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NORTH BRISTOL NHS TRUST

North Bristol and
South Gloucestershire
Option Assessment

Economic, Social and
Environmental Appraisal
update

BAKER

ASSOCIATES

Contents

- 1 Introduction
- 2 Employment by location and staff group
- 3 Economic impacts
- 4 Social Impacts
- 5 Other impacts, and implications of the findings

Annex

- 1 Detailed distribution of staff from Frenchay by place of residence
- 2 Detailed distribution of staff from Southmead by place of residence

1 Introduction

Aim and scope of the appraisal

- 1.1 This study update was commissioned in August 2004 to explore some of the economic, social, and environmental impacts of the options currently being put forward by the North Bristol NHS Trust (NBT) for reconfiguring the hospital services in north Bristol. It draws on and modifies a previous study carried out by Baker Associates in 2002 (*“Planning Bristol’s Health Services: Evaluation of the Economic Impacts of the Options”*) which looked at different options involving the amalgamation of the two hospital trusts in Bristol.
- 1.2 The data used in the previous study is now three years old and it was felt that the new options should be appraised using more up-to-date information on staff location and on the incidence of deprivation in Bristol and South Gloucestershire. An initial exercise was undertaken using the old database, which suggested that there could be significant differences in the performance of the current options against some of the socio-economic criteria. This exercise was summarised in a short report (*“North Bristol and South Gloucestershire Outline Business Case: Economic, Social and Environmental Impacts of the Options”*). As a result of this exercise, it was agreed that the update should concentrate on the following main areas:
- Using the new staff database to undertake a finer grain analysis of where NBT staff working at Southmead and Frenchay hospitals currently live
 - Assess the possible impact of concentrating most hospital jobs at *either* Frenchay *or* Southmead in terms of:
 - The overall total number of hospital jobs available to Bristol and South Gloucestershire residents
 - The possible job gains and losses to northern areas or eastern areas, depending on which option was chosen
 - Access to lower paid jobs by residents of areas of high economic and social deprivation in Bristol and neighbouring areas (using the most recent IMD 2004 data on deprivation)
 - Estimation of the number of construction jobs likely to be created using updated conversion factors and including an assessment of how many of these jobs might be created locally.
- 1.3 If it was felt likely that the options might differ significantly in terms of other economic, social, or environmental impacts it was agreed that this should be covered in a short commentary.

The Options

- 1.4 A shortlist of three options for reconfiguring hospital services in north Bristol and south Gloucestershire was provided by NBT. These essentially comprised two development options and one “do minimal” option:

- Option 1** Minimum investment to ensure continued operation of both hospitals.
- Option 2** Main acute hospital plus community hospital on Southmead site, second community hospital at Frenchay; community facilities in Thornbury and Yate.
- Option 3** Main acute hospital plus community hospital on Frenchay site, second community hospital on Southmead site; community facilities in Thornbury and Yate.

- 1.5 The North Bristol NHS Trust is now looking at developing **one** of the northern sites as the main acute hospital for north Bristol and South Gloucestershire . The question we have been asked to comment on is the extent to which either of the northern sites is demonstrably better on economic, social, or environmental grounds. It should be noted that our original analysis, and the model it was based on, was designed to highlight the impacts of putting all or most hospital employment in Bristol **either** in the city centre **or** on one of the northern sites. It was not designed to tease out the much smaller differences between any of the northern sites.
- 1.6 In this update, we have therefore adopted a different, finer-grain approach to the assessment of any differences between the two northern sites.

2 Employment by location and staff group

Total employment and employment by staff group:

- 2.1 According to the latest available staff database (mid-2004), the two hospitals directly employed 7,109 people, with Frenchay employing 3,277 and Southmead 3,832 (*these figures are actual full time and part time jobs - see Table 2.1*). These totals represent a sizeable decrease since 2002, when Southmead employed 5,587 people and Frenchay 3,422.
- 2.2 In full time equivalents, the total number of jobs in the two hospitals was approximately 5,764, with Frenchay accounting for 2,656 and Southmead 3,108 (*Table 2.2*). On this basis, Southmead currently employs less than it did in 2002 (3,178) and Frenchay (2,471 in 2002) rather more).
- 2.3 Taking the two hospitals together, almost 31% of FTE jobs are accounted for by nurses (qualified and unqualified). Paramedics, scientists, and technicians are the next largest group (19%), followed by administrative and clerical staff (15%). HCA's account for 13% of the total and doctors just under 10%. Ancillary staff (including maintenance staff) comprise almost 9% of the total and senior managers almost 4%. (*Table 2.3*)
- 2.4 The percentage breakdown for each hospital taken separately is similar to the combined total except that Frenchay has proportionately rather more HCA's and Southmead has more scientists, paramedics, and technicians.
- 2.5 Compared to 2002, the percentage breakdown by broad staff group is very similar, if nurses and HCA's are combined.

