

# NORTH BRISTOL AND SOUTH GLOUCESTERSHIRE HEALTHCARE SERVICES DEVELOPMENT PROGRAMME OUTLINE BUSINESS CASE

## EXECUTIVE SUMMARY

### 1. INTRODUCTION

This Outline Business Case (OBC) is a component part of the Bristol Health Service Plan (BHSP), to modernise health services and hospital facilities in Bristol, North Somerset and South Gloucestershire. It follows on from a Strategic Outline Case which was prepared by North Bristol Trust, South Gloucestershire PCT and Bristol North PCT and was approved by the Department of Health in July 2004. There has also been an extensive programme of public engagement and public consultation on the component parts of the Bristol Health Services Plan.

The OBC proposes an investment of £420m in the following:

- **An 84 bed community hospital, plus provision of 28 beds for older people with a mental illness (11,000m<sup>2</sup>) on the Frenchay site.**
- **A 32 bed community hospital (5,000m<sup>2</sup>) on the Southmead site integrated with**
- **An 802 bed acute hospital (105,000m<sup>2</sup>) that will combine the specialist and acute services currently provided on the Frenchay and Southmead site into a single hospital on the Southmead site, (708 new build beds and 94 refurbished beds).**

**The total number of acute beds to be provided on the Southmead site will therefore be 947. This is because there are 145 beds on the Southmead site, which are not included in the new hospital development. This includes the 121 beds for obstetrics and gynaecology, and neonatology, together with the 24 beds retained in Malvern Ward.**

The main objectives of the investment are to:

- Provide care closer to patients' homes, wherever this is possible and appropriate.
- Concentrate acute and specialist services on a single site and improve the safety and sustainability of care.
- Improve the efficiency and effectiveness of services by harmonising primary care, social care and local hospital services to prevent inefficiencies, gaps in provision, delays and duplication of effort.
- Improve the very poor patient environment and working conditions in the old hospitals and provide buildings fit for purpose.
- Contribute to neighbourhood renewal and regeneration.

These objectives cannot be achieved without a reconfiguration of services and major investment in the NHS estate. The case for change is clear and concentrates on the following issues:

- Current community and primary care facilities are incapable of supporting large scale shifts of emphasis and activity, and will require substantial development of comprehensive community services.
- The current configuration of acute and emergency services across two main acute hospital sites cannot achieve the provision of an effective local system of health care for the people of North Bristol and South Gloucestershire. This split leads to fragmentation or duplication of services, both of which cause unnecessary difficulty in the effective provision of patient care.

- The tertiary services provided by the Trust are dissipated across the two sites causing gross inefficiencies and, in particular, problems in providing adequate medical staff cover.
- There are major shortcomings in the ageing acute estate, which are reflected in cramped and overcrowded wards and departments, which do not provide an acceptable standard of privacy, or an appropriate environment for the provision of modern acute care. Patient safety is compromised by the design of the estate; considerable distances separate key patient areas and departments, and the resultant patient movements are an additional risk in patient care. These major shortcomings can only be addressed by considerable and well planned development.

## 2. STRATEGIC CONTEXT AND MODEL OF CARE

Following the NHS Plan (2000) and the NHS Implementation Plan (2004), the key emphasis of national policy is to ensure that services are patient-led, and patients benefit from:

- Options, choice and control over the services they receive.
- Strong national standards and safeguards in how their care is delivered, including more integrated networks of care.
- Clear pathways of care centred on an understanding of their needs, not the needs of the service.
- Enhanced local primary and community care services.
- An NHS focussed on health improvement and protection, not just the treatment of sickness and illness.

This policy is being updated and a consultation process: '*Your health, your care, your say*' is being conducted by the Department of Health. The results of this process will be consolidated in a forthcoming '*Out of Hospital*' White Paper.

The service model and proposals set out in the OBC reflect these patient-led themes and aims.

The national policy and key trends in health care provision, most relevant to this business case, are:

- Plurality of choice and the implications of 'Creating a Patient Led NHS' .
- Practice based commissioning.
- Payment by results.
- Improvement in patient access (and in particular the need to achieve a maximum 18 week 'end to end' wait by 2008).
- National Service Frameworks for older people, cancer, renal disease, diabetes and long term conditions.
- The Public Health White Paper, 'Choosing Health'.
- A focus on redesigning services to improve access as described in 'Keeping the NHS Local – a new direction of travel'.
- Advances in medical technology .
- New workforce and education requirements, including the European Working Time Directive and the implementation of Agenda for Change.
- The need to modernise NHS facilities for patients as described in the NHS Plan.

- An anticipated further emphasis within future national policy on enhancing the role of primary care and community based services.

In the context of this national policy agenda, the local NHS has developed a model of care which will focus on the needs of patients by:

- Providing care closer to the patient's home where clinically appropriate;
- Providing effective local health services by harmonising primary care, social care and local hospital services to prevent inefficiencies, gaps in provision, delays and duplication of effort;
- Developing specialist services and networks for a wider group of patients within the NHS, providing high quality and faster access to specialist opinion;
- Providing a vibrant learning and education culture that benefits clinical services;
- Improving the efficiency and value for money of services.
- Enabling local services to respond to National Initiatives including Patient Choice and 'Creating a Patient-Led NHS'
- Putting an end to cramped, overcrowded wards, by providing high quality facilities which support care and recovery, and ensure privacy for patients.
- Greatly improving the working environment and facilities for staff.

The Bristol Health Services Plan Model of Care was supported by Acute Trust and Primary Care Trust Boards in Bristol, North Somerset and South Gloucestershire in September and October 2005 and endorsed by the Avon, Gloucestershire and Wiltshire Strategic Health Authority in October 2005.

### **3. BACKGROUND AND THE BRISTOL HEALTH SERVICE PLAN**

#### **3.1 Bristol Health Services Plan**

The proposals for the redevelopment of the Southmead and Frenchay sites are part of the wider Bristol Health Services Plan (BHSP) to modernise NHS services across Bristol, North Somerset and South Gloucestershire (BNSSG). It is a response to the national policy agenda and to the significant need to redesign services and to improve the NHS estate.

