numbers are in line with other NHS Board provision within Scotland.

Adult and Rehabilitation

- There is an overall reduction in adult acute and rehabilitation beds of 22.

- By reducing adult acute activity rates to 85%, this effectively means a further reduction in inpatient activity equivalent to another 6.5 beds.

Older Adult

- Older Adult Acute bed numbers increase marginally to support the population inflation of this age group and reflects the growing incidence of Early Onset Dementia.
- Current intermediate care beds are under utilised. A major review will be undertaken in 2010/11.

WARD BEDS	***CURRENT***	***OBC***	***FBC***
IPCU	0	6	6
ETTRICK ACUTE ADULT ADMISSION WARD(20) COVERING STEWARTRY/ANNANDALE/WIGTOWNSHIRE +(4) DETOX BEDS	20+4	16	17
NITHDSALE ACUTE ADULT ADMISSION WARDS COVERING UPPER NITHSDALE AND DUMFRIES	22	16	17
GLENCAIRN OLDER ADULTS ACUTE (FUNCTIONAL)	15	15	15
LAHRAIG REHABILITATION	16	16	14
CREE WEST OLDER ADULTS ACUTE ORGANIC	14	16	16
TOTALS	**91**	**85**	**85**

A working group progressed the thinking on the layout of the new rehabilitation unit. The underlying principles were that the new build should provide inpatients with a greater range of accommodation options prior to discharge. Consequently the configuration which was proposed was 6 bed-sits allowing individuals to “test out” independent living in single person accommodation. The remaining 10 beds were to be based on a shared flat type layout to allow greater levels of support and supervision to people who require this and also to allow inpatients to “try out” living in a more communal setting.

In summer of 2009 bed occupancy based on the previous years information were reviewed. This identified that bed occupancy was on average 67%. Given this figure it was proposed that two of the beds be relocated in the acute units and that rehab staff would work on rehab programmes with acute staff to prepare patients for rehab.

4.7 Property Strategy

NHS Dumfries and Galloway's Dumfries Property Strategy sets out the Board's aims to address the following property issues:

- Backlog maintenance
- Inefficient building stock
- Dispersed estate
- Age of estate
- High revenue costs
- Clinical adjacencies
- Service provision (fit for purpose)
- High carbon footprint

The aim is to focus services onto 4 main sites within the Dumfries area. In rationalising the building stock, robust space utilisation targets will be achieved with reduced revenue costs. Backlog maintenance costs will be reduced by disposing of older unsuitable properties with capital receipts being achieved. Clinical adjacencies will be addressed in rationalisation of properties while ensuring remaining stock is fit for purpose.
A major part of this strategy is the development of the Acute Mental Health Facility. This will bring together inpatient beds from 4 different locations in a purpose built exemplar hospital. It also allows clinical and administrative staff associated with the new hospital to be co-located on the Midpark site.

The space vacated by some of these moves will allow a rationalisation of remaining services resulting in the poorest property stock being freed for disposal in the medium term. This strategy cannot be implemented without the Acute Mental Health Development being constructed to form the first phase of the rationalisation.

4.8 Current Financial Position and Cost Structure

Table 4.1: Health Board Expenditure: 2008/09

Hospital and Community	**£m**
Acute Services	108.5
Maternity Services	12.2
Geriatric Assessment	5.6
Mental Health Services	22.0
Learning Disability	8.2
Geriatric Long Stay	15.1
Other Community Services	27.0
Other Services	9.7
Additional Cost of Teaching/ R&D/ Other	9.1
Subtotal	**217.4**
Family Health Services	66.4
Admin Costs	2.4
Other Non Clinical Services	6.0
Subtotal	**74.8**
TOTAL EXPENDITURE	**292.2**

Mental Health represents about 7.5% of the Health Boards overall expenditure for the period, this is before allocation of any central overheads.

The Board submitted a local delivery plan that confirmed that the 2009/10 allocation is sufficient to allow the Board to meet its existing revenue and capital commitments to service delivery and improvement with the caveat around a number of financial risks which exist in the future years' estimates and planned to carry forward revenue allocation of £2.2m into 10/11.

4.9 Manpower

The Board is a major employer of people locally, the funded establishment for mental health services being 310.17 wte staff and 46.05 wte staff within psychological services as shown in table 4.2 below.

Table 4.2: Staff Numbers for Mental Health, by Staff Group

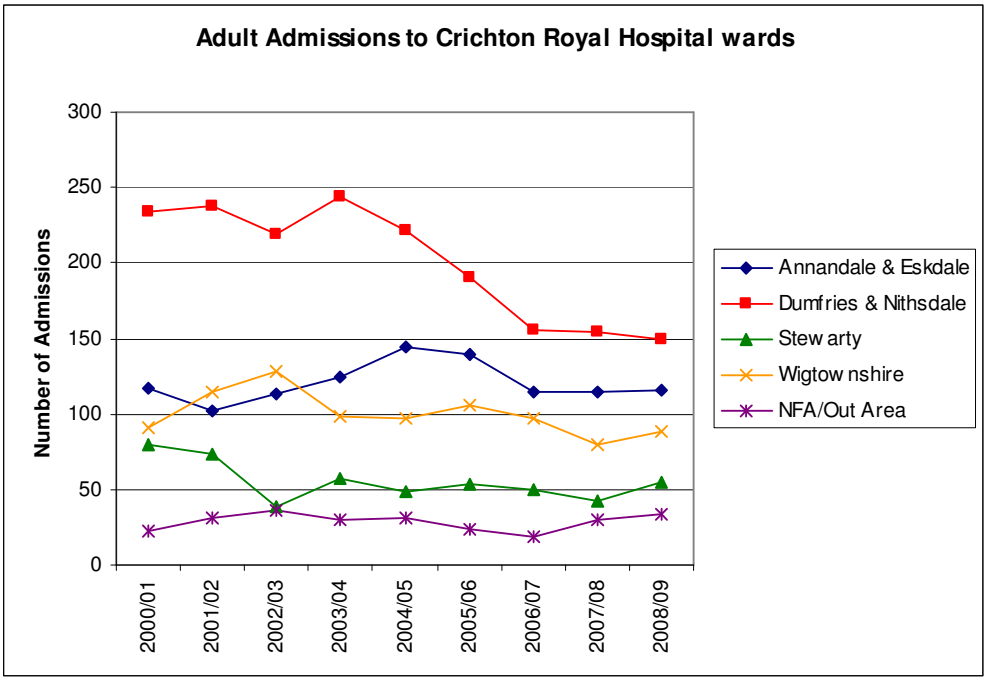
Staff Group	**WTE**
Management + Secretaries	26.90
Medical	24.55
Ancillary	1.88
Nursing	235.13
Occupational Therapy	21.71
Sub Total for Mental Health Services	**310.17**
Psychological Therapies	46.05
TOTAL	**356.22**

There has been investment in staffing to bring the ward establishment up to acceptable and safe staffing levels.

4.10 Current Service Performance against NHS Board's Requirements

In the past seven years there has been a considerable drop in admissions from Dumfries and Nithsdale locality. This has, in part, been contributable to the development of the Crisis, Assessment and Treatment Service (CATS) that is able to offer alternatives to hospital of home care and treatment and, since 2006, access to community based, crisis accommodation that takes the individual out of an environment that may be the cause of, or contributing to, the crisis that is not a hospital.

Most of the other localities have reduced admissions in the same period, but not to the same extent as Dumfries and Nithsdale. In most cases this is because of improved practices within the CMHT such as ensuring that regular patient reviews are held. It is also notable that the average length of stay is reducing from 37 days in 2006/07 to 31 days 2008/09. As improved discharge planning processes are put in place and with the development of community rehabilitation, it is expected that the average length of stay will continue to fall.



CRH Bed Statistics

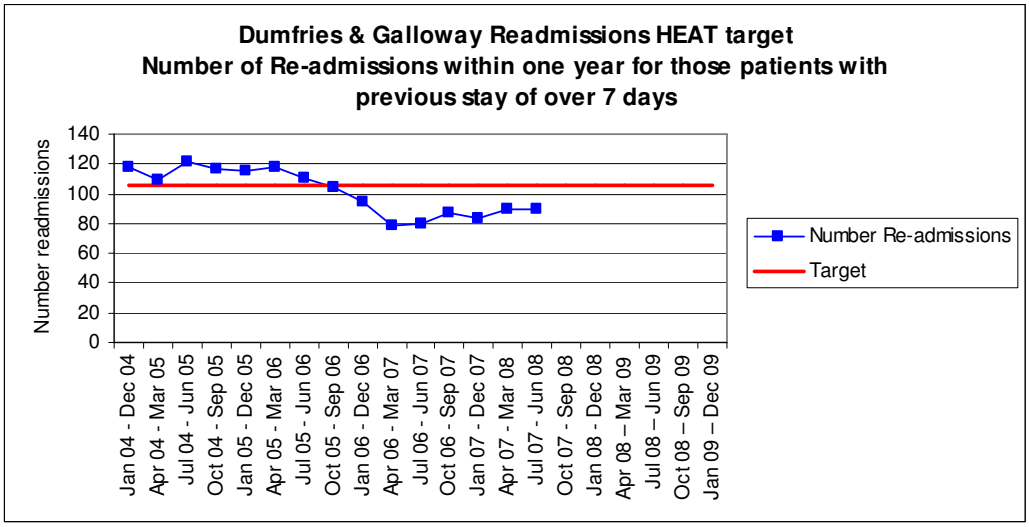
Source: Info Services- Midnight Bed Stats & PCSMR

Year	Adult Wards (Ettick & Nithsdale)			Older Adult Wards (Glencairn & Cree West)		
	Occupied Bed Days	Average Monthly % Occupancy	Average Length of stay (days)	Occupied Bed Days	Average Monthly % Occupancy	Average Length of stay (days)
2006/07	16535	91.6%	37	8773	82.7%	65
2007/08	16895	91.7%	32	8935	84.1%	72
2008/09	15190	90.5%	31	7676	72.5%	73

Readmissions HEAT Target

The HEAT target is: *We will reduce the number of readmissions (within one year) for those that have had a hospital admission of over 7 days by 10% (by the end of December 2009)'.*
As can be seen in the tables below, this is being achieved. As stated above, due to improved practices both within the in-patient wards and at community level, with improved communication between all parties involved in providing care, treatment and support to patients / clients.

Year of discharge	Number of Readmissions	Target
Jan 04 - Dec 04	118	Baseline
Apr 04 - Mar 05	109	
Jul 04 - Jun 05	121	
Oct 04 - Sep 05	117	
Jan 05 - Dec 05	116	
Apr 05 - Mar 06	118	
Jul 05 - Jun 06	111	
Oct 05 - Sep 06	105	
Jan 06 - Dec 06	95	
Apr 06 - Mar 07	78	
Jul 06 - Jun 07	80	
Oct 06 - Sep 07	87	
Jan 07 - Dec 07	83	
Apr 07 - Mar 08	90	
Jul 07 - Jun 08	90	
Oct 07 - Sep 08		
Jan 08 - Dec 08		
Apr 08 – Mar 09		
Jul 08 – Jun 09		
Oct 08 – Sep 09		
Jan 09 – Dec 09		106



Current performance measures for mental health services are nationally well developed through the Scottish Government's National Benchmarking Project and the Mental Health Collaborative. We have a Health Analyst in post that collates, interprets and regularly reports progress and information to senior managers and team leaders.

The HEAT targets are measured under three areas of work: Antidepressant prescribing, Dementia and Readmissions.

Activity to progress toward meeting the antidepressant prescribing target includes the development of the Moodjuice website with local information and resources for this region. An educational event was held for GPs at a protected training day in November 2009 and work continues toward raising awareness of self-help services. Ongoing audits of antidepressant prescribing focus on both new initiations of prescribing and review of patients on long-term antidepressant prescriptions.

Activity to progress toward meeting the Dementia targets include visits to GP practices to align data from both primary and secondary care sources to improve numbers on GP Practice Dementia Registers and development of a shared review process between primary and secondary care.

Activity to progress toward meeting the Readmissions targets includes process mapping and improvement work with CMHT and the CATs team; analysis and audits on admission and readmissions patterns and distribution of SPARRA data to team leaders and managers and the development of further case study work. Patient experience questionnaires are also being developed.

5.0 Summary of OBC / Re-evaluation of Preferred Options

Part 1 - Summary of OBC, September 2007

5.1 Introduction

The OBC that was submitted in September 2007 was the product of a considered effort by NHS Dumfries & Galloway, consulted stakeholders to the scheme and the Consultancy Advisory Team.