Where hospital staff live:

Frenchay

- 2.6 The broad distribution of staff by area of residence (zones) for Frenchay hospital is shown in table 2.4. These zones are the same as those used in the earlier analysis undertaken in 2002. It should be noted that these zones are based on Bristol postcodes and the north outer and east outer zones are entirely within South Gloucestershire. A more detailed analysis by postcodes is attached as Annexe 1.
- 2.7 The main residential locations for staff employed in Frenchay Hospital were in east and north Bristol, and South Gloucestershire, with over half of the staff concentrated in the east inner and outer zones (east inner 18%; east outer 43%). Within the east outer zone, there was a marked concentration in BS16 (where the hospital is located), which accounted for 28% of all employees. Within the east inner zone, there was a marked concentration in BS15 which accounted for 10% of all employees.
- 2.8 This concentration in two zones and two postcode areas applied to most staff groups but particularly the lower paid (A&C, Ancillary, HCA's, and maintenance staff). Doctors were a case apart, with only 17% resident in BS16 and none in BS15.

Table 2.1: Hospital jobs (actual) by location and staff group

Hospital	A & C	Anc	HCA	Maint	M & D	Nurses	P & T Support	S, P & T	Senior Managers	Total
Frenchay	552	281	497	21	291	994	149	377	115	3,277
Southmead	600	346	479	36	336	1,153	179	585	118	3,832
Total	1,152	627	976	57	627	2,147	328	962	233	7,109

Table 2.2: Hospital jobs (FTEs) by location and staff group

Hospital	A & C	Anc	HCA	Maint	M & D	Nurses	P&T Support	S, P & T	Senior Managers	Total
Frenchay	418	198	380	21	251	838	113	326	110	2,656
Southmead	465	250	372	35	291	932	142	512	110	3,108
Total No.	883	447	752	56	542	1,770	255	839	220	5,764
Frenchay	15.8	7.4	14.3	0.8	9.5	31.6	4.2	12.3	4.1	100.0
Southmead	15.0	8.0	12.0	1.1	9.4	30.0	4.6	16.5	3.5	100.0
Total %	15.3	7.8	13.1	1.0	9.4	30.7	4.4	14.5	3.8	100.0

Table 2.3: Hospital employment by broad staff groups (both hospitals)

Staff Group	Numbers (FTEs)	Percent
Doctors	542	9.4
Nurses	1,770	30.7
P, T & S*	1,094	19.0
A & C	883	15.3
Anc etc**	503	8.7
HCA	752	13.0
Sen Man	220	3.8
Total	5,764	100.0

* includes PT&S Support

** includes maintenance

- 2.9 With regard to particular staff groups, doctors were widely scattered through most zones (but not the central zone or in south Bristol). Apart from the concentration in the east outer zone noted above, there were also concentrations in the north inner zone (especially BS6) and the west inner zone (BS8). A high percentage of doctors lived outside the Bristol postcode area (over 25%) and this pattern remained true of other higher paid staff – scientists, paramedics and senior managers. However, 13% of the nurses employed in Frenchay also lived outside the Bristol postcode area.
- 2.10 Ancillary staff and administrative and clerical workers were both heavily concentrated in the east zone of Bristol and neighbouring South Gloucestershire, (especially BS15 and BS16) with over 75% of A&C and over 85% of the ancillary staff living in the two eastern zones. This pattern remained true for HCA workers with the east Bristol and neighbouring South Gloucestershire zone accounting for over 78% of HCA staff, and for almost 75% of P & T support staff. Maintenance workers were almost entirely concentrated in the north and east Bristol zones. Very few of these staff groups lived outside the Bristol postcode area.
- 2.11 The distribution pattern for nurses at Frenchay was similar to that for all staff, with almost 60% in the two east zones and over 18% in the two northern zones, covering north and east Bristol and neighbouring areas of South Gloucestershire. 13% live outside the Bristol postcode area altogether, as noted above.
- 2.12 Scientists, pharmaceutical and technical staff, and senior managers shared a similar distribution pattern, with around 45% in the two east zones and 20-25% in the two northern zones. Around 15% lived outside the Bristol postcode area.
- 2.13 In broad terms the pattern of distribution is similar to that in 2002 although changes in staff group definition may have obscured some shifts in distribution. The only noticeable change appears to be that more doctors are now living in or near the hospital in BS16 and fewer are living outside the Bristol postcode area.