Through the Bristol Health Services Plan the local NHS plans:

- To develop new, community healthcare facilities in South Gloucestershire in Yate, Thornbury, Kingswood and Frenchay.
- To develop new community healthcare facilities in Bristol in South Bristol, Central and East Bristol and Southmead.
- New investment to develop the Bristol Royal Infirmary (BRI) site (including new facilities for children, to enable inpatient children's services from across Bristol to be integrated at the Bristol Children's Hospital).
- The centralisation of surgical specialties across the city in order to efficiently and effectively use expert resources.
- New investment to develop Cardiothoracic facilities at the BRI and in North Bristol/South Gloucestershire.
- A major new acute hospital for North Bristol and South Gloucestershire at Southmead.

### 3.2 Public Engagement and Consultation

There has been extensive public engagement and consultation on these proposals in line with “Keeping the NHS Local – a new direction of travel”.

During 2002/03 the local NHS consulted widely on options for the future of health services across Bristol. In particular, it explored whether it would be best in the long term to have a single major hospital to serve the Bristol area (excluding Weston). Feedback from the public was very clear. There was considerable support for moving services out of hospital and into the community, but people were worried about the idea of a single 'super hospital' for Bristol.

In January 2004, the local NHS launched a three month period of public engagement on the Bristol Health Services Plan. This took account of the 2002/03 exercise and contained proposals for providing many more services in community settings whilst maintaining major hospitals, in both central Bristol (the Bristol Royal Infirmary) and in North Bristol/South Gloucestershire.

The public engagement process set out options for concentrating all hospital services at either Frenchay or Southmead, or for concentrating acute services on one of the sites and developing a community hospital on the other site. It also set out options for developing a network of community hospitals and healthcare centres throughout South Gloucestershire and Bristol.

The feedback from the public engagement process was clear:

- The public wanted to see some ongoing hospital presence on both the Frenchay and Southmead sites.
- There was strong support for the development of community hospitals and community healthcare centres.

The local NHS initiated a period of public consultation between September and December 2004. This took account of the feedback from public engagement and removed the option of concentrating all services at either Southmead or Frenchay, thus ensuring that a hospital presence remained at both existing sites.

The Bristol Health Services Plan consultation document also sought feedback on the ten criteria, which the local NHS proposed should be used to determine which site should be selected as the major acute hospital site for North Bristol and South Gloucestershire. These criteria were:

- what will the options mean for the quality of care that patients receive?
- what will the options mean for the development of community services?
- will the options help us in recruiting doctors and the other specialist staff we need to run services?
- will the options help in recruiting nurses, other clinical staff and support staff (such as porters)?
- what will the options mean for people's travel times?
- how will the options impact on the local communities in South Gloucestershire and North Bristol?
- will the options provide high quality modern buildings, which provide the best environment for patients to recover from their illness?
- how quickly and easily can we implement the option?

- how flexible are the options, so that if things change in the future we can still meet patients' needs?
- will the options be good value for money?

### 3.3 Scrutiny and Decision Making

Prior to consultation and throughout the process the local NHS worked with the Joint Health Scrutiny Committee (JHSC), comprising members from the Councils principally affected by the proposals – Bristol City, South Gloucestershire and North Somerset.

Before the start of the consultation process, the local NHS agreed with the JHSC on a consultation strategy and process for the Bristol Health Services Plan.

The JHSC held 7 meetings from July 2004 until February 2005 and took evidence from a wide range of organisations and visited relevant sites. Clinicians and senior managers from the local NHS attended these meetings, and also the respective Councils' own Health Scrutiny Committees.

Following the completion of the consultation process, the local NHS prepared a report on the outcomes of consultation in January 2005 which it submitted to the JHSC.

The JHSC responded formally to the consultation proposals in its report in February 2005 with a series of recommendations. This stated the JHSC's support for the criteria to be used for the selection of the acute site.

The recommendations of the JHSC were then addressed in the Bristol Health Services Plan Assessment Report, which was prepared by the local NHS to inform decision making by Boards in March 2005. A Joint Decision Making Committee of local organisations met on 14 March 2005 to consider the recommendations as set out in this report. The organisations comprising the committee were:

- Bristol North PCT
- North Bristol NHS Trust
- North Somerset PCT
- Bristol South and West PCT
- United Bristol Healthcare Trust
- South Gloucestershire PCT

The decision of the Committee was that the Southmead site should be selected as the location for the major acute hospital for North Bristol and South Gloucestershire. In particular this was because:

- Southmead has 50% more developable land than Frenchay, and so is more flexible, will allow for better hospital buildings and enable an easier implementation.
- Southmead is more important in terms of its impact on socio-economically deprived areas.
- The Frenchay development would cost £1.9m more each year to run than the Southmead development.

### **3.4 South Gloucestershire Health Scrutiny**

Following on from the decision making process, and in the context of concerns expressed by local residents about the siting of the major acute hospital, the South Gloucestershire Health Scrutiny Sub-Committee met on 6<sup>th</sup> July to consider the conclusions of the Bristol Health Services Plan Joint Decision Making Committee. The Sub-Committee concluded that it would write to the Secretary of State for Health to request that she should refer the decision on the selection of the major acute hospital site to the Independent Reconfiguration Panel. In support of this request the Sub-Committee cited five grounds, which they argued demonstrated there had been inadequate consultation and flawed decision-making.

In response to the letter sent to the Secretary of State by the South Gloucestershire Sub-Committee, the equivalent Scrutiny Committees in Bristol and North Somerset wrote to the Secretary of State opposing the South Gloucestershire position and in support of the Joint Decision Making Committee. In addition, support for the decision to select the Southmead site for the major acute hospital was reiterated by the North Bristol Trust (NBT) Patient and Public Involvement Forum (PPIF), the NBT Medical Advisory Committee and the NBT Joint Union Committee.

On October 21<sup>st</sup> 2005 Lord Warner responded on behalf of the Secretary of State to the letter from the South Gloucestershire Health Scrutiny Sub-Committee. The letter from Lord Warner considered the five grounds presented by the Sub-Committee and concluded that he could see no reason to refer the decision to the Independent Reconfiguration Panel.

On November 2<sup>nd</sup>, the South Gloucestershire Health Scrutiny Sub-Committee met to consider its response to the letter from Lord Warner. The Sub-Committee concluded that it should recommend to its own Cabinet that Counsel's opinion should be sought on the potential for Judicial Review into the decision of the Secretary of State not to refer the matter to the Independent Reconfiguration Panel.

At this meeting, the local NHS made representations to the South Gloucestershire Cabinet on the potential for delay and increased cost as a result of the pursuit of Judicial Review. The North Bristol Trust Patient and Public Involvement Forum, Medical Advisory Committee and Joint Union Committee supported the concerns expressed by the local NHS.