The OBC adhered to the guidance in place at that time for the compilation of such an exercise.

5.2 The Options Considered For OBC

Following early rejection of options from the long-list, the remaining short listed options considered in the OBC were as follows (these short-listed options were developed further to include specific site options at the time):

Short-List of Options

OPTION NO:	SITES
4(b)3 - (iii)&(v)	**Midpark Field, Bankend Road** ▪ Single Site - All new build ▪ Offices not required, so not included
4(a)3 - (iii)&(v)	**Ladyfield West** ▪ Single Site - All new build ▪ Offices not required, so not included
4(b) - (iii)&(vi)	**New Site – not yet identified** ▪ Single Site – All New Build ▪ Not within walking distance of Crichton Hall ▪ Offices are required and therefore included
4(a) - (iii)&(v)	**Residences Site – Older Adults, Adults, IPCU** **New Site – Rehab (close to acute services)** ▪ Split Site - All New Build ▪ Rehab - site that is close enough to receive assistance from acute services ▪ Offices not required, so not included
4(a)4 – (iii) &(v)	**Residences Site** ▪ Single Site - All new build ▪ Offices not required, so not included
1	**Do Nothing**

5.3 The Benefits

Following identification of the Options, the NHS D&G appraisal team developed and agreed the content of the benefit criteria. These criteria were then ranked in order of importance.

The ranked and weighted benefit criteria were recorded, see the table overleaf.

Ranked & Weighted Benefit Criteria

Benefit Criteria	Definition	Weighting	Scaled Weighting
Environment fit for purpose (incl. Reduced Risk)	• Building Quality and Longevity • Clinical accommodation on ground floor • Meets single sex accommodation standards • Designed for safety, observation • Includes intensive Care (A) & High Care (OA) • Has therapeutic, occupational & recreational space • Meets the need for privacy, dignity and security • Has adequate and appropriate outside space	100	24
Deliverability (incl. Practical Solutions)	• Site availability and suitability • Planning issues • Disruption to services • Manageability • Length of time to commissioning of modernised unit/s.	80	19
Flexibility	• Offers opportunities to respond to range of service user complexity • Ability to change the function and/ or mix within the buildings should future need require this e.g. move to single sex wards, client mix changes, change of use • Ability to change working practice/ treatments	70	17
Acceptability to users and carers (incl. Clinical Effectiveness & Quality)	• Enables assessment and treatment • Supports the model developed by stakeholders including users, carers and staff • Enables implementation of the "Fit for Purpose" standards and reflects the view of user and carer • Enables staff to provide the service identified within the service model in a safe and effective way	60	14
"Staffability"	• Ability to attract and retain high quality staff by: • Having a service which values and develops staff • Provides a safe and modern environment • Enabling them to utilise their skills • Having appropriate opportunities to utilise staff resources and skills effectively and productively	60	14
Location and Accessibility	• Accessible to users, carers and staff • Having good transport routes and times to and from the site/s • Quality of service through synergy of co-location • Within easy access of DGRI	50	12
	TOTAL	**420**	**100**

5.4 The Preferred Option (OBC)

5.4.1 Benefits Analysis

The 6 short-listed options were scored against the benefits noted at 5.2 above. The results are presented in the order of preference/ rank in the table overleaf.

Ranked order of Options

OPTION NO:	SITES	TOTAL SCORE	RANK
4(b)3(iii)	All new build – Bankend Road site	898	**1**
4(a)3(iii)	All new build – Ladyfield West site	879	2
4(b)(iii)&(vi)	All new build, Greenfield site (not identified)	779	3
4(a)(iii)	All new build – Residences site – except Rehab	765	4
4(a)4(iii)	All new build – Residences site New Build, site to be identified – Rehab	688	5
1	Do Nothing	397	6

As can be seen from the table above, it was determined from the Benefits exercise, and subsequently reported in the OBC, that the Preferred Option arising from the Options Evaluation Workshop was **Option 4(b)3(iii) All new build – Bankend Road Site.**

When reappraising the options identified in the OBC against the Non Financial Selection Criteria it was confirmed that the original selection still offers the best solution.

With the additional knowledge that has been gained regarding the requirement of the unit and further investigations carried out into the preferred site many of the original benefits identified in the preferred site have been reinforced. Additional benefits have also been gained.

- A design has been developed that shows the proposed development fits onto the preferred site. It has also been identified that the development would be a "tight fit" on the site of the 2nd option.
- Planning application did not present an issue with local community due to location (only 2 non material objects received). If option 2 or 3 had been pursued it would inevitably have received greater objection.
- Land acquisition has been agreed awaiting approval of FBC for purchase (ministerial transfer).
- Immediate availability of land, no reliance on other projects.
- Proximity to DGRI and Crichton Royal. This benefit has been realised in the proposal to transfer patients to DGRI for ECT treatment on the basis of patient safety.
- Site offers outstanding location for a mental health unit and designers are able to make great use of surroundings, views and natural biodiversity.
- Availability of adjacent property to relocate Psychiatry offices and others associated with the new hospital. In the OBC the preferred option had made a compromise in the offices were not being included due to cost restraints. Due to this site being chosen an opportunity has arisen to include these offices and therefore enhance the service without any additional cost being incurred by the project (see below).

During development of the design for FBC purposes the Scottish Government Rural and Environmental Research Analysis Directorate (SGRERAD) advised that Midpark House, a property in their ownership, directly adjacent to the development site, could be made available to the NHS.

After fully considering the Boards overall property strategy it was concluded that a rationalisation of the Dumfries estate would be assisted if Midpark House was utilised for Psychiatric services. This has allowed the re-provision of Psychiatric office accommodation to be included on the site of the new development. This will provide a number of benefits which were not originally being achieved by this option and further reinforces that the Midpark Field New Build is the best option.

The inclusion of Midpark House into the mental health development has not increased the overall project cost as significant savings are achieved by relocating some services from the new building into Midpark House and also by utilising additional grounds and driveway attached to the property.

Affordability

Both capital and revenue costs have been analysed in section 7 and show that projections made in the OBC are reasonable and the project remains affordable. On reviewing the costs shown in section 7 against the other OBC options it is clear that the preferred option remains the best solution financially.

Changes to the Environment

Following a revalidation exercise, it was concluded that there have been **no** substantive changes to the clinical imperatives and assumptions that drove the requirement for this project from NHS Dumfries & Galloway's perspective. Therefore, the need for the facility to be procured as per the Preferred Option from the OBC remains.

Option 4(b)3(iii) has therefore been revalidated and NHS Dumfries & Galloway can state that the Preferred Option at OBC stage continues to be the Preferred Option for the project.

5.5 The Cost of the Preferred Option

At OBC stage, the costs for the Preferred Option were reported as noted below. The reported capital cost for the Preferred Solution, a New Build, all services on one site (Midpark Field site, Bankend Road) (Option 4(b)(iii) & (v) from the OBC) was **£27,254,530.**

This was built up in the following manner:

	Option 4B 3 (iii) (v)
Gross Area (m^2)	7,152
	£
Land Purchase	100,000
Construction Cost	11,883,515
On Cost	4,397,714
	16,281,229
Contingency	814,061
TOTAL incl. Contingency	17,095,291
Vat	2,794,173
Fees	2,136,911
Equipment inc. vat	2,008,697
	24,135,072
Optimism Bias @12.93%	3,119,458
TOTAL CAPITAL COST	**27,254,530**

The capital cost was built up based on the following assumptions:

- The district valuer has supplied land acquisition costs for the purchase of land where NHS Dumfries and Galloway do not currently own it.
- Construction and/or refurbishment costs have been prepared by McGowan Miller Partnership based on plans supplied by our architectural advisers for the project. All the current options are new build with irrecoverable VAT included on the element which can be charged to revenue. VAT has been included on the capital element.
- It has been assumed that the VAT associated with the rehab longstay element will be zero rated and therefore an assumption has been included that no VAT is chargeable on this proportion.
- A construction cost contingency of 5% has been costed in addition to the base capital costs provided.
- Professional fees have been estimated as 12.5% of the construction costs. Costs exclude VAT as this is recoverable.
- Equipment costs have been estimated and included for all group 2, 3 and 4 costs including VAT.
- Optimism Bias percentage of 12.93%.
- Capital costs have been indexed to Q4 2010 to reflect prices at mid point of construction.

These were prepared at October 2007 and assumed project completion by August 2012. Despite delays in the programme awaiting the establishment of the Frameworks Scotland process for procurement of the development the project is planned for completion within a shorter timescale and is expected to complete in October 2011.

Whilst some changes have been introduced to the scope of the development since the OBC the costs are able to be contained within the OBC capital cost estimates. More detail on this is contained in section 7 which provides the full financial analysis of the development.

5.5.1 Review of Economic Appraisal

At the OBC stage an economic appraisal was carried out as part of the option appraisal process to assess, from a financial perspective, the relative merits of the different options.

A discounted cash flow for each of the options has been undertaken over 25 years (plus initial construction period) using a discount rate of 3.5% which is in line with Treasury Green Book guidance. The key elements used for the appraisal are detailed below:

Capital outlay for each option exclusive of VAT
Lifecycle costs of building and engineering works
Optimism bias adjustment to initial capital costs
Total revenue costs for each option excluding capital charges net of income
Bridging or other non recurring costs

5.5.2 Economic Appraisal Key Assumptions

The key assumptions for the economic appraisal are detailed below:

- The base period for the economic appraisal is 2009/10. (Year 0)
- All cashflows are at 2009/10 outturn prices.
- The appraisal period is 25 years, plus construction period.
- Capital costs have been phased based on a model provided by technical advisers.
- Optimism bias has been applied to all capital costs at the rate of 3.08%.
- The first full year for additional revenue costs for property and staffing is assumed to start in 2012/13.

5.5.3 Summary of Results

The outcome of the economic appraisal is summarised below, it has been assumed that the schemes have the same lifetimes. The table below summarises the results of the economic evaluation and compares the results to the benefits appraisal outcome and also the financial appraisal.

This confirms that options 4B 3 remains the preferred option as highlighted in the table below as this option has both the lowest net present cost (NPC) and equivalent annual cost (EAC), with the exception of option 1 which is the do minimum option and it would be expected that this is the outcome.

	NPC £k	Ranking	EAC £k	Ranking
OPTION 1	298,778	1	16,254	1
OPTION 4A (iii) (v)	327,564	5	17,819	5
OPTION 4A 3 (iii) (v)	327,032	4	17,791	4
OPTION 4A 4 (iii) (v)	326,835	3	17,780	3
OPTION 4B (iii) (vi)	331,337	6	18,025	6
OPTION 4B 3 (iii) (v) (preferred option from OBC)	326,687	2	17,772	2

Most of the shortlisted options from the OBC have a relatively similar capital cost profile as most of the difference between the options were site specific and the actual building being constructed which, it has assumed, would be the same size. Using switching techniques to assess sensitivity it would require capital costs to increase by £400k on the preferred option to affect the option appraisal ranking. However due to the level of significant development of the preferred option this has a lower risk profile.

6.0 The Preferred Solution

6.1 Introduction

The Outline Business Case identified 6 potential options available to the Board. These options were assessed both by financial analysis and non financial benefits appraisal. Option 4 (b) 3, new build in Midpark Field, Bankend Road, Dumfries, was identified as the Preferred Solution.

The importance of the Preferred Solution in supporting the aims and objectives for the development of Mental Health Services (both clinical and rehabilitave) in the area cannot be stressed strongly enough, this option will allow NHS Dumfries & Galloway to have the capacity to meet existing and future needs and to enable a complementary grouping of services to be brought to one site in a innovative manner that will benefit the people of the area.

6.2 Development Work since OBC

6.2.1 Engagement with Stakeholders

Engagement with patients / service users & carers

There has been considerable engagement with all stakeholders across the region, not least with people who use mental health services and their families and carers. The launch of the FBC stage and introduction of PSCP partners was an afternoon event held in Dumfries and has been followed by 14 further consultation meetings around the region (3 to each locality) in June, September and November. Invitations to these events have been through the locally commissioned organisation, User Carer Involvement (UCI) who mail out the programme of consultation events to everyone on their mailing list (over 300 people) and send further reminder emails nearer the event. Some Community Mental Health Team involvement events have also included an update on the progress of the design of the new build.

Much of this has been run in addition to operational developments which have also required the involvement of people who use mental health services and their carers such as the development of condition-specific ICPs and other major policy developments that are integral to the whole mental healthcare system.