Southmead:

- 2.14 The broad distribution of staff by area of residence for Southmead Hospital is shown in table 2.5. These zones are the same as those used in the earlier analysis undertaken in 2002. It should be noted that these zones are based on Bristol postcodes and the north outer and east outer zones are entirely within South Gloucestershire. A more detailed analysis by postcodes is attached as Annexe 2.
- 2.15 The main residential locations for staff employed in Southmead Hospital were in north Bristol and neighbouring areas of South Gloucestershire, with well over half of the staff concentrated in the north inner and outer zones (north inner 41%; north outer 16%). Within the north inner zone, there were marked concentrations in BS7 and BS10 (where the hospital is located), which together accounted for 27% of all employees.
- 2.16 This concentration in two zones and two postcode areas applied to most staff groups but particularly the lower paid (A&C, Ancillary, HCA's, maintenance

- staff), but also to nurses and P&T support staff. For doctors, the pattern was rather different: a strong concentration in the north inner zone which accounted for 45% (particularly in BS6, BS9, and BS10) and a further 15% in the west inner zone, especially BS8.
- 2.17 The two east zones accounted for almost 19% of all Southmead staff, but proportionately more maintenance, P&T support staff, and senior managers, and fewer ancillary staff.
- 2.18 In terms of individual staff groups, 44% of A&C staff lived in the north inner zone (especially BS7 and BS10), with a further 26% in the north outer zone (especially BS12 and BS34); the majority of ancillary staff (almost two thirds) lived in the north inner zone (again, mostly BS7 and BS10). HCA and P&T support staff distribution was similar to that of A&C staff. Maintenance staff were more widely scattered with the east zones and west and south inner zones accounting for well over 50%. Very few of these lower-paid staff groups lived outside the Bristol postcode area.
- 2.19 As noted above, doctors were concentrated in two zones (north inner and west inner) but a relatively high proportion (19%) lived outside the Bristol postcode area altogether. This pattern remained true of other higher paid staff – scientists, paramedics and senior managers. However, 10% of the nurses employed in Southmead also lived outside the Bristol postcode area.
- 2.20 The distribution pattern for nurses at Southmead was similar to that for all staff, with well over half in the two northern zones and 20% in the two eastern zones. 10% lived outside the Bristol postcode area altogether, as noted above.
- 2.21 Rather less than half of scientists, pharmaceutical and technical staff lived in the two northern zones, with 22% in the eastern zones and 15% outside the Bristol postcode area. About a third of senior managers lived in the northern zone and over a quarter in the eastern zones. Over 10% lived in south Bristol and 21% outside the Bristol postcode area.
- 2.22 In broad terms the pattern of distribution is similar to that in 2002 although changes in staff group definition may have obscured some shifts in distribution.

3 Economic impacts

The pattern of spending out of wages and salaries

- 3.1 The distribution of staff by place of residence is critical to an understanding of economic impacts. This is because local economies within the city and beyond benefit from spending out of wages and salaries of hospital employees. Changes in the place of residence of staff resulting from a changed location of place of work will have an impact on these local economies.
- 3.2 Changes in the distribution of jobs between the east side of Bristol and its neighbouring areas of South Gloucestershire, and the north side of Bristol and its neighbouring areas of South Gloucestershire would, over time, affect the location of some of the spending out of wages and salaries. A major shift of jobs to the north, for example, would bring immediate benefits to businesses located nearby, as spending by staff at work increased. This may be further reinforced by patient and visitor spending.
- 3.3 Conversely, a shift to the east would benefit businesses located there. It should however be noted that there are currently relatively few businesses near either Southmead or Frenchay hospitals that would be in a position to benefit and that, with respect to visitor spending, a new hospital on either site would be likely to have retail outlets within it.
- 3.4 Over a longer time frame, as the residential distribution of staff adjusted to the new location, other businesses in the area within the residential catchment of the hospital could be expected to benefit. Broadly speaking, a concentration of hospital jobs at the Southmead site will tend to benefit north Bristol and neighbouring areas of South Gloucestershire, while a concentration at Frenchay will tend to benefit east Bristol and (different) neighbouring areas of South Gloucestershire.
- 3.5 Much if not most of the spending out of staff wages and salaries will continue to take place in the city centre shops or out-of-town retail parks. This is unlikely to be greatly impacted by staff changes of residence.

The impact of relocating hospital jobs

- 3.6 If hospital facilities were to be concentrated on Southmead, most of the jobs (but not all) currently located at Frenchay will shift to the new hospital that would be built on part of the Southmead site. This would mean that the north of Bristol, and its neighbouring areas of South Gloucestershire might gain something in the order of 2,500 jobs and east Bristol and its neighbouring areas of South Gloucestershire lose a similar amount (precise staffing levels by job category are not yet available). If hospital facilities were to be concentrated on Frenchay, most of the jobs (but not all) currently located at Southmead will shift to the new hospital that would be built on part of the Frenchay site. This would mean that east Bristol plus neighbouring areas of South Gloucestershire might gain something of the order of 3,000 jobs and north Bristol plus its neighbouring areas of South Gloucestershire lose a similar amount.