Despite these representations, the Health Scrutiny Sub-Committee's recommendation was supported by South Gloucestershire Cabinet at its meeting on November 14<sup>th</sup> and Counsel's opinion on the potential for Judicial Review will be considered by Cabinet on December 8<sup>th</sup>. This clearly poses a risk to the project timetable and programme set out in Section 11 below.

## **4. ISSUES ARISING FROM AVON, GLOUCESTERSHIRE AND WILTSHIRE SHA'S MEETING ON 20<sup>TH</sup> OCTOBER 2005**

Following the BHSP Decision Making Committee on 14<sup>th</sup> March 2005, the Strategic Health Authority met on 23<sup>rd</sup> March 2005 to consider the Decision Making Committee's conclusions.

At that meeting the SHA endorsed the programme of further work on the BHSP and in particular requested that further work to be completed by the BHSP Steering Group in advance of OBC submissions.

On 20<sup>th</sup> October 2005, the BHSP Steering Group presented this work to the Strategic Health Authority and provided progress reports on the following:

- Model of Care for future service provision
- Planning Assumptions of PCT Commissioners underpinning the plans
- Phasing of the capital schemes for BNSSG
- Affordability and Contingency arrangements of the plans
- Travel and access issues for each of the Outline Business Cases
- Social Services issues raised by the Joint OSC Report

In particular the BHSP Steering Group highlighted the following issues in the affordability assessment which are directly relevant to the NBSG OBC:

- i) A savings requirement of £13.5m for NBT was not unreasonable in light of their scope for efficiency and redesign benefits realisation.
- ii) In their outline business case NBT should set out the reasons why it was not appropriate to phase their £420m scheme.
- iii) The assumption by Trusts of a 1.5% pa growth in income from activity increases was appropriate.
- iv) The assumption by Trusts of a transfer to the independent sector of activity valued at £20m in BNSSG was appropriate in light of DH policy initiatives of approximately £38m in AGW. This transfer is after the 1.5% pa activity increase referred to at (iii) above.
- v) Business cases should be prepared taking account of the potential use of vacant beds at Weston Area Healthcare Trust.

In response, the Strategic Health Authority welcomed the progress made by the BHSP project and supported the local NHS's planned model of care.

With respect to Outline Business Cases which would be prepared within the framework of the BHSP, the SHA endorsed the Programme Board and Steering Group position that:

*“the Affordability Assessment was not a substitute for properly scrutinised Outline Business Cases (OBCs). This issue would be the subject of further work prior to submission of Outline Business Cases”.*

The further work on affordability is reflected in Section 8 of the Executive Summary.

It also concluded that:

- The SHA should require the BHSP Steering Group to ensure that OBCs are robust in the context of the potential for a future service reconfiguration across acute hospitals, and to ensure that the configuration of community provision is taken forward by the new PCTs in the context of implementing the organisational changes resulting from the Commissioning a Patient Led NHS in Avon, Gloucestershire and Wiltshire.
- The OBCs for capital schemes should have explicit sensitivity analysis within the BHSP envelope.

The mechanisms for managing activity and income risks and for managing potential future service change are addressed in Section 8 and Section 10 below.

## 5. OPTION APPRAISAL

### 5.1 Shortlist of Options

In line with the outcomes of the BHSP Decision Making Committee on 14<sup>th</sup> March 2005 and taking account of the outcome of the SHA meeting on 20<sup>th</sup> October 2005, this OBC therefore considers options for the development of a major new acute hospital and community hospital on the Southmead site, and options for the development of a community hospital on the Frenchay site. The options are as follows:

<b>Do Minimum</b>	<ul style="list-style-type: none"> <li>▪ No reconfiguration of service</li> <li>▪ No community hospital at Southmead</li> <li>▪ No Community Hospital at Frenchay</li> <li>▪ Estate at Southmead and Frenchay Hospitals upgraded to Condition B</li> <li>▪ Capital expenditure limited to backlog maintenance</li> </ul>
<b>Southmead New Build South</b>	<ul style="list-style-type: none"> <li>▪ A new build acute hospital and integrated community hospital, concentrated to the South of the Southmead site, adjacent to the Avon Orthopaedic Centre.</li> <li>▪ Maximise use of category A/B estate particularly Elgar House and Avon Orthopaedic Centre.</li> <li>▪ Treatment centre services based in existing accommodation within the Avon Orthopaedic Centre.</li> </ul>
<b>Southmead New Build North</b>	<ul style="list-style-type: none"> <li>▪ A new build acute hospital and integrated community hospital, concentrated to the North of the Southmead site, adjacent to Elgar House.</li> <li>▪ Maximise use of category A/B estate particularly Elgar House and Avon Orthopaedic Centre.</li> <li>▪ Treatment centre services based in existing accommodation within the Avon Orthopaedic Centre.</li> </ul>
<b>Frenchay New Build</b>	<ul style="list-style-type: none"> <li>▪ Development of a new community hospital of the Frenchay site.</li> <li>▪ Creates a health campus to the North of the site.</li> </ul>
<b>Frenchay Refurbish</b>	<ul style="list-style-type: none"> <li>▪ Refurbishment of the good quality estate in Phase One, to create a community hospital.</li> <li>▪ Maximise use of existing good quality, category A/B estate at Frenchay.</li> </ul>

These options were the subject of both non-financial and financial appraisal. The non-financial appraisal comprised of clear weighted benefit criteria, comprehensive stakeholder involvement and weighted benefit scores for each option. A series of events were held to ensure the involvement of public, staff and clinicians in the process and at meetings of the NBSG Cluster Board, the OBC Public Involvement Group and of NBT clinicians. The options were scored against the following weighted non-financial benefits.