Latterly, there has been active engagement with a local service user art group on the development of the Art Strategy.

Members from UCI have been actively engaged on the new build working groups alongside staff, managers and commissioners. There genuinely seems to be an appreciation of greater involvement and consultation. Quotations from UCI work-stream members re the New Build include the following:

“Very impressed with the whole process – it has been friendly and genuinely involving and we have been able to express our views with the confidence that we are being listened to. Whilst appreciating that everything suggested cannot be taken on board I value the fact that everyone has been listened to and where an idea has been rejected the time has been taken to discuss the reasons why within the group and to search for a workable alternative that everyone can agree on”.

Workstream Group Member and Carer November 2009

“I believe that there has been a genuine commitment to the involvement process with a real effort made, by everyone involved, to listen and engage and that this has generated a genuine team ethos in the work-stream meetings with final decisions on the way forward reached through debate and consensus.”

Workstream Group Member November 2009

Involvement & engagement with staff

At all levels, there has been a huge amount of enthusiasm and engagement from staff who have been involved from the start on the new build working groups. For those not able to attend the working groups (e.g.: staff in community based teams) there have been regular updates across region.

The implementation of the Model of Service has been led by staff who have also been involved in developing policies and carrying out 'tests of change' to ensure operational robustness necessary to ensure a robust whole mental healthcare system.

Engagement with partners

We have involved & /or consulted with the following partners in the new build and other developments such as the model of service & policy development:

- Engaging voluntary sector through the Mental Health Providers Forum
- Consultation with community groups through open days and displays in the foyers of both Crichton Hall and DGRI.
- Consultation with local authority through attendance at Area Committees in regard to the new Model of Service and latterly, keeping Nithsdale Area Committee updated of progress of design and development.

Changes to the Scope of the project

As part of the development process of ensuring that the new facility is configured in such a way as to best meet clinical need and reflect any emergent opportunities to introduce improvements there have been changes to the scope of the project since OBC. These are as follows: -

- Electro Convulsive therapy has been removed from the project for clinical governance and patient safety reasons and will now be provided from Dumfries and Galloway Royal Infirmary. The move will take place prior to the opening of the new unit and will be fully operational by that time.

- The current proposal allows for the inclusion of a tribunal suite within the facility as per the Mental Health Act which will facilitate greater access by both staff and patients, as it is moved from an admin block to the clinical centre.

- The procurement of Midpark House, which is adjacent to the new facility, as part of the project enables all managerial and administrative staff to be co-located thus improving working practices. This ensures that the new build is purely a clinical facility with no new admin space. It also enhances the services on site with the introduction of pharmacy/ dietetics and psychology under the same roof.

- The configuration of the 16 rehabilitation beds has been reviewed. The provision now consists of 6 rehabilitation bedsits, 2 four bed wards-one designed to a low secure specification to help future proof the facility, and 2 beds in the adult wards to be used as progression beds

Beyond this, and since submission of the OBC, there has been development work carried out to both the requirements within the building and to the design of the building itself. This has resulted in some movement to the configuration of the building and to the accommodation schedule.

The Current Schedule of accommodation is included at **Appendix 01** of this FBC. This functional accommodation schedule and the associated ancillary space give a GIFA for the facility of 6,934m². This compares with an OBC area allowance of 7,152 m². The Schedule of accommodation provides details of the current proposal referenced against the original provision of the OBC. The main changes are:

- Transfer of ECT service to DGRI
- Inclusion of Tribunal suite
- Removal of office accommodation to Midpark House

- Increase in single room and ensuite size

The inclusion of Midpark House has enable the relocation of Psychiatrists, Junior Doctors, Psychiatry admin and Medical Records, related Psychologists, Pharmacists and Dietician to the site of the new hospital.

The Design Drawings for the facility are included as **Appendix 02** of this FBC.

6.2.2 Frameworks Scotland

With the Department of Health introducing Frameworks Scotland in November 2008 the decision was taken to delay the appointment of a design team to develop the project towards FBC.

Following the Framework launch by the Cabinet Secretary for Health a high level information pack was sent to all 5 PSCPs in the framework. After an interview process Laing O'Rourke was chosen as our preferred partner. The same process was followed for the appointment of client cost advisor and CDM coordinator. Currie and Brown and Cyril Sweett were appointed to these roles respectively. The choice of Laing O'Rourke was assisted by a strong presentation from their Principal Supply Chain Member (PSCM), Archial Architects. Design excellence had been emphasised in the briefing material and Archials presentation and their response to questions addressed this essential criteria well.

6.2.3 Contract

On appointment of the principal Suppy Chain Partner (PSCP) and Professional Services Consultants (PSC), stage 3 NEC3 contracts were entered to agree scope of work and cap fees.

Design Fees

With the development of project costs for the FBC, design fees for work up to confirmation of target price and to completion of construction contract have been agreed with the PSCP and PSCs.

Work Information /Market Testing

At the time of FBC submission over 80% of the construction packages have been market tested. The client cost advisor has worked with the PSCP to verify that the provisional target cost included in the financial appraisal is appropriate and compares well with national benchmarking.

Risk Allowance

Throughout the design process a risk management strategy has been implemented and a risk register compiled to log risks, mitigation, value and ownership. It has been agreed which party, client or PSCP, can best manage those risks. See Risk Register **Appendix 03**

The PSCP has taken a commercial view on their level of exposure to risk by assessing the risk register and considering the current stage of design and specification development. A sum has been included in the target price as an allowance for this risk. This has been confirmed by the Client Cost Advisor as an acceptable level of risk by benchmarking against the wider market.

The PSCP and NHS Dumfries and Galloway have forged a productive team which has moved the design and costing process forward in a very inclusive manner resulting in a signed off design which best meets the team's needs (including users and carers).

A not to be exceeded target price has been agreed between NHS Dumfries and Galloway and the PSCP but further work is ongoing to develop the design and works information to give more surety around the specification and detailing of the proposal. This may identify savings which will be implemented before finalising the target price in the Stage 4 contract.

Whilst the wait for the launch of Frameworks Scotland delayed the start of the design process, the overall project programme is anticipated to reach completion approximately 12 months ahead of the timescale indicated in the OBC. Project completion is predicted for October 2012, if a start date of March 2010 is achieved.

6.2.4 Risk Evaluation

Following submission of OBC, a workshop was held with all stakeholders to re-examine the major issues that may have an effect on the deliverability of the project. This workshop was termed the "Contingency Workshop" and the aim was to identify major issues and to formulate, and agree, a strategy for mitigating against the effects of these risks.

The results of this workshop are noted in Section 8.0 and discussed further in Section 13.0 of this FBC.

6.2.5 Design Development

The design process has involved a wide variety of input from Health planners, architects, clinicians, allied health professionals, ancillary services, users and carers, who all contributed to numerous workstream groups. These workstream groups consisted of:-

- Acute Adult
- IPCU
- Elderly functional
- Elderly organic
- Rehabilitation
- Hotel Services/Admin
- Ancillary Services
- Estates/Maintenance

Location and Site

It is proposed that the new hospital will be located on Midpark Field, a Greenfield site, which lies directly adjacent to the former Crichton Royal Hospital and used to form part of the estate. The location of the development is shown on the site plan **Appendix 02.**

Functional Content

The design of the new facility was based on the site environment, the OBC Schedule of Accommodation and the Operational Policies provided by NHS Dumfries and Galloway. The design team began the design process without any pre-conceived ideas of the layout or form of the building.

The process began with a re-examination of the schedule of accommodation with the various Workstream groups and a development of a Scheme Development Plan which set out the departmental agencies.

Once this had been agreed by the workstreams, work began on developing a 1:500 scale layout of the new hospital, this was an iterative process and involved the input of the board staff and users and carers using the workstream meeting process.

Once the 1:500 scale layouts had been agreed and signed off by the Project Board, the 1:200 scale layouts were developed through a continuation of the same process. At this stage the various groups were challenged on the requirement and use of every square metre of the building to ensure that the most efficient scheme was developed which fulfilled the clinical need of the facility. This was again presented to the Project Board for Approval.

The final part of the process was the development of 1:50 scale loaded room drawings and development of the equipment lists.

As well as the layout of the new hospital the workstreams also commented on the external form and finishes for the new building and comments were addressed prior to the planning submission being made.

Throughout all of this process the design team were also tasked with ensuring that a BREEAM Excellent rating for the new building could be achieved.

6.2.6 Design Excellence

The principles of Design Excellence as set out in the NHS Dumfries and Galloway Design Action Plan **Appendix 04** have been considered from the outset of the Design stage. Working collaboratively with clinical staff, support staff and users and carers, the Design Team have maintained the drive to ensure the key principles outlined below have been at the forefront of the decision making process. Jeff Ace, Chair of Project Board and Director of Health Services and Stephen Howie, Project Manager are both designated design champions for NHS Dumfries and Galloway and are tasked with ensuring design excellence is achieved.

Functionality, of use, accessibility and space,

Impact, detailing character, innovation, form and materials, the created environment and urban and social integration

Build Quality ensuring that performance, engineering and construction are also considered as part of the design.

The Planning Design and Access Statement **Appendix 05** sets out the ethos of the building and how this has manifested within the design.

The building has been designed specifically to respond to site orientation, the land forms of the site and the views afforded to it as well as operational needs. The functional requirements and natural progression from public space to private have steered every stage of the design from the development plan to the detailed room layouts. A clear and logical planning diagram has developed and supported the aspirations of providing the welcoming, homely environment considered 'best practice' amongst Clinical and Design professionals as well as responding to the requirements of staff management and support services. Although it has a relatively large footprint, the accommodation is stepped to minimise its impact on the conservation area it inhabits and it does not dominate the sky line. It is a building fundamentally about relating to its site and the weaving of mass to create interior and exterior courtyards which bring light and nature into the heart of the building.

The intention is to portray a sense of calm and the positive aspects of feeling secure and cared for. Although it is fairly quiet and considered piece of architecture it responds to the principles of place making, thresholds and entrances and way finding. It responds to the history of the area with the inclusion of local materials and of function. Together with the opportunities the building will bring to enhance outreach to the community through various means including art, we believe these aspects will bring a new dynamism to the area, and therefore enhance the prospects of the future sustainability and ongoing conservation of the Crichton site as a whole.

The design has been assessed by a designated group with members from outwith the regular workstream group. The AEDET assessment tool has been utilised and the results recorded. Further reviews are planned once detailed design progresses and again at completion of the project. This is in accordance with NHS Dumfries and Galloway's Design Action Plan.

Art Strategy

A Framework for creative arts has been developed by a project subgroup. The framework aims to ensure that the building will appeal to occupants senses through expressive art and add a further dimension to the ambience and therapeutic nature of the building.

"Where time and attention has been tailored to meet patient needs, the resulting environments have had 'therapeutic impact'. These environments, which encourage patients to feel looked after and cared for, and for staff to feel valued, demonstrate that public art projects have an impact beyond the physical environment." Evaluation of the King's Fund's 'Enhancing the Healing Environment Programme.' NHS Estates, 2003

The *Healing Spaces* Framework (**Appendix 06**) is the first part of the strategic approach to embedding creative works into the new building.

It sets out the context, initial research and the broad brush strokes for a creative commissioning programme involving users, the wider community and creative professionals.

Healing Spaces is a programme of creatively led integrated permanent art projects that will help engender a sense of pride and identity for the new unit .

Our aim is to work with staff, patients, creative professionals, visitors, volunteers and the design team to develop a programme of commissioning that has a lasting permanent legacy both for the enhancement of the new internal and external spaces for users, as well as for the wider community.

The project will be an integral part of the design and build, will positively engage users and the wider community in the development and implementation of this programme and will generate extensive partnership working.

It will support the reduction of stigma surrounding mental illness and result in a building with a healthcare culture where the arts are firmly embedded into the daily life of users.

6.2.7 Optimism Bias

Optimism bias of 12.93% was included in the capital cost at OBC and was assessed by the project team as part of the business case process. This has been further reviewed throughout the FBC and was subject to an Optimism Bias workshop to ensure that this important factor was properly accounted for. The revised Optimism Bias is now included in the Capital Cost at a level of 3.08% (see Section 7.0 below) (**Appendix 07).**

6.2.8 Market Testing

As the design developed, a process of Market Testing the design in order to inform a Target Cost was started.

The Market Testing process involved the issuing of preliminary tender information to a list of preferred suppliers and sub-contractors to allow the current market rates for products and services to be determined.