- 3.7 The extent to which people currently in post in either hospital would follow their relocated jobs depends on a number of inter-related factors. These include:
- The availability of other (similar) jobs elsewhere inside or outside the health service
 - Their commitment in career terms and training effort to particular departments and organisations
 - Their ability and willingness to move house
 - The ease or otherwise of changing commuting patterns and habits, including factors such as costs of travel in relation to pay, and opportunity to use public transport at anti-social hours
- 3.8 The extent to which these factors are likely to operate differs significantly between individuals and between different types of staff. In general, for the more highly trained and better paid staff, their commitment to their career, their existing job, and the organisation that employs them is likely to be greater, while opportunities for alternative employment may be constrained. At the same time, their willingness and ability to relocate their place of residence, or to significantly change their commuting habits, is also likely to be greater than it would be for lower paid staff.
- 3.9 For lower paid staff (administrative and clerical, ancillary, maintenance staff, HCA's, P&T support staff), the opportunities for alternative employment outside the health service may be greater, and possibly better paid, particularly at certain stages of the economic cycle (as now, at almost full employment). Commitment to careers may be less, as may willingness and ability to move house or to significantly change commuting habits.
- 3.10 The probable result of the operation of these factors is that the propensity to follow a relocated job will increase broadly in line with skills levels and remuneration. In the absence of hard data it is difficult to put figures on the proportion of jobs in any category that would become vacant. There is a significant turnover of staff in any case, broadly determined by economic conditions and alternatives on offer. But relocation can be a significant trigger for people who were thinking of leaving anyway to do so.
- 3.11 A relocation from Frenchay to Southmead or vice-versa may therefore provoke a shift in the residential pattern of employment. Looking at a reconfiguration of most hospital jobs away from Frenchay first, from the analysis of the residential distribution of staff groups we know that around 25% of lower paid staff at Frenchay live in the east inner zone (BS5,BS15) and a further 35% in parts of the east outer zone (BS16 and BS30) from whence it may be relatively hard to access Southmead. Some of these staff, particularly from BS16, currently walk or cycle to work, or make a short simple journey on public transport. Commuting by such means to Southmead would be more difficult, and these employees would be faced with making a car journey (through one or more congestion spots) across the northern edge of the Bristol conurbation, or a more complicated journey via central Bristol on public transport.

- 3.12 It is reasonable to assume that a proportion of lower paid staff will not shift with the job. They may be able to find similar jobs in central Bristol – we understand UBHT is expanding - or outside the health service. This is particularly true of ancillary staff (the lowest paid).
- 3.13 Quantifying this proportion is difficult in the absence of hard data about staff retention following relocation. In the previous study (2002) we made the assumption that maybe half or more of the lower paid staff seriously disadvantaged by the relocation might not move with the job. For staff relocated from Frenchay to Southmead (which are relatively close together, although the cross-city journey is not straightforward), the proportion not moving with the job may be less – perhaps a third. If this was to prove to be the case, then around 20% of the total of lower paid staff might quit their NBT job. Of those remaining, perhaps another 20% facing more difficult journeys might move out of the east zones. This would mean that east Bristol and neighbouring areas of South Gloucestershire might “lose” around 360 residents currently occupying lower-paid hospital jobs.
- 3.14 For nurses (the biggest staff group) a rather smaller proportion (perhaps 50%) would face significantly more difficult journeys to work. In this case the opportunities for finding alternative work might be lower, and the propensity to stay with the current employer higher. This suggests that most nurses would stay with the job and either put up with a more difficult journey or move. If 80% of nurses stayed with the job, and, of those seriously disadvantaged by the relocation, half were to move out of the eastern zones, this would mean that east Bristol and neighbouring areas of South Gloucestershire might “lose” 375 residents currently occupying nursing jobs.
- 3.15 Only 21% of doctors employed at Frenchay live in the eastern zones, and all of these are in the outer zone (in South Gloucestershire). Some may be actually resident in or near Frenchay hospital and will therefore need to find alternative accommodation. The majority of doctors employed at Frenchay already live in northern zones or in areas with easy access to it. We can assume that most doctors will stay in their relocated job and few (10% or less) will need to move.
- 3.16 Around 45% of scientists and other technical staff, and senior managers employed at Frenchay, live in the eastern zones, more than half of these in BS16 itself, in South Gloucestershire. Most will probably remain in NBT employment and some may need to move – perhaps rather more than is the case with doctors. We could assume that perhaps 20% would eventually move out of the eastern zones.
- 3.17 If this scenario (and it is only a scenario, not a forecast) is reflected in reality, then east Bristol and neighbouring areas of South Gloucestershire might “lose” in total around 850 residents currently occupying hospital jobs. The vast majority of these would be lower-paid jobs or nursing jobs.
- 3.18 Conversely, a reconfiguration of most hospital jobs away from Southmead might provoke a shift in the opposite direction. Around half of Southmead staff in lower-paid jobs live in the north inner zone. Most of these people will face significantly longer or more difficult journeys to work. Using the same assumptions as above in terms of staying in hospital employment and/or

moving would mean that north Bristol might “lose” around 380 residents currently occupying lower-paid hospital jobs.