## 5.2 Non Financial Benefit Appraisal

<b>Enables the delivery of the clinical and service models</b>	<ul style="list-style-type: none"> <li>▪ Quality and safety of care for patients</li> <li>▪ Promotes clinical excellence</li> <li>▪ Allows efficient and effective delivery of support services</li> <li>▪ Enables high quality research and education</li> <li>▪ Allows delivery of national and local strategic aims &amp; targets</li> </ul>
<b>Flexible and Future Proof</b>	<ul style="list-style-type: none"> <li>▪ Adaptable to future changes</li> <li>▪ Logical extension space e.g. for women’s services</li> <li>▪ Able to be used for a variety of purposes</li> <li>▪ Demonstrates effective use of assets across the health community</li> </ul>
<b>Provides an excellent environment for patients and staff</b>	<ul style="list-style-type: none"> <li>▪ Feel good factor</li> <li>▪ Provides good internal design</li> <li>▪ Provides good external design</li> <li>▪ Safe and easy access for staff and patients (including roads and car parks)</li> <li>▪ Encourages staff recruitment and retention</li> <li>▪ Meets NHS building standards, especially space</li> <li>▪ Supports protection of the environment</li> </ul>
<b>Civic presence</b>	<ul style="list-style-type: none"> <li>▪ Noticeable public building</li> <li>▪ Should complement the neighbourhood</li> <li>▪ Supports regeneration</li> </ul>
<b>Practicality</b>	<ul style="list-style-type: none"> <li>▪ Ability to keep existing services running during construction period</li> <li>▪ Ability to procure services sensibly and cost effectively</li> <li>▪ Has public and staff support</li> <li>▪ Likely to gain planning approval</li> </ul>

The conclusions of the non-financial appraisal were:

*Table 1 – Outcomes of Non-Financial Appraisal*

Option	Weighted Benefit Score
Do minimum	271
Southmead New Build South	793
Southmead New Build North	540
Frenchay New Build	793
Frenchay Refurbishment	600

## 5.3. Financial Appraisal

The economic appraisal concluded that of the two Southmead options, the Southmead South option has both the lowest net present cost and the lowest cost per benefit point, and is hence the preferred option.

In the case of the Frenchay options, the Frenchay Refurbishment option has the lowest net present cost, but the Frenchay New Build option has the lowest cost per benefit point. This indicates that if the Trust was able to afford the additional cost of the new build option, it would provide additional benefits which would be more than commensurate with the additional cost. The key issue in deciding whether it can opt for the new build option is whether it can afford the additional cost.

The annual revenue costs (including capital charges) of the two options in the first full year of operation are compared below :-

Table 2 - Annual revenue cost comparison of the Frenchay options

	Annual revenue cost	
	FHY Refurb £000	FHY New Build £000
Building capital charges	3,472	4,697
Land capital charges	616	722
Premises running costs	1,086	1,102
Other costs	6731	6518
Total	11905	13039

This indicates that the annual revenue cost of the new build option exceeds that of the refurbishment option by £1.13m per annum. This is a significant additional annual cost, which could only be afforded by securing additional savings. The viability of this needs to be considered in the context of the BHSP affordability assessment, which concluded that the existing savings plans are already high risk and that maximum use should be made of existing good quality buildings. The capital cost of the Frenchay New Build option also exceeds that of the Frenchay Refurbishment option by £10.4m (New Build £51.5m; Refurbishment £41.1m), which potentially would result in greater capital affordability difficulties.

#### 5.4 Conclusion of the Option Appraisal Process

In light of the scale of the additional revenue and capital costs of the new build option as outlined above, and given the particular concern to ensure that the OBC proposals as part of the wider BHSP plans are affordable, the refurbishment option is proposed as the preferred option for the Frenchay site. The scheme is timetabled for completion in 2013, and the Trust and PCTs will have the opportunity to review the affordability of a new build option as detailed planning for the scheme develops.

### 6. THE PREFERRED OPTION

Following the selection of the preferred option for the Southmead site and for the Frenchay site, these have been combined to generate a composite preferred option, which provides for:

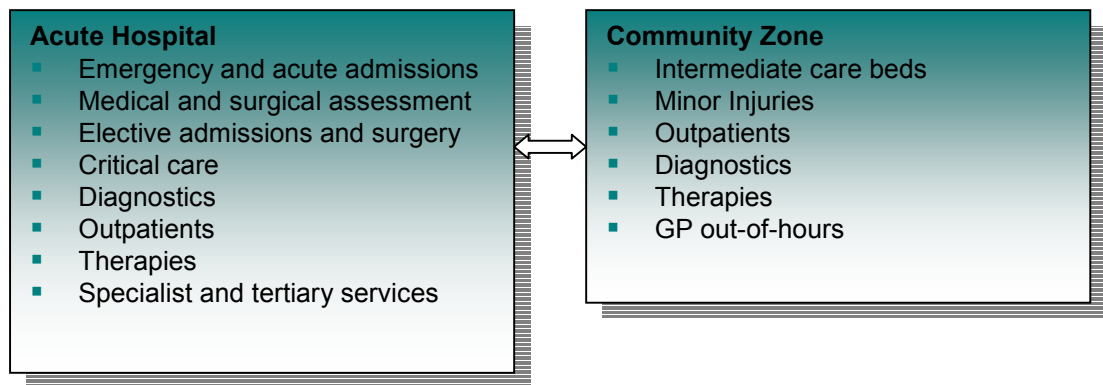
- An acute and specialist hospital, together with an integrated community hospital on the Southmead site.
- A community hospital on the Frenchay site.

The principle benefits of the preferred Southmead option are:

- Use of existing good quality grade A/B estate, particularly Elgar House, Avon Orthopaedic Centre and Frenchay Phase I.
- The ability to sustain the clinical core services at Southmead, due to the selection of a site in the South, away from the wards, theatres and main clinical thoroughfare.
- The ability to integrate treatment centre services into the Avon Orthopaedic Centre without substantial adaptation to the building, due to the flexible nature of this facility and its current functional content including theatres, inpatient beds and assessment facilities.
- The ability to integrate the treatment centre into the acute hospital and achieve good clinical adjacencies.

## 6.1 Southmead Site

The services to be included in the acute and community hospital at Southmead are set out in the figure below:



The new acute hospital at Southmead will contain 947 beds, 23 theatres, a comprehensive imaging service and full diagnostic facilities. The community facilities will be integrated and will comprise elements of the ambulatory, emergency and inpatient zones. The hospital will have a new service model operating within the following zones, and it is intended that there will be four entrances to the hospital to help patients and visitors access the areas they require within the following zones;

- Inpatient Zone.
- Emergency Care Zone.
- Ambulatory Zone.
- Core Clinical Zone.
- Support Zone.
- Treatment Centre.

Within the Inpatient Zone there will be generic inpatient units providing maximum flexibility to allow for changes in medical, nursing and therapy needs of patients, changes in models of care and service delivery and future reconfiguration and expansion. Inpatient beds will be provided in units of 32 beds, clustered into groups of 3 units to provide 96 bed clusters. 75% of the inpatient beds will be provided in single rooms, the remainder will be in 4 bedded bays.