The project was divided into a series of work-packages and key high-value packages were identified to be market tested to ensure that at least 80% of the value can be determined from the market. It is not possible to market test every package as the design will not be sufficiently developed to allow this.

At the time of FBC submission, over 80% of the construction packages had been market tested. The client cost advisor has worked with the PSCP to verify that the provisional target cost included in the Capital Cost table in Section 7will be a “not to exceed” figure (which has been formally agreed with Laing O’Rourke). Further work is progressing to examine specification and design detail prior to confirming finalised target cost for completing Stage 4 NEC3 Contract.

6.2.9 Examination of Programming issues

Since OBC, NHS Dumfries & Galloway have been, in conjunction with the appointed PSCP, examining programming issues in order to establish a realistic and achievable programme for the project.

The main project programme is included in this FBC at **Appendix 08**.

The key milestones for the delivery of this project are outlined overleaf.

Milestone	Completion By
Health Board Approval	7th Dec 2009
CIG Approval	20th Jan 2010
Agreement of Stage 4 Contract	30th Jan 2010
Mobilisation of PSCP	Feb 2010
Formal Transfer of Land	Jan 2010
Construction Commencement	Mar 2010
Construction Completion	Jul 2011
Cleaning and Commissioning	Mid Sept 2011
Equipping	Sept 2011
Migration	Oct 2011

Planning Approval

Detailed discussions have been taking place with the Planning Department and statutory consultees since March 2009. A formal submission for Full Planning Permission was submitted in August 2009. Dumfries and Galloway Council are due to determine the application at their Area Committee meeting on 9 December 2009. Planning Officers are recommending approval with various minor conditions applied.

An earlier presentation of project progress to the Council Area Committee did not identify any significant issues Councillors have with the proposal.

Note – 10 December 2009
Planning Approval was granted by Dumfries and Galloway Council on 9 December.

Accepted Programme

A construction phase programme has been prepared by the PSCP. The Programme correlates directly with the works information as well as showing the critical path activities for the construction stage.

Close Out Programme

This will be issued by the PSCP towards the end of the construction phase and will provide detail on the following:

- Testing and Commissioning
- Client training
- Clearance of defects
- Transition planning
- Migration

Progress Monitoring and Reporting

The project management process is set out in detail in the attached Project Execution Plan **(Appendix 12)**. This document is reviewed on a regular basis and any amendments to the management process are authorised by the Project Board.

The contract is controlled though a New Engineering Contract version 3 (NEC3) This contract includes a very precise management system to ensure all contractual issues are recorded and agreed in a prescribed manner to ensure close control of the contract management is maintained at all times.

The Project Board meet on a monthly basis and receive monitoring reports on all aspects of the project.

7.0 Financial Appraisal and Affordability

7.1 Introduction

This section sets out the current position in terms of costs, financial and economic appraisal and affordability in respect of the Preferred Solution and covers: -

- Capital Costs and any movements since OBC
- Revenue Costs Implications
- VFM analysis
- Affordability

7.2 Capital Costs

As noted at Section 5.0, the reported capital cost for the Preferred Solution, a New Build, all services on one site (Midpark Field site, Bankend Road) (Option 4(b)(iii) & (v) from the OBC) was **£27,254,530.**

The detail behind the OBC capital cost and assumptions is included in section 5.

In the time between the approval of the OBC and the submission of this FBC there have been various factors and activities carried out which have had an impact on the GIFA but always with the objective of protecting the stated capital cost.

There has been some development of the service model since OBC and this has had an impact upon the GIFA for the scheme, though this has tended to be in a positive manner. The factors influencing the developed design are detailed in Section 6.0 “The Preferred Solution”.

The Current Schedule of accommodation is appended at **Appendix 01** of this FBC. This functional accommodation schedule and the associated ancillary space give a GIFA for the facility of **6,934msq.** This compares to an OBC GIFA of 7,152msq and represents an overall reduction in the build as identified in the schedule of accommodation.

The current cost of the scheme is based on a maximum target price for the development as agreed with the PSCP Laing O’Rourke, whilst further work is required to finalise the detailed contractual position (which will be concluded by January 2010), the figures quoted below represent the maximum target price for the scheme.

The total estimated capital cost of the preferred option is £26.355m which, with an optimism bias of 3.08% applied at this stage, gives a total capital budget cost at FBC stage of £27.168m.

7.2.1 Capital Cost Assumptions

The Board and its appointed cost advisors, in conjunction with Laing O Rourke the Principal Supply Chain Partners (PSCP), have prepared the capital costs based on a review of the capital requirements. The following assumptions have been applied:

- Construction cost based on Maximum Target Price as advised by PSCP is based on over 80% tendered work packages and a schedule of estimated costs for preliminaries.
- PSCP overhead and profit has been calculated based on a percentage of 8.463% as agreed under the Framework.
- The risk allowance and contingency within the maximum target price is the probability assessed figure agreed at Project Board workshop for those items agreed to be

managed by PSCP. This was adjusted downwards from the actual risk adjusted sum of £902k including in **Appendix 03**

- Phasing of the capital costs is based on the current project plan which shows a 77 week construction period from April 2010 to September 2011.
- It has been assumed that where possible existing equipment will transfer from current facilities and an allowance for new equipment including IM&T and telephony requirements has been build into the budget cost.
- Fee estimates have been built up based on best advice from PSCP and cost advisor of likely requirement. These include the costs to develop the FBC and therefore a significant percentage has already been incurred at this stage. All fees are assumed to be VAT recoverable under the contracted out services recovery.
- Land and building purchase relates to the cost of acquiring the land and Midpark House and the cost of refurbishing the building for ongoing use.
- VAT has been included at 17.5% in line with the return to the original VAT rate from January 2010.
- It has been assumed that a proportion of the scheme cost relating to the rehab element of the build can be zero rated for VAT purposes and this has been reflected in the capital cost planning assumptions. All of these assumptions have been discussed and confirmed with the Board's VAT advisor.
- Optimism bias has been assessed at a rate of 3.08% and is included in the total estimated cost.

SUMMARY CAPITAL COSTS	**£k**
Construction Costs	
Building Works Packages	14,977
Preliminaries	2,130
Works Cost	**17,107**
PSCP Overhead and Profit (OHP)	1,448
Risk Allowance/ Contingency	750
Total Works Cost	**19,305**
Design Fees and Surveys	2,198
MAXIMUM TARGET PRICE	**21,503**
VAT on Target Price (excludes fees and OHP)	3,125
VAT zero rating for rehab	(344)
Equipment incl IM&T	1,048
Land and Midpark House Purchase & Refurb	550
Other Board Fees and Costs	474
TOTAL CAPITAL COST	**26,356**
Optimism Bias	812
TOTAL CAPITAL COST Incl Optimism Bias	**27,168**

The sections below provide more detail on some elements of the capital costs.

7.2.2 Equipment / IM&T Costs

An indicative equipment list has been provided by Scottish Healthcare Supplies who have been engaged to identify the equipment requirements for the development. In addition to this a budget has been included to encompass IT and telephony requirements. The total estimated cost is £1.048m, however it is envisaged that further scrutiny and review will reduce

this budget and this is therefore the maximum sum envisaged that is required for furniture, fittings and equipment. The OBC included a sum of £2.008m and therefore this represents a reduction of the indicative budget which was identified at that stage.

7.2.3 Optimism Bias

Optimism bias has been reviewed in line with Treasury Guidance and has been included in the final capital sum at a rate of 3.08% which equates to £0.812m. No additional Board risk has been included in the calculation below the line of the maximum target price figure as it has been assumed that the £200k, as identified in the risk workshop, can be contained within this optimism bias residual sum.

This has been included in the overall project cost calculation shown at 7.2.1 above, and the Optimism Bias calculations are included in this FBC at **Appendix 07.**

7.2.4 Target Price

In line with the Frameworks Scotland procurement process outlined at Section 9.0, NHS Dumfries and Galloway has progressed with Laing O'Rourke as PSCP to develop a target price for the project. A maximum target price of £21.503m has been agreed and this is reflected in the capital costs in table above. This sum is still subject to ongoing discussions to review both the specification and the tendered cost packages to confirm that the agreed price is acceptable to all parties and this will be ongoing until phase 4 contractual discussions are concluded. This price represents a fixed ceiling to the target price which can only be reduced in discussions to finalise contractual discussions which will be concluded during the next six weeks.

Further details of the capital cost break down and the tendered packages can be found in **Appendix 10**.

7.3 Revenue Costs

When taking account of the total revenue impact of the options (revenue costs including capital charges) there is an ongoing revenue impact for NHS Dumfries & Galloway through the life of the new facility.

The current baseline costs for Mental Health Services within Dumfries and Galloway including all existing property costs (rates, energy, maintenance, cleaning and catering), are estimated at £14.874m including capital charges and based at 2009/10 price base. These are detailed in the table below.

The additional costs of the development are estimated at £1.987m increasing the ongoing recurring revenue cost of the development to £16.861m in the first full year of operation of the building which is expected to be 2012/13.

7.3.1 Revenue Cost Assumptions

The pay and non pay costs have been calculated using the following assumptions:

- Costs are stated at 2009/10 price levels.
- Costs for the service and model of care are based on the July 2007 model updated for inflation and any known changes.
- Pay costs are based on current guidance and are inclusive of on costs.
- The change in revenue costs is anticipated to happen during 2011/12 towards the final date for the completion of the development under the current programme.
- The phasing of the costs is based on the current programme.
- Capital charges have been calculated in accordance with the current capital accounting guidance assuming a 42 year asset life and cost of capital at 3.5%.
- Ancillary costs including domestic/ catering and laundry have been reviewed in line with operational policies for the building/ revised bed numbers and cleaning specifications.

- Rates based on District Valuer assessment of £20per sqm.
- Energy costs based on cost per unit (GJ) of £19.75 electricity, £8.33 gas and £6.25 biomass.
- Maintenance costs based on £25 per sqm.

REVENUE COSTS	Current Costs £k	Change in Cost £k	FYE Recurring Cost £k
PAYS			
Admin	675	0	675
Ancillary	28	0	28
Medical	2,180	0	2,180
Nursing	7,841	221	8,062
Professional & Technical	2,662	0	2,662
subtotal	**13,386**	**221**	**13,607**
NON PAY			
Clinical Supplies and Drugs	376	0	376
General & Lab Supplies	111	0	111
Property Costs incl Catering/ Domestics/ Laundry	726	451	1,177
Travel/ Training/ Other	576	19	595
Capital Charges	179	1,432	1,611
Out of Region Placements	0	-136	-136
subtotal	**1,968**	**1,766**	**3,734**
MISC INCOME	-480	0	-480
NET BUDGET	**14,874**	**1,987**	**16,861**

7.3.2 Service Redesign/ Clinical Requirements

Prior to finalising the OBC, Mental Health Services developed a strategy which underpinned the development which identified additional investment in the service to deal with a range of deficiencies in the current service and support the enhancement of therapies across all disciplines. In July 2007 the Board supported a significant additional investment in mental health services as follows (figures at 2007/08 prices):

SERVICE REDESIGN	wte	£k
Adult Acute Wards (Including IPCU)	8.89	173
Older Adults	2.56	113
Rehab redesign	-5.66	-187
Crisis Assessment and Treatment Services	10.06	364
Therapy Staff	-0.07	22
Medical Staffing	0.90	76
Psychology	2.20	119
Admin Staffing	2.52	51
Pharmacy and Dietetics	1.60	65
Mental Health Act Implementation	2.00	126
TOTAL	**25.00**	**922**

The additional nursing spend of £221k identified in the revenue costs table relates to a further 4.81wte nursing staff to support the move to the new acute nursing model which can be delivered in the development once the IPCU has been completed. This number is based on the original workforce modelling which was completed during 2007 that has been subject to further review through the FBC development phase.

7.3.3 Capital Charges

Current guidance requires capital charges to be applied on an ongoing revenue basis. These have been calculated using a standard equated 42 year life for the building element and a 5 year life for IM&T and equipment.
An element of the equipment which is assumed to be purchased from the revenue budget has been excluded from this calculation.
Capital charges are incurred in the quarter following completion and therefore in the expenditure phasing profile only one quarters worth of capital charges are assumed incurred in 2011/12.