- 3.19 The proportion of Southmead nurses who might face significantly more difficult journeys to work is rather lower, perhaps 35%. Again, using the same assumptions as above this would mean that north Bristol and neighbouring areas of South Gloucestershire might “lose” around 350 residents currently occupying nursing jobs.
- 3.20 Around 45% of Southmead doctors live in the north inner zone. Some of these may be located in the hospital itself and would have to find alternative accommodation. Most would stay with the job but perhaps 15% might eventually move out of north Bristol.
- 3.21 Less than a third of scientific and technical staff and senior managers live in the north inner zone. Most of these would stay with the job but a proportion (perhaps (10%) might eventually move out of north Bristol.
- 3.22 If this scenario is reflected in reality, then north Bristol and neighbouring areas of south Gloucestershire might “lose” in total around 830 residents currently occupying hospital jobs. The vast majority of these would be lower-paid jobs or nursing jobs.
- 3.23 In terms of losing or gaining residents with hospital jobs, on these assumptions, the impact of a relocation of jobs to either site is much the same – what the east loses the north gains, and vice versa. Taking the catchment area as a whole, across Bristol and South Gloucestershire, it is likely that the total number of hospital jobs available to Bristol and South Gloucestershire residents will be similar whichever location is chosen.
- 3.24 However, there are reasons not to be indifferent to the location of hospital jobs within this area. It is arguable, in terms of regeneration priorities, that north Bristol and neighbouring areas of South Gloucestershire “needs” these jobs, and the local spending that comes with them, more than the eastern areas (see chapter 5). We can assume that the impact in terms of income broadly mirrors the impact in terms of jobs, subject to some variations due to the different wage levels of staff groups.
- 3.25 It is also possible to show that access to lower-paid jobs from areas of high socio-economic deprivation within Bristol city is easier if most of these jobs are located in the north rather than in the east of the city. We explore this in more detail in the next chapter.

Construction jobs

- 3.26 The assessment of the employment effects of the construction programme is based on converting the proposed capital spend into full-time-equivalent jobs. From similar capital programmes elsewhere we understand that the conversion factor of £850,000 capital spend per FTE job might be appropriate to this project. We understand that the proposed capital spend on the options is as follows:

Option 1 (Do minimum)	£153m
Option 2 (Southmead)	£295m
Option 3 (Frenchay)	£340m

3.27 On this basis, the number of construction jobs generated by each of the options would be in the order of:

Option 1 (Do minimum)	180 FTE's
Option 2 (Southmead)	347 FTE's
Option 3 (Frenchay)	400 FTE's

3.28 Option 3 would therefore create around 50 more construction jobs than Option 2, and more than twice as many as Option 1. However, this should not be seen as a crucial factor in the decision, as the capital works may be tendered for nationally and may not translate substantially to long-term jobs for the local workforce.

3.29 The number of these jobs going to local firms depends crucially on how procurement is managed. Under present procedures, recent evidence from hospital construction works elsewhere suggests that no more than 30% of construction jobs created might go to local firms, but this could change if there is a move to more local or regional procurement.