The Core Clinical Zone will provide the high quality complex clinical support services to inpatients, outpatients, and community patients. This will include; imaging including 3 MRI scanners, 3 CT scanners, 18 operating theatres, 4 endoscopy rooms, pharmacy, diagnostic services.

The Southmead Community Hospital will be the local hospital for patients in the North West part of Bristol and the Southern 'arc' of South Gloucestershire. Its core catchment population will be around 150,000. It will support the proposed clinical model of care by acting as a 'hub' to other 'spoke' facilities across the defined catchment area. Links will also exist with other community facilities, outside its core catchment areas, such as the proposed Central and East Bristol Community Health Centre.

The treatment centre will provide 38 beds and five theatres and will provide for day and short stay surgery and some diagnostic facilities.

## 6.2 Phasing of the Southmead Site Development

It is proposed to minimise the number of phases in the Southmead scheme, and a comprehensive enabling programme is an important factor in this approach. The PCTs and NBT propose to prepare the potential development site in advance of the PFI scheme by conducting an enabling programme, which will increase certainty and therefore attractiveness of the scheme to PFI and shorten timescales by parallel running the procurement and the enabling works.

In response to AGW Strategic Health Authority's question about whether a phased approach to the development had been considered, the Trusts have explored the issue of phasing in some depth, and have concluded that the number of phases should be minimised due to:

- The cost of multiple phase construction.
- The cost of procurement.
- The constraints of the Southmead site with the current services located in the centre of the site, driving potential developments to the edges of the site.
- Uncertainty of procurement and methodology change.

## 6.3 Frenchay Site

The Frenchay site will house the Frenchay Community Hospital, together with inpatient beds for older people with a mental illness, a satellite renal dialysis unit, and the Brain Injury Rehabilitation Unit and the Macmillan Unit in retained third party accommodation. The Frenchay Community Hospital will provide services for a population of approximately 150,000, and will be complemented by community health centres in Yate and Kingswood, and the community hospital in Thornbury. Across the Frenchay site the following services will be provided:

### Community Hospital:

- Community inpatient beds
- Outpatient services
- Minor injuries unit
- GP Out of Hours
- Diagnostics – x-ray and ultrasound
- Rehabilitation and therapy services
- Local anaesthesia day cases

### Other Services:

- Satellite renal dialysis
- Inpatient facilities for older people with a mental illness.
- The Macmillan Unit and the Bristol Brain Injury Rehabilitation Unit

## 7. ACTIVITY AND CAPACITY

Projections of demand for healthcare in 2013/14 are based in the first instance on historical trends adjusted on the basis of local clinical knowledge. These projections are then adjusted to take account of the impact of increasing the availability of alternatives to care in an acute hospital.

Table 3 below shows a summary of the 2013/14 projections built up in this way.

*Table 3 – Growth in inpatient and outpatient demand 2004/05 to 2013/14*

	<b>2004-05 actual activity</b>	<b>Adjusted historical growth</b>	<b>Impact of alternatives to acute care</b>	<b>2013-14 projected activity before transfers</b>
Elective IP/DC	50,807	6,594	-772	56,629
Non-elective IP	61,601	13,467	-8,280	66,788
<b>Total IP activity</b>	<b>112,408</b>	<b>20,061</b>	<b>-9,052</b>	<b>123,417</b>
New OP appts	90,529	26,154	-17,517	99,166
Follow-up OP appts	224,168	78,613	-37,954	264,827
<b>Total OP appts</b>	<b>314,697</b>	<b>104,767</b>	<b>-55,471</b>	<b>363,993</b>

The overall planned growth in inpatients and daycases as set out in Table 3 above is shown in percentage terms in Table 4 below:

*Table 4 – Growth in inpatients and daycases – percentages*

	<b>Annual Growth Per Year %</b>	<b>Cumulative Growth 2004/05 – 2013/14 %</b>
Historic projected growth (adjusted for local clinical knowledge)	1.9	17.9
Impact of alternatives to acute care (demand management)	(0.9)	(8.1)
<b>Resulting planned growth</b>	<b>1.0</b>	<b>9.8</b>

The resulting planned growth in activity (9.8%) is greater than the projected growth in age weighted population over the same period (8.9%). Essentially the initiatives to increase the availability of alternatives to acute care, and therefore to manage demand, are projected to reduce the historically high level of activity growth and bring it more in line with underlying population growth.

Having established the total demand, assessments have then been made of planned service transfers to and from other organisations within the BHSP. These are in line with the BHSP Steering Group's report to the SHA on the Bristol Health Services Plan of October 2005. These are shown in Table 5 below:

Table 5: Demand and Service Transfers

	Elective Inpatients & Daycases FCEs	Non-Elective Inpatients FCEs	Total Outpatients Attendances
TOTAL DEMAND	56,629	66,788	363,993
BHSP service transfers	-202	-3,683	-2,027
Transfers to community settings	0	0	-93,310
Transfers to Independent Sector	-8,010	0	-27,995
Effect of acute flows	-826	-4,534	0
Change in clinical practice	0	0	-16,403
<b>2013/14 projected activity</b>	<b>47,591</b>	<b>58,571</b>	<b>224,258</b>
2013/14 activity in Community settings	0	0	93,310
2013/14 activity in acute settings	47,591	58,571	224,258

The capacity required in the new hospital has been assessed based on the activity projections as described above.

The assessment of bed numbers required take account of reductions in average length of stay and increases in daycase rates, which are enabled by both the planned clinical model for the future, and also by the design and adjacencies of the new hospital.

The 2013/14 planned performance levels in comparison with 2004/05 actuals and with casemix-adjusted benchmarks are show in Table 6 below.

Table 6: Performance Improvements

	2004-05 Actual	Benchmark Upper Quartile	Benchmark Upper Decile	2013-14 Proposed
Non-elective lengths of stay (days)	6.3	4.6	3.9	4.1
Elective lengths of stay (days)	4.7	3.8	3.1	3.8
Daycase rates	60%	73%	82%	74%

The resultant bed requirements is 1230 in comparison with current beds of 1320. This is a decrease of 7% while overall activity is increasing by 9.8%. This represents an overall performance improvement of 18%. Due to the planned transfer described above, 171 beds are provided outside this business case, 155 in other Trusts (UBHT 120; Weston 35) and 16 in Independent Sector Treatment Centres (ISTCs). The beds provided in the new and existing facilities therefore total 1059, comprised of 947 acute beds, and 112 community beds.