7.3.4 Property and Facilities Costs

Whilst the overall bed numbers reduces from the existing complement the size of the building increases as compared to the area currently occupied by mental health by approximately 35%. There is a requirement for additional staffing for cleaning which have been calculated using domestic time measurement models. Additional property costs associated with maintenance, energy costs and rates liability have also been included in the overall estimated increased revenue requirement for this building. There continue to be ongoing discussions to ensure that these services can be delivered as efficiently as possible. These costs have been calculated using the same assumptions as the OBC around release of property costs savings; however the Boards revised property strategy has now changed some of the assumptions around where it can be assumed that property costs can be released. This is explored in more detail in the affordability section.

7.3.5 Other Costs

There is a recurring increase in the IM&T and telephony costs of £19k which has been identified by the eHealth team as part of the new infrastructure in the development which has been reflected in the ongoing cost requirement.

7.4 Accounting Treatment

The Accounting Treatment for this project is in accordance with the rules relating to all of NHS Dumfries & Galloway's assets as governed through the Scottish Government Capital Accounting Manual.

7.5 Financial and Economic Appraisal

The financial case considers the affordability analysis for the preferred option based on the overall capital and revenue costs of the preferred option. It also presents the anticipated impact of the proposals on the Board's Income and Expenditure and Balance Sheet. The analysis ties in with the Board's Local Delivery Plan and confirms the affordability of this scheme.

A review of the option appraisal in included in section 5 which also refreshes the economic appraisal. This confirms the ongoing support of the Midpark Field option as the preferred option from both an economic and benefits perspective.

7.5.1 Capital Affordability

A summary of the total capital costs and available capital funds (taken from the current capital plan) for each year of investment is shown below:

CAPITAL COST PHASING	2008/09 £k	2009/10 £k	2010/11 £k	2011/12 £k	Total £k
Total Capital Costs	142	1,804	14,240	10,982	27,168
less equipment <£5k charged to revenue				**(814)**	**(814)**
Net Capital Requirement	**142**	**1,804**	**14,240**	**10,168**	**26,354**

Appendix 09 details the Boards 5 year capital programme and confirms that the capital cost of this scheme can be contained within the overall funding available assuming prior year banked funds can be utilised over the main contract period from April 2010 to October 2011 which represents the construction and commissioning period. In addition it is anticipated that capital receipts from the sale of properties vacated as a result of this development can contribute to the overall capital requirement to the sum of £0.5m. This is less than indicated at OBC stage due to the Board's property strategy which requires the Hospice Block and Lahraig for alternative use as part of the overall master strategy.

7.5.2 Revenue Affordability

The overall revenue impact from pay, non pay and capital charges is set out below and has been phased over the project period.

This confirms that from year 2012/13 the additional revenue requirement will be £1.987m per annum which is an £80k increase from the OBC. This increase can be attributed to inflation and increases in energy costs since the OBC completion and represents only a 4% increase since 2007/08 (the price base at which the revenue costs were calculated).

REVENUE COSTS PHASING	2010/11	2011/12	2012/13
	£k	£k	£k
Baseline Revenue Costs in Recurring Budgets	14,874	14,874	14,874
Increased Staffing for IPCU	0	111	221
Property Cost Increases	0	235	470
Capital Charge Increases	0	358	1,432
Project Team Costs	100	100	0
Transitional and Commissioning Costs	0	50	0
Equipment transferred from capital to revenue	0	814	0
Savings from out of region placements	0	0	-136
TOTAL REVENUE COSTS	**14,974**	**16,542**	**16,861**
ADDITIONAL REVENUE COST REQUIREMENT	**100**	**1,668**	**1,987**

Since the OBC was submitted in 2007 further work has been completed on the Board's property strategy which requires a change in assumptions around the use of buildings which are released by Mental Health Services in their move to the new facility. It is proposed that the Hospice Block and the Nithbank CETU (Lahraig) is reused as office and other service accommodation and therefore previous assumptions about release of savings will not be realisable. Included within the revenue cost assumptions are £95k of savings which will only be released following the wider property strategy delivery.

The project team costs and recurring costs of this development were supported at OBC completion in 2007 and have therefore already been reflected in the Board's financial plan for both revenue and capital and therefore present an affordable solution.

7.5.3 Impact on the Balance Sheet

The overall balance sheet will increase by £25.764m (excluded the impact of indexation and in year depreciation) over the project period. The table overleaf shows the asset movements over the project period.

Project Balance Sheet	31/03/10 £k	31/03/11 £k	31/03/12 £k	31/03/13 £k
Existing Land and Building Value	2,941	2,941	2,941	2,941
In year capital expenditure	1,804	14,240	10,168	0
Assets Under Construction	142	1,946	16,186	26,354
Asset disposals	0	0	0	-589
Total Relevant Assets	**4,887**	**19,127**	**29,295**	**28,705**

8.0 Risk Analysis

8.1 Introduction

Since the submission of the OBC in September 2007, the project process has been managed with an emphasis not only on ensuring the most expedite way forward but in a manner which would address the risks to the project identified at OBC stage.

8.2 The OBC Risks

The main risks identified at OBC stage were and the steps taken to ameliorate them are noted below: -

Affordability - Revenue

As part of the risk identification exercise at OBC stage the following risks were noted as those that could affect the affordability of the project in revenue terms: -

- Inflation
- Maintenance Costs
- Regulation Changes
- Being unable to move into the new accommodation

Of these, the mitigation factors identified at OBC stage continue to be effective. Inflation remains low, the design work and Life Cycle Cost work now being carried out by the PSCP is tailored to support the statements made in terms of minimising ongoing maintenance costs and the main regulation change identified at OBC stage (that of the Mental Health Act) was planned for and is being carried through.

In terms of the final risk, that of being unable to move into the new accommodation – this is currently being ameliorated through the process of this FBC by NHS Dumfries & Galloway working in partnership with the PSCP to agree the final design, programme and Target Cost for the New Facility.

Affordability – Capital

As part of the risk identification exercise at OBC stage the following risks were noted as those that could affect the affordability of the project in Capital terms: -

- Inflation – Building Costs
- Inflation – Land Cost
- Design Changes
- Building Tenders exceed cost
- Planning Delay
- Construction Delay
- Commissioning

Again, the mitigation factors outlined at OBC stage have been effective and have been supplanted by the creation of the NHS Framework for Scotland and the subsequent procurement of the project through the framework with its use of the NEC 3 Contract route.

The partnership that now exists between NHS Dumfries & Galloway and the appointed PSCP now gives surety to aspects such as the construction cost (through the agreed Target Price) and design changes (through the collaborative design process).

It was noted at OBC stage that there still remained some potential for planning issues to impact upon the timescales for the delivery of the project. It was agreed at that time to ensure that dialogue was kept up with Dumfries and Galloway Council's Planning Department in order to "head off" problems early.

This strategy has been followed through and has been picked up by the PSCP's design team and it is anticipated that the design for the facility will receive planning approval on 9 December 2009.

A value for the site has been agreed and has been factored into the overall project appraisal.

Commissioning of the building has been the subject of ongoing dialogue between NHS Dumfries & Galloway and the PSCP during the course of formulation of the FBC. It is anticipated that a full commissioning programme is produced by the PSCP and that this will be supplanted by migration management and staff training for the new facility all as detailed in Section 13 of this FBC at "Management of Issues that Affect Deliverability".

8.3 The Risk Management Process through FBC

At the appointment of the PSCP and from that through the process of both agreeing a Target Price and finalising this FBC a rigorous risk management regime has been in place.

8.3.1 The Risk Register

The process has been facilitated through a regular series of workshops which have included stakeholders drawn from the Board's project team, their advisors and the PSCP and their team. All of the risks identified and the development of a strategy to mitigate have been captured on a "Joint Risk Register" template.

Effectively, NHS Dumfries & Galloway and the PSCP act as joint owners of the Joint Project Risk Register for the Project.

The starting point for the Risk Register template was the Health Facilities Scotland template which already included many generic risks which were found pertinent. These were then supplemented with Project Specific Risks.

As the register was built through the workshops, the joint team progressively looked at the listing of risks, then original scoring and the identified mitigation factors before then re-evaluating the scoring.

The Joint Project Risk Register incorporates all risks associated with the various aspects of the project i.e. Land Purchase/ Design/Construction/Business/ Clinical/Operational/ Staffing/Equipment Risks.

The Joint Risk register is appended to this FBC at **Appendix 03**. It details the number and frequency of the Risk Workshops that have been held thus far, together with the attendees of each workshop. Beyond the Risk Register itself, it also details the Quality Assessment Guidelines and the Risk Action Plan.

8.3.2 Risk Owner

During the workshops, identified risks are assigned to either NHS Dumfries & Galloway or the PSCP, this is on the basis of the party that is best placed to assume and deal with the risk.

Where risks might be seen as a shared risk, these have been separately identified as both and NHS Dumfries & Galloway risk and as a PSCP risk in order that there is no appearance of the risk sitting with a single party.

8.3.3 Risk Action Plans

Risk Action Plans have been prepared for all High Priority Risks (Red) using the pro forma included in the Risk Action Plan Worksheet as noted earlier, this is included in the overall Risk Register**.**

The Risk Action Plan identifies:

- The risk owner and person responsible for the risk;
- Mitigation measures that need to be put in place;
- Any other actions that could be taken if the risk occur.

8.3.4 Risk Quantification

Each of the risks identified were appraised to determine their financial impact upon the project. This was based on a percentage of costs applied to both the probability and impact of the risk and produced a financial allocation of the risk that was deemed by both parties to be ultimately acceptable.

The apportionment to the PSCP currently sits at £750,000.

NHS Dumfries & Galloway have determined that their portion of the risk costs can be absorbed through the Optimism Bias apportioned to the project costs.

9.0 Procurement Process and Summary of the Contract Structure

The Preferred Solution is being procured under the new NHS Framework for Scotland. This Framework is founded on Collaborative Working principles and the NEC3 form of contract is used to support these principles.

Following the SGHD's methodology for tendering work through the new Framework for Scotland, NHS Dumfries & Galloway has appointed a Primary Supply Chain Partner (PSCP), Laing O Rourke, to work with the Board to finalise design, work up the target cost for the scheme and to construct the building.

This work has been ongoing and this Full Business Case not only represents the further work carried out by the Board on this project since OBC but it also reflects the results of this collaborative approach between the Board and the PSCP in defining the scope and financial envelope of the project.

As noted above, the mechanism for ensuring that this partnership ethos is carried through to the construction of the new facility is through the use of the NEC3 form of contract. The main principles of this procurement methodology are outlined below.

9.1 Open book philosophy:

A key principle of the NEC3 Option C contract is the payment of 'Defined Cost' and an open book accounting philosophy. These require a robust, reliable and transparent system to record staff time and manage the invoicing process. This allows the Cost Advisor not only to identify costs but also to establish that the costs have been properly expended on the project, and that they are allowable under the NEC3 Option C contract as defined under the 'schedule of cost components'

Project costs must be referenced to items on the activity schedules with detail added against 5 main headings of; labour, plant, materials, sub contractors and preliminaries. Orders, deliveries, invoices for payment, external plant hires and sub-contracts also have to be cross-checked against Goods Received Notes.

The target price is key to the cost operation of the contract and is set during the pre-construction phase. This process concludes when the PSCP's proposals are completed for costing and the risk register has been agreed. The target price costing is made up of the following elements:

Within the NEC 3 option C contract there is provision to adjust the target price (upwards and downwards) via the compensation event process.

9.2 Contractor's share percentage and share range

Within NEC 3 contract, the pain share/ gain share payment mechanism is set-out.:

>100%	• Contractor takes 100% of the Pain
100%	• **Target Price**
95%>100%	• Contractor & Employer share the gain 50:50
<95%	• Employer takes 100% of the Gain below the 95%

The key benefit of the introduction of the target price with a pain share / gain share mechanism is the incentivisation on the team and PSCP to control cost.

9.3 Priced Activity Schedule:

The activity schedule gives a breakdown of the work to be done under the contract and this covers the entire contract price. A key interface within NEC 3 is that the activity schedule must be related to the accepted programme. The principle objective of having the activity schedule and accepted programme linked under NEC 3 option C is not to assess the contractor's payments (these are made on defined cost), but to assist in the assessment of compensation events and contractors share.

9.4 Defined Costs:

Defined cost is made of up 3 key elements;

1. The amount of payments due to sub-contractors for work which is subcontracted without taking account of amounts deducted for; retentions, payments to employer for failure to meet key dates, correction of defects after completion, payments to others and supply of equipment etc.