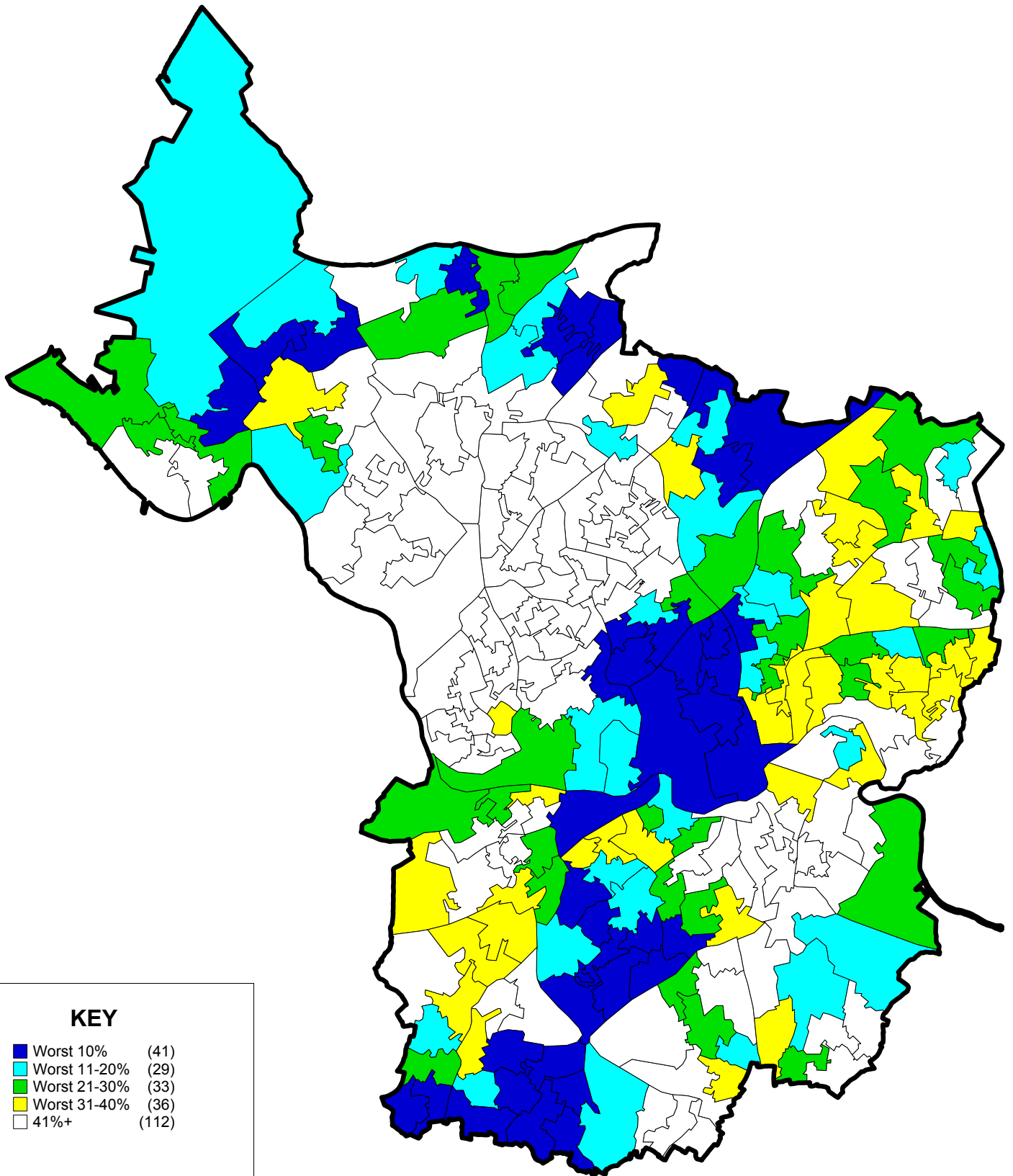
4 Social Impacts

Introduction

- 4.1 As in the previous report, the main issue addressed under social impacts is the access to lower-paid hospital jobs by people and communities who are relatively uncompetitive in the labour market and/or disadvantaged in other ways. To comment on this, we look first at the incidence of deprivation in Bristol, the extent to which relatively deprived communities may benefit now from access to such lower-paid and the extent to which this might change following any reconfiguration.
- 4.2 Data on relative deprivation is now available on a much more detailed basis (by “output areas” which are much smaller than wards). This has allowed us to undertake a finer-grain analysis of relative deprivation in Bristol and neighbouring areas, using IMD 2004. Most of the worst deprivation is within Bristol itself so the analysis focuses on that area, but the incidence of deprivation in neighbouring areas of South Gloucestershire has also been reviewed.

Relative deprivation in Bristol

- 4.3 Based on the combined index of deprivation, there are 41 output areas in the city of Bristol in the worst 10% in the country, a further 29 areas in the 11-20% decile, and a further 33 areas in the 21-30% decile (*see Map 3*). In terms of the distribution of deprivation, it is clear from the map that these areas are not randomly scattered across the city but there are definite concentrations. There is a swathe of high deprivation running north-south across the middle of the city from the wards of Lockleaze through Lawrence Hill and Windmill Hill to Filwood and Hartcliffe in south Bristol. Other pockets of high deprivation occur along the northern edge of the city, from Southmead through Henbury to Kingsweston and Avonmouth. On the east side of the city, there are smaller pockets of less severe deprivation mixed in with relatively well off areas and this pattern continues into Kingswood across the eastern border of Bristol and within South Gloucestershire. Much of this area lies within BS15 and BS16, and is in the residential catchment area of Frenchay hospital.
- 4.4 Conversely, there are clear concentrations of areas with very low deprivation. The most important of these lies to the north west of the city centre and includes all of the wards of Clifton, Clifton East, Cotham, Redland, Bishopston, Henleaze, Westbury on Trym and Stoke Bishop. It is a feature of Bristol (and most cities) that areas with very high scores are located cheek-by-jowl with areas that have very low scores.
- 4.5 The distribution of areas of high relative deprivation in terms of wards and postcodes is summarised in Figures 4.1 and 4.2. As the boundaries of output areas are constrained to fit within wards, it is relatively easy to characterise wards in terms of deprivation. There is a clear ranking (*Table 4.1*) but many wards are not homogenous. The exceptions are Lawrence Hill, Filwood, Southmead, and Lockleaze which are almost wholly areas of high deprivation.