Table 7: Changes in Beds

<b>Changes in Bed Numbers</b>	
Current beds in 2005/6	1320
Growth	286
Impact of alternatives to admission	(189)
Assumed increase in specialist work	30
Reduction in length of stay	(224)
Increase in daycase rates	(101)
Decrease in occupancy rates	108
<b>Total beds required in 2013/14</b>	<b>1230</b>
<b>Location of Beds</b>	
NBT acute	947
Community	112
Transferred to other Trusts	155
Transferred to ISTCs	16
<b>Total beds required in 2013/14</b>	<b>1230</b>

## 8. CAPITAL COST AND AFFORDABILITY

The capital cost of the preferred option at a 2005/6 price base (MIPS 446.75) is projected at £420m, and the individual elements of this overall cost are shown in Table 8 below.

Table 8 – Capital cost of the preferred option

	<b>Southmead</b>	<b>Southmead publicly funded</b>	<b>Frenchay publicly funded</b>	<b>Total</b>
	<b>PFI funded</b>			
	<b>£m</b>	<b>£m</b>	<b>£m</b>	<b>£m</b>
New build	295	0	0	295
Refurbishment	18	0	44	62
Enabling	5	26	0	31
Equipment	19	10	3	32
Total capital cost excluding VAT on PFI	337	36	47	420

An assessment of the preferred procurement route for the Southmead South component of the preferred option has been undertaken. This compares PFI with conventional procurement, providing a value for money analysis and an assessment of the competitive interest in the project and the market capacity to bid and deliver the project effectively. The assessment concludes that PFI is the preferred procurement route for the Southmead site component of the preferred option. This excludes enabling costs, as the key enabling works are planned to be completed before the PFI build begins. It does include an element of the equipment requirements.

The affordability analysis therefore assumes that £337m of the total capital cost, as shown in Table 8, above will be financed through PFI. The procurement route for the Frenchay Refurbishment scheme will be assessed separately at a later stage, but for the purposes of the affordability analysis in the OBC, it is assumed to be publicly funded. Therefore of the total capital cost of £420m, £83m is assumed to require public capital, £36m for enabling and equipment costs on the Southmead site, and £47m for the Frenchay Refurbishment scheme.

A forward capital plan has been drawn up showing how this £83m together with all other NBT and BHSP strategic capital developments, and also replacement and lifecycle requirements could be funded under the new capital regime. This shows that this requirement for public capital can be met on the basis that costs of strategic schemes falling in 2006/7 are met from SHA strategic capital, and all costs in future years are met from a combination of depreciation funds, capital receipts from the sale of part of the Frenchay site, and prudential borrowing within the Trust's likely £30m borrowing limit (based on a risk rating of 2).

The recurring annual revenue consequences of the preferred option are estimated at £46.2m. This includes a PFI unitary payment of £33.1m, which has been calculated in conjunction with the Trust's financial advisers using a realistic shadow financial model. After netting off the release of £22.2m existing capital charges and premises budgets, the net additional revenue cost of the scheme is £24.0m per annum.

Table 9 below shows how this additional cost is planned to be met.

Table 9 Summary affordability statement for the preferred option

	£m
Revenue cost of preferred option (net of third party income)	24.0
Met by :-	
Projected tariff increases for revenue consequences of new build	8.6
Projected efficiency savings	13.9
Net surplus resulting from activity changes	1.5
<b>Total</b>	<b>24.0</b>

The calculation of the projected tariff increase for revenue consequences of new capital investment assumes 0.3% of the overall tariff increase is available, compared to a total tariff increase in 2005/6 of 0.4%.

The efficiency savings include £6.0m from bed-related savings, and £7.9m from savings related to larger wards, synergy savings on moving to a single acute site and savings resulting from improved adjacencies and design. These savings are over and above those required to complete the Trust's financial recovery. North Bristol Trust is fully on track with its Financial Recovery Programme, having made cumulative savings over 2003/2004 to 2005/2006 of £47.8m, with further savings planned of £23.5m over 2006/2007 and 2007/2008 to reach recurrent balance. The improvements in management capability and the more general cultural changes that have been made in the course of achieving these savings puts the Trust in a good position to deliver on the required OBC savings.

The basis of the £1.5m net surplus from activity changes is shown in Table 10

Table 10: Summary of income and expenditure movements relating to projected changes in activity from 2008/9 to 2013/14

	Income Changes £m	Expenditure Changes £m	Net change £m
BNSSG PCT growth 2008/9 to 2013/14	26.0	21.2	4.8
Other PCT growth 2008/9 to 2013/14	10	8.2	1.8
Reduced excess bed-days	(2.5)	(1.9)	(0.6)
Service transfers	(28.1)	(23.6)	(4.5)
<b>TOTAL</b>	<b>5.4</b>	<b>3.9</b>	<b>1.5</b>

The BNSSG PCT income growth from 2008/9 to 2013/14 is based on an overall 1.4% per annum increase excluding renal and HIV services and beta interferon prescribing, and corresponds with PCTs commissioning plans as agreed in the BHSP affordability exercise. The £28.1m income reduction from service transfers to other acute trusts, ISTCs and new community based units is also consistent with the BHSP affordability exercise. The £2.5m credit from reduced excess beddays was not fully incorporated into the BHSP exercise and thus should assist the financial position of PCTs. The expenditure changes consequent on the activity changes have been specifically assessed where possible, and otherwise are assumed to be equal to 75% of the income change. The income assumptions within this OBC are therefore consistent with those of PCTs and of other providers based on the BHSP affordability exercise.

However, an increased risk to the affordability for PCTs of the activity growth projected has arisen since the BHSP modelling work was completed, from revised national implementation plans for Payment by Results. Under the latest plans, PCTs will only receive non-recurring support for tariff increases in moving to the national tariff. While the final tariffs have not yet been set, PCTs project the impact of the move to tariff will be an additional £15m payment to NBT and an additional £23m across all BNSSG providers (including the £15m to NBT). This is likely to lead to a reduction in activity commissioned from NBT as well as other Trusts.

NBT is committed to working with PCT partners to resolve this issue. The implications for PCTs and options for managing the impact of PbR are currently subject to discussion between NBT and BNSSG PCTs. However, Section 10 highlights potential strategies for mitigating the risk that growth assumptions are currently overstated. These include a commitment from NBT to ask bidders to price a variant of 50 beds lower than the planned bed numbers in order to facilitate this process.