2. The cost of components in the Schedule of Cost Components for other work

3. Less, Disallowed cost

9.5 Recording and Collation of costs information:

The PSCP is required to keep records of:

- Accounts of payments of Defined Costs
- Proof of payments being made
- Communications about and assessments of compensation events for Subcontractors
- Other records required by the works information

The PSCP will ensure that the Cost Advisor has full and unrestricted access to accounts and records that are required to be maintained.

9.6 Compensation events and their application:

Clause 60.1 details 19 compensation events for which the PSCP is entitled to compensation if they occur. The object of the NEC 3 contract is to ensure that all compensation events are listed in one place, expressed clearly to avoid disagreement and to allocate the events in line with modern risk allocation principles.

The Project Manager assesses compensation events and they are then implemented if appropriate. The key to the entire process within NEC3 is that the process has time constraints to ensure that decisions are made, preventing the process dragging on, allowing the Project to move forward without protracted negotiations. The compensation event process can be simply defined as per the diagram below:

10.0 Project Management Arrangements

10.1 NHS Dumfries & Galloway Project Team

Since project inception, and through the OBC process to the current stage of the project, NHS Dumfries & Galloway have had in place a Project Governance structure which sought to ensure that there was a dedicated management focus for the project, visibility and accountability at the highest levels in the organisation and the involvement of a wide range of stakeholders in the project process.

This internal project structure is noted below.

Project Owner

The Project Owner is the Clinical Director for Mental Health, Dr David Hall.

Project Sponsor

The Project Sponsor is the General Manager, Mental Health Services, Mr Iain Boddy.

Project Manager (Technical)

The Project Manager for technical aspects is Stephen Howie, Estates Department.

Preferred Supply Chain Partner (PSCP)

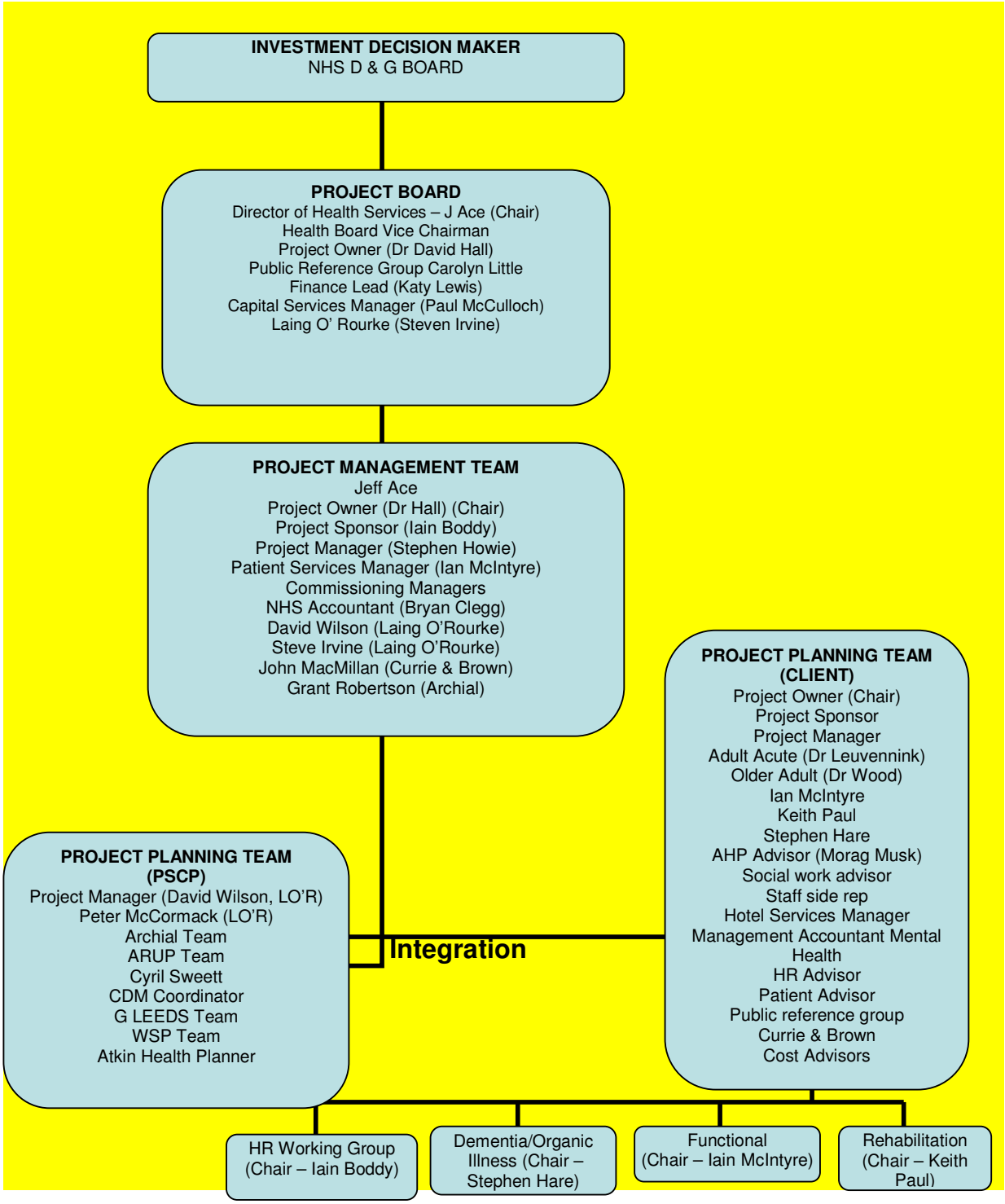
Laing O'Rourke Scotland. Project Leader – David Wilson.

Cost Advisor

Currie & Brown. Contact – John MacMillan

The Cost Advisor's roles principally will involve: assisting in the compilation of the FBC, assist in the formulation and agreement of the target price, undertake open book audits during the construction phase, advice on payments and controlling expenditure and contribute to the preparation of specific contract documentation.

Table 1.0 Project Organisation Chart



10.2 Definition of Roles & Responsibilities

The roles and responsibilities of all parties involved in managing the project are set out in the Project Execution Plan (PEP) which has been approved by both Project Board and Dumfries and Galloway Health Board. This document is a live policy document which records the management process as well as roles and responsibilities and has been updated to form a joint document owned by both NHS Dumfries and Galloway and the PSCP.
The PEP is attached as **Appendix 12**

11.0 Benefits Assessment and Benefits realisation Plan

11.1 The Benefits Criteria

As previously noted at Section 5.0 of this FBC, the Benefits Criteria and their weightings are shown in the table below:

Ranked & Weighted Benefit Criteria

Benefit Criteria	Definition	Weighting	Scaled Weighting
Environment fit for purpose (incl. Reduced Risk)	• Building quality and Longevity • Clinical accommodation on ground floor • Meets single sex accommodation standards • Designed for safety, observation • includes intensive Care (A) & High Care (OA) • Has therapeutic, occupational & recreational space • Meets the need for privacy, dignity and security • Has adequate and appropriate outside space	100	24
Deliverability (incl. Practical Solutions)	• Site availability and suitability • Planning issues • Disruption to services • Manageability • Length of time to commissioning of modernised unit/s.	80	19
Flexibility	• Offers opportunities to respond to range of service user complexity • Ability to change the function and/or mix within the buildings should future need require this e.g. Move to single sex wards, client mix changes, change of use • Ability to change working practice/treatments	70	17
Acceptability to users and carers (incl. Clinical Effectiveness & Quality)	• Enables assessment and treatment • Supports the model developed by stakeholders including users, carers and staff • Enables implementation of the "Fit for Purpose" standards and reflects the view of user and carer • Enables staff to provide the service identified within the service model in a safe and effective way	60	14
"Staffability"	• Ability to attract and retain high quality staff by: • Having a service which values and develops staff • Provides a safe and modern environment • Enabling them to utilise their skills • Having appropriate opportunities to utilise staff resources and skills effectively and productively	60	14
Location and Accessibility	• Accessible to users, carers and staff • Having good transport routes and times to and from the site/s • Quality of service through synergy of co-location • Within easy access of DGRI	50	12
	TOTAL	**420**	**100**

11.2 Measuring the Benefits

The Benefits Criteria (above) articulated in the OBC are all desirable outcomes for the project that are expected to be achieved by the Preferred Solution that is the subject of this FBC.

However, a critical factor that will help determine the success of this project in the longer term will be in ascertaining just how well were the expected benefits realised? In other words, will NHS Dumfries & Galloway not only implement the project within the expected timescales and to budget, but will the project also achieve the anticipated benefits as outlined above.

In order that these outcomes can be ascertained, the Benefits Criteria must therefore be capable of being measured and evidenced.

The following outlines how each of the Benefits Criteria above, will be measured and monitored through the project's lifetime in order to ensure that a meaningful assessment can be made of the benefits yielded by the project is available and to benchmark the assessment criteria themselves so that lessons learnt can be fed back into future projects.

The monitoring and review of achievement in relation to each of these service aims will be built into the work plans of the management team as appropriate.

Please see overleaf.

Success Factors (The Benefit)	Objectives (Defining the Benefit)	Review Questions/Methods (Measuring the Benefit)	Results (Proving the Benefit)
Environment fit for purpose (incl. Reduced Risk)	• Building quality and Longevity	• Building quality and Longevity is demonstrated through the design, construction methodology and through a vigorous lifecycle costing exercise designed to optimise the design life of major elements of the building.	Monitoring the actual lifecycle costs against the projections during the design phase during the lifetime of the facility. Reporting variances.
	• Clinical accommodation on ground floor	• The design demonstrates that the Clinical accommodation is on the ground floor.	
	• Meets single sex accommodation standards	• The design meets the single sex accommodation standards for the project.	Client sign-off at construction completion.
	• Designed for safety, observation • Includes intensive Care (A) & High Care (OA) • Has therapeutic, occupational & recreational space • Meets the need for privacy, dignity and security • Has adequate and appropriate outside space	• Day care accommodation can be segregated. • The design demonstrates the inclusion of Intensive Care and High Care. • Again, this benefit is evidenced through the design which includes for therapeutic, occupational & recreational space in accordance with the brief. • In terms of privacy, dignity and security as well as adequate and appropriate outside space, the measure here will be evidenced through patient and carer surveys after the new facility has been operational for one year. These surveys will be compared to similar past exercises carried out in the existing premises in order to ensure that the expected outcomes are being met. It should be noted that the inclusion of patient and carer representation through the project process should mean that NHSD&G should be in a better position from the onset to be readily able to meet the required benefit outcomes.	These three Benefits will have been proved at Client sign-off on construction completion. The measure here will be evidenced through patient and carer surveys after the new facility has been operational for one year. These surveys will be compared to similar past exercises carried out in the existing premises in order to ensure that the expected outcomes are being met.

Deliverability (incl. Practical Solutions)	• Site availability and suitability • Planning issues • Disruption to services • Manageability • Length of time to commissioning of modernised unit/s.	• The project preferred site has been selected and the Planning exercise carried out on it has been revalidated, the demonstrable outcome here will be the acquisition of the site and the delivery of the project on it. • All planning issues will be ameliorated as part of the FBC and approval process. • Whilst the preferred solution demonstrates greater efficiency in decant than a staged decant solution for a refurbishment for example, the measure of this will be demonstrated through pick up in new admissions and discharges – benchmarked against previous statistics. • The manageability of the process of drawing together of the services from four sites into the one will be demonstrated by adherence to programme and minimal disruption to services during the transition phase. During the operational phase, efficiencies in working practices will be benchmarked through both observation and comparison and by inclusion in staff survey. • NHS Dumfries & Galloway are clear that they have chosen the most efficient project solution for the new facility. It is anticipated that the commissioning of the units can be achieved in a tighter timescale than indicated in the OBC and that shall be the benchmark that success is judged by.	
Flexibility	• Offers opportunities to respond to range of service user complexity	• The preferred solution demonstrates a more flexible approach, for example IPCU can now be done without a 24hr wait for the patient either way. The inclusion of bedsits and tenancy observations will help ensure more structured and streamlined outcomes for certain types of patients.	