KEY

■ Worst 10%	(41)
■ Worst 11-20%	(29)
■ Worst 21-30%	(33)
■ Worst 31-40%	(36)
□ 41%+	(112)

**Figure 4.1 Relative deprivation in Bristol by wards
(in rank order, highest first)**

Ward name	No. of output areas in:			
	Worst 10%	11-20%	21-30%	Other
Lawrence Hill	6	1	0	0
Filwood	6	2	0	0
Southmead	4	2	0	1
Hartcliffe	4	1	0	3
Lockleaze	3	2	1	1
Ashley	3	1	1	2
Whitchurch Park	3	1	0	3
Kingsweston	2	2	1	2
Bishopsworth	2	1	1	5
Easton	1	2	2	2
Windmill Hill	1	2	2	3
Avonmouth	1	1	3	2
Henbury	1	1	3	1
Cabot	1	1	1	3
Horfield	1	1	0	6
Southville	1	0	2	4
Knowle	1	0	2	4
Frome Vale	0	1	2	4
St George W	0	1	2	4
Hengrove	0	1	2	5
Hillfields	0	1	2	5
Stockwood	0	1	1	5
Eastville	0	1	1	5
Brislington E	0	1	1	6
Brislington W	0	1	0	7
St George E	0	0	1	7
Clifton E	0	0	0	6
Clifton W	0	0	0	7
Cotham	0	0	0	7
Redland	0	0	0	7
Bishopston	0	0	0	8
Henleaze	0	0	0	7
Westbury on Trym	0	0	0	7
Stoke Bishop	0	0	0	6

**Figure 4.2 Relative deprivation in Bristol by postcode
(in rank order, highest first)**

Postcode	No. of output areas in:			
	Worst 10%	11-20%	21-30%	Other*
BS13	9	3	1	7
BS4	7	5	4	16
BS2	6	0	1	1
BS10	5	3	3	2
BS5	4	4	5	15
BS7	4	2	0	15
BS11	3	1	3	2
BS3	2	1	5	12
BS1	1	2	1	0
BS6	1	1	0	17
BS16	0	2	4	11
BS14	0	2	3	13
BS9	0	1	1	18
BS8	0	0	1	16

*within Bristol city boundary

- 4.6 Because postcode areas are larger and do not correspond with ward boundaries, the fit with the output areas is less good and the characterisation of postcodes in terms of output area scores is only approximate (*Table 4.2*). Most postcode areas are heterogeneous and that makes it difficult to determine the extent to which, for example, lower-paid staff currently live in the more deprived areas.

Hospital employment and social inclusion

- 4.7 As more than 20% of lower-paid staff at Southmead live in BS10 (where the hospital is located), we can be confident that many of these will be local and from areas that are relatively deprived. Similarly, we can be confident that most of the lower paid staff at Southmead living in BS7 (around 15%) live in Horfield and Lockleaze rather than Bishopston. It is likely therefore that Southmead hospital is currently playing an important economic role in providing jobs and incomes to these deprived areas on the northern fringe of the city.
- 4.8 On the other hand, it is also clear that Southmead hospital is not playing an important role in providing jobs and incomes to the most deprived areas in the south of the city (BS3, BS4, and BS13). It is also worth noting that very few Southmead staff come from the area of highest deprivation in the city centre (BS2). There may be a number of factors at work here – including difficulties of access from south of the river by public transport and by car. That so few Southmead staff come from areas like Ashley and Lawrence Hill (BS2) which are relatively near is perhaps more surprising.
- 4.9 Almost half of the lower paid staff at Frenchay hospital live in two postcode areas, BS15 and BS16, one of which is within the Bristol city boundary, and the other in South Gloucestershire (the hospital itself is located in BS16). As noted above, these two postcode areas are not characterised as highly deprived. Less than 10% of all Frenchay staff (but 19% of ancillary staff) live in BS5 (Easton and St George) which does contain some areas of high deprivation. As with Southmead, very few Frenchay staff live south of the river or in central Bristol.
- 4.10 It would appear from this analysis that Frenchay hospital is currently less important than Southmead as a provider of jobs and incomes to the more deprived areas of the city.

Access to jobs from the most deprived areas

- 4.11 Shifting all or most hospital jobs to Southmead would provide more job opportunities to residents of north Bristol and neighbouring areas of south Gloucestershire. As noted above, this is likely to benefit the deprived wards along the northern fringe of the city (Southmead itself, Lockleaze, and to a lesser extent Horfield and Kingsweston). At the same time, deprived areas in east Bristol would lose job opportunities. The analysis of the current contribution of hospital jobs to combating deprivation (previous section) suggests that there would be likely to be a net gain from such a shift, in terms of access to jobs from the more deprived areas.