The project management, procurement and other transitional costs of the scheme (including costs of phasing in savings and cost releases after building completion) are projected at £54.1m, including the £42m referred to above. This is in line with the NHS Bank funding for such costs, which is 2% of the total capital cost of the scheme (at outturn prices and including VAT) for project management and procurement costs and an overall 7.5% of the capital cost for post completion transitional costs.

The Trust has built up a detailed income and expenditure model showing the key income and expenditure changes over the period 2005/6 to 2017/18, including :-

- completion of the financial recovery plan to achieve recurrent balance
- changes in activity relating to growth and service transfers
- additional recurring and non-recurring costs relating to the redevelopment, and offsetting savings

This demonstrates that the preferred option can be afforded within the context of all the other changes affecting the Trust's income and expenditure, and not just in isolation.

## 9. WORKFORCE

The Model of Care summarised in Section 2 above sets out a new system of service provision in North Bristol and South Gloucestershire. This new system will require a change in focus from the workforce, and a reshaping of traditional departments into new teams. In addition to this, the future NHS workforce must be fit for purpose and competent to deliver the future services and service standards set out in the NHS plan and the national service frameworks.

The plans for healthcare across North Bristol and South Gloucestershire are driven by the need to provide healthcare for the population in both new environments and through a new relationship between primary and secondary care. These plans require changes in the configuration of skills required in both primary and secondary care settings, and increased interchange of roles between both settings. The analysis of health needs and care-pathways will underpin the development of a workforce to deliver this care. The provision of more specialised healthcare in peoples' homes or integrated with primary care, challenges traditional staff roles and will provide opportunities for new staff roles.

The OBC sets out in detail how the key elements of the new service model will drive changes to the workforce within both primary care and secondary care and will also drive changes to education and training. Details are provided of workforce developments required to ensure appropriate staff are in place for the enhanced community and primary care services.

## 10. RISK MANAGEMENT

There are a number of critical risks that have been identified during the course of development of the OBC. This section highlights key risks which have been identified, the potential impact of these risks being realised and the approach to mitigating these risks. In practice these are grouped into risks related to:

- Activity and capacity
- Affordability
- Overall programme management

RISK	RISK IMPACT	MITIGATION
<b>Activity and Capacity</b>		
Over-estimate of activity due to re-direction of work to the Independent Sector (IS).	Scheme is over-sized leading to waste of resource and financial problems-work to IS being lost at full price with the Trusts being unable to release the fixed cost of buildings.	The Trusts have reduced the size of the development to anticipate the loss of some work to the IS. The scheme has also been down-sized to reflect the potential flow of activity to UBHT and Weston. In addition, the Trusts will not build new facilities to house the remaining potential IS work but will concentrate this work in existing facilities in the Avon Orthopaedic Centre. This approach minimises investment in this type of workload and offers the opportunity for the Trusts to close the facilities down at some point if the workload was to be lost to the IS.

RISK	RISK IMPACT	MITIGATION
<p>Over-estimate of growth assumptions with a worst-case scenario that only 1/6 of the current predictions on growth actually occurs/is affordable.</p>	<p>The scheme is oversized as above.</p>	<p>The strategy is to retain beds on site where appropriate to allow a buffer. Of the 947 acute beds on the Southmead site, 239 beds will be in retained areas. These beds will mostly be maternity or gynaecology.</p> <p>The Trusts are developing a design brief to allow for retrenchment of the gynaecology and potentially low risk birth facilities (around 70 beds in total) into Elgar House with the displacement of the services in Elgar House into the main hospital.</p> <p>This provides the Trusts with the ability to use up to 60 beds of the new development with retained activity.</p> <p>The Trusts are also looking at potential mandatory variants in the procurement process to allow for:</p> <ul style="list-style-type: none"> <li>▪ A scheme with 50 less beds.</li> <li>▪ A scheme with some shell and core facilities</li> </ul> <p>The Trusts will also explore the potential to attract more tertiary work from outside BNSSG.</p>
<p>Change in profile of specialty configurations across Bristol leading to different set of specialty provision in NBT.</p>	<p>The scheme is designed with the wrong type of capacity leading to expensive reconfiguration of the hospital after completion.</p>	<p>The building has been designed with generic groups of in-patient, outpatient and clinical core services instead of a more bespoke clinical village model. This approach allows for changes in the sets of specialties housed in the scheme without change to the basic structure of the building.</p> <p>In addition the scheme is being specified to include generic rooms for the high volume content such as outpatient consulting rooms, wards and office facilities. This approach leaves the building with around 80% translatable generic space with a relatively small percentage of inflexible space.</p>
<p>Changes in technology and medical practice</p>	<p>The scheme is designed with the wrong type of capacity leading to expensive reconfiguration of the hospital after completion.</p>	<p>See above but also use of techniques such as merging theatre with interventional radiology space and also the fit-out of the building with highly flexible IT and communications capabilities.</p>
<p>Over-estimate of performance, under-estimate of growth</p>	<p>The scheme is under-sized leading to the Trusts being unable to deal with the entire quantum of workload. The resulting 2 phase procurement represents poor Value for Money with PFI costs and preliminary costs being incurred twice.</p>	<p>The Frenchay scheme is not being procured through the PFI and leaves the option to flex the specification for the scheme to include more rehabilitation/ sub-acute facilities if there appears to be problems with overall capacity.</p> <p>In addition, the Southmead development will be specified to ensure ease of development and the site is sufficiently large to accommodate more facilities.</p> <p>Similarly, outline planning has been sought for a scheme larger than current requirements to help facilitate expansion if required.</p> <p>Furthermore the retention of the beds at the North of the site, including Elgar House gives the Trust some flexibility with regard to core clinical space,</p>