	• Ability to change the function and/or mix within the buildings should future need require this e.g. Move to single sex wards, client mix changes, change of use • Ability to change working practice/treatments	• The preferred design solution has flexibility "built in", there is, for example, space on site for future rehabilitation accommodation. The methodology for demonstrating that this criterion has been met however, will be through annual reviews to monitor activity and efficiency. • NHS Dumfries & Galloway recognise that psychological and therapeutic services will inevitably change over coming years. The new facility is designed to accommodate such changes – NHSD&G intend to evidence improvements in service through the new facility's life by carrying out regular patient and carer surveys.	
Acceptability to users and carers (incl. Clinical Effectiveness & Quality)	• Enables assessment and treatment • Supports the model developed by stakeholders including users, carers and staff • Enables implementation of the "Fit for Purpose" standards and reflects the view of user and carer • Enables staff to provide the service identified within the service model in a safe and effective way	• NHS Dumfries & Galloway have, through the project process, attempted to give "early proof" that the new facility will be acceptable to users and carers. This has been achieved through extensive consultation and participation in the project by these important stakeholders. • This has used, as its basis, the "Fit for Patients" report of 2001 and has built upon this by a series of face to face meetings with these groups in order to ensure that their views were built into the project – these face to face sessions are documented. • There has been public participation and consultation during the project process too and again this documented. • There has also been a mock up of the anticipated style of the bedrooms in the facility which has been available for interested stakeholder groups to view and comment upon.	Further empirical measures to be produced

		• It is anticipated that the follow up validation of all of this work will be wrapped up in the patient and carer's survey exercise that will be carried out one year after the facility becomes operational.	
"Staffability"	Ability to attract and retain high quality staff by: • Having a service which values and develops staff • Provides a safe and modern environment • Enabling them to utilise their skills • Having appropriate opportunities to utilise staff resources and skills effectively and productively	• NHS Dumfries & Galloway have been diligent in ensuring that all affected staff across a range of disciplines have been involved in the project scoping exercise and associated processes. Beyond direct staff involvement in the project processes, all project meeting minutes and the evolving design of the new facility have been cascaded down to all staff that will be affected by the project. It is recognised that the new facility significantly enhances staff facilities and training opportunities. • It is intended that the factors identified, left, to evidence the benefits here will be monitored through examination of absence levels and by undertaking a staff satisfaction survey approx one year after the new facility becomes operational.	Further empirical measures to be produced
Location and Accessibility	• Accessible to users, carers and staff • Having good transport routes and times to and from the site/s • Quality of service through synergy of co-location • Within easy access of DGRI	• Given the new site's proximity to both the DGRI and the College it is felt that the new facility will not demonstrate any degradation in accessibility by public transport as the site is well served by the services to the previously mentioned institutions. However, this will be reviewed by surveying staff and patients regarding their feelings about bus access to the facility. • In terms of access to DGRI, the new facility is adjacent to DGRI and wayfinding will be built into the design.	

Beyond the Benefits that are outlined above and were used in the evaluation of the options at OBC stage, NHS Dumfries and Galloway shall, of course, be seeking to ensure that the new facility is making a positive impact on the treatment of mental health issues and also in other important areas going forward.

To this end the following additional benefits should be recognised and these too shall be monitored through patient, carer and staff surveys during the facility's operational life: -

- The provision of Midpark House enables all managerial and administrative staff to be co-located thus improving working practices.
- The project provides all mental health services on one campus for the first time – improved patient journey and outcomes.
- The new facility allows NHSD&G to better meet its obligations under the new mental health act in terms of tribunals – there will be less need for transfer of patients and less journey time between facilities optimizing the ability of patients to participate.
- The inclusion of a gym, café, family room and spiritual room all add to safety and well being in the new facility – it is intended to monitor the positive impact of these facilities by monitoring the incidence of "adverse incidents", it is anticipated that these will decrease.
- The preparation of a framework for creative works will ensure that all forms of art are considered for inclusion in the new facility. The framework also sets out how expressive arts will continue to be offered as a therapeutic service in the unit.

Beyond all of this, it is intended to use the measure of drop in use of medication and absconding rates as a measure of the success of the restructured service.

12.0 Management of Issues Affecting Deliverability (Risk Management)

12.1 Introduction

Beyond the risk exercise that was detailed in section 8.0 of this OBC and having due regard to the factors outlined in Sections 5.0 and 6.0 concerning the preferred site, the Project Team determined that it was prudent to focus in upon those factors that had the most immediate chance of impacting on the deliverability of the project.

The intention in this section of the FBC is to demonstrate an in-depth level of understating of the major risks that could affect the project and to illustrate the work being carried out to ameliorate these risks.

12.2 Issues Affecting Deliverability

12.2.1 Availability of Site

Section 5.0 notes that it is intended that the acquisition of the preferred site should be co-terminus with approval of this FBC.

Agreement has been reached between NHS Dumfries and Galloway and SGRERAD regarding the purchase of Midpark properties. A price has been agreed and missives prepared for the transfer between Ministers. The suspensive conditions of CIG approval and Planning Permission apply to this transaction. It is anticipated that Planning will be approved on 9 December 2009.

12.2.2 Planning issues

The project team are aware that the establishment of a new mental health facility on the scale of the one proposed in this FBC will be a development that will attract careful consideration by the Local Authority Planning Department.

It is envisaged that many of the issues around the type of use, scale and massing have been ameliorated by the choice of site for the facility given the site's proximity to the existing DGRI and the Crichton Royal Hospital Mental Health Facility.

Detailed discussion have been taking place with the Planning Department and statutory consultees since March 2009. A formal submission for Full Planning Permission was submitted in October 2009. Dumfries and Galloway Council are due to determine the application at their Area Committee meeting on 9 December 2009. Planning Officers are recommending approval with various minor conditions applied.

An earlier presentation of project progress to the Council Area Committee did not identify any significant issues Councillors have with the proposal.

12.2.3 Affordable Target Price

As with any project procured through the NEC Contract, one of the main imperatives is collaborative working to ensure that the Target Price is both equitable and affordable.

The NHS Dumfries & Galloway team and the PSCP team are working well together in this regard with a solid relationship focussed on this common goal being forged. To date a maximum target price has been agreed between all parties but this will be progressed to conclude final target price for the stage 4 contract completion.

Through this, and through adherence to the NEC contract steps outlined at Section 10, above it is anticipated that the target price contained in this FBC is one which will allow NHS Dumfries & Galloway to meet its project objectives whilst staying within the affordability parameter set out at OBC stage.

12.2.4 Funding Issues

The capital expenditure funding for this project is intended to be met by in year capital expenditure allowance and previous years banked funds that NHS Dumfries & Galloway has built up over a number of years. It is recognised that tight control must be kept on the construction costs of the project and the project must be delivered within the overall OBC resource envelope of £27.254m.

It is envisaged that the ethos of the NHS Framework for Scotland and, in particular, the provisions in the NEC contract (as outlined above at 13.2.3 and detailed in Section 10) will assist in ensuring that the funding envelope is not exceeded.

It is recognised however that NHS Dumfries & Galloway will need the Scottish Government's approval to progress the FBC to the construction phase and early discussions have taken place to ensure that the risk around this can be managed. The business case is therefore being completed subject to the approval by the Scottish Government that the funding identified for this project, either banked funds or in year capital funding can be released.

12.2.5 Transition

It is recognised that the reconfiguration of services into the new facility represents a major challenge to the mental health service. To move services from four locations in the Dumfries area into the new facility will be a major logistical exercise in migration terms. It will also present challenges operationally and new procedures will be required.

Planning for this transition has already commenced and operational staff are drafting proposals and preparing training plans to ensure a seamless migration is achieved.

In order to ensure that services suffer minimal impact it is also proposed that there is a phased approach to the "close down", move and resumption of each service – this is designed to allow each service to minimise downtime and to be able to be the main focus of the decant team at any given time. This approach will also minimise the chances of confusion which could ensue if every service/current location all descended upon the new facility at the one time.

It should be noted that the identified staff who will take ownership of the migration (and who currently comprise the working group examining these issues ahead of time) have successfully moved other services of NHS Dumfries & Galloway between other facilities.

12.2.6 New Service Model

Inherent in the project outcomes for the Acute Mental Health Services Project is the opportunity to realign the service delivery model to promote best practice and new methodologies aimed at service improvement.

However, in order to implement these changes to service delivery, the project team are very aware that there can be short-term risks during the transition to the new working practices, especially when coupled to the move into the new facility.

In order to minimise the impact of this, NHS Dumfries & Galloway is currently (ahead of the main project implementation) carrying out an "early implementation programme" designed to shift toward the new service delivery models (as far as practicable in current premises) prior to the move to the new facility.

This includes the placement of staff to facilities in other Board areas where they can gain experience of the new models in the types of facility envisaged for Dumfries. As an example of this, IPCU staff are being sent from Dumfries to Gartnavel Hospital to experience first hand the improved service delivery achievable from the planned new facility.

There is an established 'HR Working Group' which is focussing on the complex workplace planning issues facing the project. Its functions include the recruitment to the key post of

IPCU Ward Manager in mid 2010, looking for an experienced IPCU specialist who can manage the training, development and working practices of the new IPCU.

In tandem with all of the above, the Stakeholder involvement process noted earlier encompasses consultation on the new service delivery.

It is anticipated that the steps taken above in “testing” the new model and training staff off site together with integrating communication of the new model as part of the wider stakeholder consultation should minimise the risk to disruption of services when implementing the new model.

13.0 Sustainability

The adoption of the preferred solution is designed to promote NHS Dumfries & Galloway's commitment to meeting the needs of the present without compromising the ability of future generations to meet their needs in all of its activities, and to this end the new Mental Health Facility is seeking a BREEAM 'Excellent' rating. The current BREEAM assessment is attached as **Appendix 13** and indicates an anticipated score of 75.12% which achieves the excellent rating. This allows some minor scope for variation in methods of achieving points as the design is finalised. A post construction review will be carried out in compliance with mandatory requirements and the management team will ensure that the estimated excellence rating is achieved.

NHS Dumfries & Galloway take cognisance of the principles laid down both locally and nationally for the promotion of sustainability in all activities undertaken by the Public Sector.

This project will promote sustainability across three fronts, these are:

13.1 Through the procurement, construction and operation of the new facility.

The facility design has been developed to provide a comfortable and stimulating environment for the occupants whilst minimising the impact of the building on the environment both during construction and in operation. A number of measures, outlined below, have been considered in order to improve the sustainability of the building; these aspects will continue to be developed throughout the design process and will obviously take cognisance of final site location.

Passive Energy Saving Measures
By careful consideration of the location, orientation, form and construction type of the building, a comfortable internal environment will be maintained with minimal energy input.

Daylighting
Natural light can make an important contribution to sustainability by reducing the electrical energy used for artificial lighting. It also contributes to the well-being of visitors and staff, and the aesthetics and feel of the space.

By making the best use of the final site chosen and minimising the number of storeys in the building, daylight penetration to the lower levels of the building has been optimised.

North facing glazing will be maximised to allow good quality diffuse daylight to enter the building whilst minimising the potential for glare and overheating.

Natural Ventilation
The outline proposals aim to maximise the use of natural ventilation to provide a comfortable internal environment. Generally the layouts will allow for effective cross-ventilation of space by means of opening windows.

Building Envelope
The building will include a high level of thermal insulation and careful detailing to minimise unwanted heat loss.

Efficient Building Services Installations

The building services systems within the building will be designed and controlled so that they operate at maximum efficiency and only operate when required, thus minimising energy consumption. Some examples of ways in which the building services may be designed to reduce energy consumption are as follows:

The artificial lighting will utilise low energy fluorescent or discharge lamps and luminaires with high light output ratio.

Automatic lighting controls, with manual override, should be used to ensure lights are switched off when sufficient natural daylight is available or when rooms are unoccupied.

All air handling units will incorporate variable speed fans. Automatic controls will ensure the fans only deliver the volumes or air required to suit the requirements of the space at any particular time. This will reduce energy consumption for both fans and heating of fresh air.

Water Conservation

Water consumption will be reduced by using low water use fittings and timed flow control to reduce wastage.

Materials

Construction materials will be selected on grounds of their suitability for the job and their sustainability. Choosing sustainable construction materials involves consideration of environmental impacts throughout their life cycle and the avoidance of non-renewable materials where possible. The following have been considered during the selection process:

- Impact of the material's production on the environment.
- Hazards to health or local environment during construction or use.
- Life span of the material.
- Nature of the resources involved, renewable or non-renewable, scarce or abundant.
- Emission of CO_2 during production and consideration of embodied energy.
- How far and by what modes the material will be transported.
- The use of recycled material.

Eventual destination of the material after the building's life; where possible materials and construction methods should be employed that will allow building components to be reused at the end of the building's life, or recycled where reuse is not possible.