RISK	RISK IMPACT	MITIGATION
<b>Affordability</b>		
Capital costs exceed budget	The Trust will pay more in Unitary Charges and this will potentially be unaffordable, particularly with the rigours of Payment-by-Results	The Trusts have included optimism bias in their capital costs to reflect the potential for under-estimation of capital cost. In addition, the Trusts have included a 10% contingency sum and has benchmarked the proposed capital cost per square metre against the last 5 schemes to reach Financial Close. The Trusts have also recruited an experienced Project team with a clear Project structure.
Projected Savings are not achieved  Tariff increases for revenue consequences of capital falling below the 0.3% per annum assumed.	The Trust will not be able to manage implications with the constraints of PbR.	The risk of not achieving savings targets related to performance (£6m) is addressed above. The risk of not achieving other savings targets (£7.9m) is relatively low taking account of the scale of the opportunity for synergies and improvements in service efficiency as a result of centralising on a single acute site. This is also a relatively low risk compared to the Trusts current recovery programme, which is achieving savings of £16m per annum within the constraints of twin-site working. However, to mitigate these risks, the Trust has made relatively conservative assumptions with regard to some costs including a high range UP assumption of 9.91% and a potentially low release of existing capital charges. The Trusts are also planning to pull forward savings plans and incorporate them into the current programme to give several years to achieve the targets. The Trust has a track record of achieving a very significant savings programme. The same project discipline will be applied to activity outlining the savings from this programme.
<b>Overall Programme</b>		
The Clinical Model is not implemented successfully.	The productivity targets cannot be met and the building environment will not be appropriate to a partially implemented model.	This is the key risk in the NBSG programme and as such will require the most attention. The Programme incorporates a Clinical Redesign Group charged with overseeing the implementation of the new model. The group will have representation from all the Trusts and will be serviced and supported by dedicated staff.  This group will be a composite team pulling together the Trusts operational processes with the longer term objectives.  The Group will report directly into the Cluster Board and this Board will focus on this issue as the main agenda item. This will allow the programme of change to have CEO level focus during a period of organisational restructure that could potentially refocus senior management attention elsewhere over the next 12months.  In addition the BHSP Project team will support the process with learning events and networking into the other programmes of development within BHSP and with other programmes around the country.

RISK	RISK IMPACT	MITIGATION
The Workforce is not developed to meet the demands of the clinical model	The clinical model cannot be delivered effectively leading to problems with capacity and affordability due to failure to meet efficiency targets.	The Trusts are establishing a workforce group to target the actions required to implement the necessary changes. This group will put in place an implementation plan and implementation methodology and will report in to the Project Board and Cluster Board.
The scheme does not attract a field of bidders	There is no competitive process and the procurement can therefore not proceed. This puts the whole scheme at risk.	The Trusts are preparing a commercially attractive scheme with minimum refurbishment, a site prepared for single phase development and an experienced Project Team. The Trusts are also undertaking a process of sounding out the market with a view to attracting a field of bidders. The Trusts are also trying to pitch the launch of the scheme at a time when the market will be ready and not absorbed with other work. There appears to be an opportunity for this before summer 2006.
Problems with Town Planning Application/Permission	The scheme is delayed due to a protracted process and potentially costs increase due to onerous Section 106 requirements. Planning permission is too constraining on the preferred scheme and does not allow sufficient scope for PFI innovation.	An Environmental Impact Assessment has been developed at an early stage to set clear parameters for the scheme. The Trusts have also engaged the Councils at early stage and have received commitment to allocating dedicated manpower to the application. The application is also for a larger scheme than anticipated to provide flexibility for the potential PFI proposals.
Programme is not adhered to	The overall programme becomes delayed and problems arise due to escalating capital inflation and bid/procurement costs.	The Trusts are maintaining a Prince 2 programme management system and have recruited a Project Team with experience of managing complex PFI procurement. The Trusts are also developing a pre-procurement enabling scheme that will allow the PFI to be procured as a 1phase development. This will make the development simpler and easier to manage from a commercial perspective.
Public concerns about preferred site location	Delays will occur whilst challenges from various stakeholders are addressed.	Detailed BHSP reports are produced to support each round of decision making. The Trusts have established public involvement groups and regular discussions are taking place with the local public. The proposals have received endorsement from the Secretary of State.

## 11. PROJECT TIMETABLE

The OBC programme is being developed as two key projects viz. the Southmead and the Frenchay site proposals. The programme is being developed in stages with the current stage leading up to the completion of the Outline Business Case and the publication of the OJEU notice. The timetable to complete the OBC for the Frenchay and Southmead projects is set out in the table below. The table also shows the PFI timetable for the Southmead development, and the main milestones for the Frenchay development.

Milestone	Date
SOC approved by Secretary of State	July 2004
Joint decision making forum confirms Southmead as preferred site for acute hospital with community hospitals at Frenchay and Southmead	March 2005
OBC agreed by local health community	December 2005
Submission of OBC to Strategic Health Authority and PFU	January 2006
Outline planning Committee resolution for Southmead received	30 March 2006
Approval of OBC	30 March 2006
<b>Project: Southmead</b>	
Submission of OJEU notice for Southmead	1 April 2006
Expressions of interest received	May 2006
Issue Pre-qualification questionnaires	May 2006
Pre-qualification questionnaires received	June 2006
Four bidders identified and preliminary ITN issued	July 2006
Responses to PITN	October 2006
Evaluate bids and shortlist to two bidders	December 2006
Issue Full Invitation to Negotiate	December 2006
Bidder response to FITN	April 2007
Preferred partner identified	June 2007
Submit full planning application	January 2008
Full business case submitted	May 2008
Full planning approval received	May 2008
Business case approved	June 2008
Financial close	August 2008
Building complete	September 2012
Commissioning complete	March 2013
Facilities ready for occupation	April 2013
<b>Project: Frenchay</b>	
Agree Procurement Route	April 2008
Secure Outline Planning Approval	April 2009
Complete Scheme	April 2013

## 12. CONCLUSION

The Outline Business Case presented for approval proposes an investment of £420m to take forward the provision of a single site acute hospital serving North Bristol and South Gloucestershire, together with community hospitals on the Southmead and Frenchay sites. The need for the major investment in these facilities is strongly supported by a clear case for change, which identified the reasons why it is impossible to achieve the proposed model of care with the current configuration of services, in the current grossly inadequate estate. The proposals are a component part of the Bristol Health Services Plan, and are consistent with the BHSP affordability exercise presented to the SHA in October 2005.

The detailed work which has been undertaken on activity, income and affordability shows that the developments are affordable; the financial risks have been calculated, including the potential impact of Payment by Results, and it has been shown that plans are in place to mitigate these risks.

A key feature of the planning and the design of the preferred option has been the need to ensure that facilities are flexible, ensuring that a high degree of future proofing is included in the developments.

The implications for the workforce have been modelled, and a clear understanding achieved as to how the workforce profile will need to change during the period until 2012/2013. This will include continuing the work currently underway across North Bristol and South Gloucestershire on the implementation of the NHS Career Framework and the introduction of new roles.

The Trusts presenting the Outline Business Case; North Bristol NHS Trust, Bristol North PCT and South Gloucestershire PCT, are clear that there is a very strong case for change underpinning these proposals, and that the developments outlined are both affordable and achievable