The methodologies set out in "The Green Guide to Specification" (bre: August 2007) will be used to assess different materials and determine the most sustainable material for each element of the buildings. Where possible A +/A rated materials or their nearest equivalent will be used.

Landscaping & Ecology

The following items have been considered in respect of how the facility will interact with its surroundings:

- Biodiversity before and after the build
- Use of native species
- Use of a scheme that avoids artificial irrigation or fertilizers
- Trees for shading
- Retention of existing vegetation
- Avoidance of disturbing the water table and watershed
- Integrated pest management

Management/ Methodology

The following proposed procedures will help to develop a sustainable construction methodology for the contractor:

- Using lean construction methods with minimum waste.
- Minimising energy use during construction.

- Separation of construction waste (and avoidance of waste in the first place) and the careful disposal of toxic waste to prevent pollution of the local environment.
- Preserving local biodiversity through careful and compact zoning of construction activities.
- Conserving water resources.
- Developing good relationships with local people in order to safeguard particularly important features of the local environment.
- Careful monitoring of the construction process.
- Responsible sourcing through identification of the supply chain and product stewardship.

13.2 Through the location of the new facility

There is one major positive contribution to the overall sustainability of the project that the choice of site can make and that is its location.

The Board are aware that one of the overriding objectives for the new facility, that of "accessibility", inherently corresponds to sustainable outcomes. The Board, by ensuring that the facility is sited close to the existing DGRI and on public transport and cycle routes has minimised the need for car journeys, allowing staff, patients and visitors to either walk, cycle or use public transport to access the site.

It also allows a reduction in 'traffic' from the DGRI to the other four sites currently in use and in building adjacent to the main health campus allows staff to utilise existing services rather than duplicating them for the new structure.

Green Travel

A green travel plan has been prepared for the proposed development to ensure that pollution from transportation is minimised**. Appendix 14.**

The proposed site adjacent to the grounds of the existing Crichton Royal Hospital, allows the Board to meet all of the points outlined above.

13.3 Through the provision of facilities capable of sustaining growth

The overriding objective of this project is to provide modern, fit for purpose, NHS acute and rehabilitation inpatient facilities that are essential and integral elements of the Mental Health Service provision in the Dumfries and Galloway area.

The ideas of 'growth' and 'sustainability' could be regarded as potentially opposing forces.

Consideration has been given to sustaining growth by providing a facility with a:

- Long Life
- Low Maintenance
- Flexible Layout
- Capability of Extension
- Potential for re-use/ adaptation of the premises by other functions

Future proofing of the existing facility has been considered. There is some limited room for expansion on site if required but, primarily, the building has been constructed in such a way that there is flexibility to nurse patients with varying needs between wards if bed number pressures arise. It should also be noted that a four bed ward in the rehab department has been designed to a low secure specification which allows flexible use in the future if demands change.

13.4 Summary

After Producing a building that is designed and constructed with conservation and sustainability as a priority it is then essential that the ongoing management of the facility continues these principals. Operational policies will be developed to ensure resources are utilised to their maximum and waste is minimised. An Environmental Management System installed in the building will help staff control light, ventilation, temperature and monitor energy usage and allow targets to be set regarding reducing consumption.

This new Hospital will lead NHS Dumfries and Galloway's journey in reducing their carbon output by making it the most environmentally aware building in their estate.

By providing this facility, and doing so across the three fronts described, the provision of inpatient Mental Health Services in Dumfries and Galloway will be sustainable for the foreseeable future.

14.0 Post – Project Evaluation Plan

14.1 Purpose

NHS Dumfries & Galloway are aware that in order to assess the impact of the project, an evaluation of activity and performance must be carried out. This is an essential aid to improving future project performance, achieving best value for money from public resources, improving decision-making and learning lessons. Further, sponsors of capital projects in the NHS are required by the Department of Health, HM Treasury, and the National Audit Office to evaluate and learn from their projects. This is mandatory for projects with a cost in excess of £1 million.

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.

Therefore NHS Dumfries & Galloway 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.
- Prescribing Trends will be assessed

14.2 Prerequisites for successful evaluation

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.

14.3 The stages of evaluation: when should evaluation be undertaken?

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:

Stage 1: at the project appraisal stage the scope and cost of the work will be planned out. This will be summarised in an Evaluation Plan.

Stage 2: progress will be monitored and evaluation of the project outputs will be carried out on completion of the facility.

Stage 3: there will be an *initial* post-project evaluation of the service outcomes 6 to 12 months after the facility has been commissioned.

Stage 4: there will be a follow-up post-project evaluation to assess longer-term service outcomes two years after the facility has been commissioned.

Beyond this period, outcomes will continue to be monitored. It may be appropriate to draw on this monitoring information to undertake further evaluation after any market testing or benchmarking exercise – perhaps at intervals of 5-7 years.

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.

Table 1: What will be considered in the evaluation plan?

1. 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?
2. Consideration of the structural context	• What is the baseline situation (status quo)? • What are the internal and external constraints? • What are the desired outcomes?
3. 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?
4. 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?
5. 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?

6. 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?
7. 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?

Factors to consider in judging the importance of evaluation

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?

14.4 How we will evaluate: some technical considerations

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.

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

14.5 Feedback and dissemination of findings from evaluation

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.

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.

Evaluation results will then be signed off by senior management or at Board level.
The results from the evaluation should generally lead to recommendations for the benefit of the organisation and wider NHS.

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.

15.0 IM&T Strategy

15.1 Introduction

Currently little use is made of Information Technology to support the delivery of clinical care in mental health services at the bedside in the Crichton wards. The existing buildings are old, have restrictions placed upon them, being listed buildings and are not suitable for the deployment of mobile technology. The new build breaks down these impediments and a new way of working is available with the new build.

15.2 Wards – Use of IT for Clinicians

With a new build the opportunity to deploy mobile technology presents. Therefore the basis of infrastructure proposals and development is that the clinicians will use mobile technology when reviewing patients' clinical progress. All the ward areas will be covered by wireless access points allowing clinicians to use laptops, notebooks or tablets while on the wards. Using the existing citrix infrastructure, clinicians will be able to access existing services. This includes viewing lab results, x-ray reports, clinic letters, referrals and other data as contained within an electronic patient record at the bedside or day rooms in the ward areas. It also provides greater assurance on patient identification through easy access of the CHI number

In addition, any clinical notes can be updated during these patient/clinician interviews. If the application exists, any drug monitoring systems available will also be able to be viewed via this technology, including access to the internet and externally available knowledge bases.
Mobile technology can also be used to support bed management and bed utilisation if this should be an issue.

Using this technology ensures all data is safe as nothing is stored on the device itself.

Also through the use of mobile technology, blood test labels can be produced in the patient's room at the time.

To provide contingency if the wireless network should fail, hard wired IT facilities will be provided at certain strategic locations, such as the equivalent "nurse's station".

15.3 Radio Frequency Identification (RFID)

The use of RFID will be facilitated with the deployment of multiple wireless access points as described above. This could be used for the tracking of equipment or even patients. An alarm could be sounded if a patient attempted to stray beyond the allowed boundary

15.4 Patients Access to IT facilities

Patient access to the internet and email may be an advantage and support their treatment. Patients will be able to bring their own wireless laptops into the unit and use in their own rooms, this to be at the discretion of their clinician. The rehab units will also have wireless access points for patients to use their own laptops. It is also intended that IT facilities will be provided in patient common rooms.

15.5 Telephony

As with the deployment of IT, wireless telephony will be introduced into the new unit but it will be integrated into the existing Crichton Hall voice services. These will be integrated into the data network. Most telephone handsets will be wireless enabling mobile usage. Contingency will be provided via wired handsets into the data network. At this stage it is anticipated that patients will use their own mobile phones and the unit will not be providing any facilities for patients.

16.0 Equipment

Scottish Healthcare Supplies (SHS), a division of Health Facilities Scotland have been appointed as procurement specialists to assist in developing and costing a detailed equipment list. They will also, through dialogue with workstream groups, specify tender, order, receive and place group 2, 3 and 4 equipment.

Workstream groups have been working with the design team to develop detailed equipment requirements for every room listed in the schedule of accommodation.

The list has been priced by SHS to inform the overall project cost. Detailed work is ongoing to identify items of equipment that can be transferred to the new hospital. Further meetings are scheduled with SHS to develop detailed specifications for all pieces of equipment to be provided.

A programme for ordering and delivering of the equipment will be developed by the Project Manager and SHS which is to be included in the construction programme and transition plan.

As part of the Management Team's aspirations for an environmentally sustainable building the procurement of energy efficient and responsibly sourced equipment will be a priority.

17.0 Human Resources Issues

17.1 Present Staffing

"The original staff numbers and observations that were contained within section 4.5.2 of the OBC highlighted the need to review staffing to ensure that the service would have a workforce capable of delivering a service that was "fit for the future".

It was also found that a relatively high percentage of qualified staff (just under 40%), across the service, could feasibly retire over the next 10 years.

The above, coupled with low employee turnover, required us to ensure that effective manpower management strategies are an essential part of our local workforce planning that is monitored via our Mental Health HR Group."

17.2 Future Requirement

It was identified that a change in skill mix and staff numbers, across the service, was required to implement the proposed model of care. A summary of the change was articulated in the OBC. Generally there were:

- An enriched skill mix of staff across the professional groups and care settings.
- increased ratio of nursing staff to inpatient beds
- increased numbers of ward clerks to release nursing staff time
- staff for new assertive outreach and CATS services
- reduced staffing levels in rehabilitation units in line with reduced beds
- increased housekeeping staff in line with redesigned inpatient units

A number of factors required addressing within the workforce plan to achieve the level of organisational change required to support the implementation of the preferred model of care. The factors that needed addressing were: the demographic changes locally that will affect the availability of staff; the new services to be provided; preparation of staff to deliver new services; the impact of national requirements such as consultant contracts and the national shortages of particular staff groups. Elements of the plan include role changes that may be required, redeployment, recruitment and training. An implementation plan has been introduced and funding made available to realign the human resource to match the requirements of the remodelled service.

17.3 Policy on Openness – Consultation & Involvement

NHS Dumfries and Galloway are committed to creating an effective partnership with the public and have developed a strategy to have public involvement in service changes thus ensuring that the public make a positive contribution to decisions about service planning, development, delivery and evaluation.

Staff side organisations have also contributed to the redesign and modernisation of the service and updates on progress have been submitted to the Area Partnership forum. A joint communications group has been formed to ensure all staff involved in the process are kept appraised of developments. A communications strategy has been developed and is maintained on a weekly basis via the Project Management Team.

17.4 Staffing Issues

NHS Dumfries and Galloway have an Organisational Change policy to govern all service restructuring, and staff affected will be treated in accordance with the policy guidelines. It is not envisaged that either compulsory or voluntary redundancy will be an outcome of this process.

17.5 Workforce Planning

The MH service has an established group which will manage the workforce planning issues arising during this project's implementation.

18.0 Conclusion

NHS Dumfries & Galloway have conducted a thorough and evidence based analysis of its present and future Mental Health requirements. This Full Business Case represents the collective input of NHS Dumfries & Galloway Project and Clinical Staff, their Advisors and the appointed PSCP and their Supply Chain Team. Additionally, wide consultation with patients and user groups has taken place.

The conclusion is clear; the current inpatient facilities are inappropriate to deliver a Mental Health Service that meets current and future standards. The main issues are the lack of space, poor fabric and design of the current wards, along with having no local intensive care or high care facilities. This is set against a background of new legislation (importantly, the Mental Health (Care and Treatment) (Scotland) Act 2003,) and emerging new work practices.

This coupled with an ageing Mental Health estate has led to a situation where NHS Dumfries & Galloway feels that it no longer provides the proper environment for patients and staff. The current estate is inefficient and does not allow the Board to achieve desired improvements.

The proposals in this Full Business Case are well developed and reflect the needs of Patients, Strategic Partners and other external stakeholders as well as NHS Dumfries & Galloway's clinical, operational and administrative staff.

The Board are of the opinion that the proposed new facility at Bankend Road is vital to meet future Mental Health strategic targets. The preferred option, **Option 4(b)3(iii) All new build – Bankend Road Site** represents the best investment in mental health services going forward. It is a best value option that would fulfil the Key Drivers identified in this FBC and deliver a quality 21st Century Mental Health Service that meets the needs and aspirations of patients and staff.

The formal approval of this Full Business Case is sought in order that NHS Dumfries & Galloway can enter the necessary contractual arrangements with their preferred Principal Supply Chain Partners.