- 4.12 What is less clear is the extent to which such a shift in job opportunities would benefit other deprived areas of Bristol, in particular residents of the central zone who at least in theory ought to be able to access such jobs relatively easily (reverse commuting). At present this does not seem to be happening to any great extent and it would be interesting to find out why.
- 4.13 Shifting all or most hospital jobs to Frenchay would provide more job opportunities to residents of east Bristol and neighbouring areas of South Gloucestershire. As noted above, this is likely to provide some benefit to the deprived areas within Easton, Eastville, and Frome Vale wards but the deprivation there is not on the same scale as on the north Bristol fringe.
- 4.14 At the same time it would greatly disadvantage residents of north Bristol (and the substantial numbers of existing employees from the deprived wards on the northern fringe). Although it would be possible for such people to commute to Frenchay, the journey is quite awkward by car (because of the M32 corridor and the congestion points at intersections) and probably even worse by public transport. Dedicated (bus) transport could be provided by the hospital trust to overcome this difficulty, but at an additional cost.
- 4.15 The analysis of the current contribution of hospital jobs to combating deprivation (previous section) suggests that there would be likely to be a net loss from a shift of jobs to Frenchay, in terms of access to jobs from the more deprived areas.
- 4.16 In theory, increased job opportunities at Frenchay also ought to benefit residents of the most deprived parts of the east inner city (BS5 and BS2). At present, relatively few hospital staff come from these areas, although they are not that far from the hospital site and can be accessed relatively easily by public transport (again, reverse commuting). As with Southmead it would be interesting to find out why.
- 4.17 Overall, therefore, the evidence on social impact clearly favours relocation to Southmead rather than Frenchay. However, it should be noted that the two site do-minimal option is likely to provide the best access to jobs from a larger number of deprived areas.

5 Other impacts, and implications of the findings

Impact on the local area

- 5.1 Either development option involves substantial changes to the relevant sites. Both hospital sites are an integral part of the surrounding residential areas. The Southmead site is set in an area of relatively uniform semi-detached housing. The height, scale and mass of the current hospital buildings is such that they largely integrate satisfactorily with the surrounding residential areas.
- 5.2 Option 2 would substantially intensify the hospital use of the site (and hence the scale of buildings and the intensity of activity) and may have a negative impact on the surrounding communities. The extent of these impacts is a matter of scale and degree. Furthermore, endeavours to accommodate access may run counter to improvements that are being sought in adjacent residential areas that are designed to cut down “rat running” and other negative impacts of traffic congestion already experienced in the area.
- 5.3 Option 3 would substantially intensify the hospital use of the Frenchay site which is likewise embedded in a residential area, although one of rather different character (larger houses, more open space). In some ways it might be easier to minimise any adverse impacts of more intensive use of the hospital site in this area. Local residents however are likely to be more vocal in their opposition to perceived increases in traffic and congestion, possible fears of crime and so on.
- 5.4 On this criteria there is no presumption that either site is better – the impacts will be significant and have to be managed in either case.

Impact on urban regeneration

- 5.5 There is a strong policy presumption for cities in the UK to pursue approaches that are likely to enhance the quality of urban living and promote investment in those facilities which will contribute to a properly functioning city that people want to live and work in. Trends in health care (reflected in these options) already include a move to the provision of more local services which will help to deliver more sustainable patterns of living and reduce the need to make journeys (especially by car).
- 5.6 Hospital services for the whole of north Bristol and South Gloucestershire therefore need to be accessible by public transport. Since many visits are made during off-peak hours this helps to create the right operating circumstances for cost-effective public transport. Current public transport provision is relatively poor at both hospital sites (particularly for east-west journeys) but could probably be enhanced more easily at Southmead than Frenchay (others to comment).
- 5.7 Major investment in new hospital facilities can play its part in the overall economic and social regeneration of the surrounding area. Southmead is part of the “Northern Arc” of Bristol which has just seen the completion of £5m regeneration project focussed on training, employment and economic regeneration, environmental improvements, improvements to the housing stock, community safety, health and community empowerment.

- 5.8 It is likely that the benefits from hospital expansion in terms of area regeneration will be more substantial and more needed in the area around Southmead than around Frenchay and on these grounds there should be a presumption in favour of Southmead. This parallels the view that the area around Frenchay is essentially a fairly well-off residential area with relatively high property values whereas the area around Southmead is not.

Summary of impacts

- 5.9 The main finding is that relocating all or most hospital jobs to Southmead rather than Frenchay is likely to bring more benefit in terms of contribution to economic regeneration and in terms of access to hospital jobs by residents of more deprived areas. While this is a clear preference, it does of course have to be weighed against other factors in the decision-making process. It is not definitive by itself.
- 5.10 This is illustrated by the fact that the do-minimal option is likely to perform best of all against the criteria of access to hospital jobs by residents of more deprived areas, because it keeps two sites going, both of which have different catchments that include some areas of deprivation.
- 5.11 The do-minimal option also has substantial risks attached to it. It is often assumed that this option has no significant economic, social, and environmental impacts as it represents a no-change option. While this may be broadly true at least in the short term it is worth pointing out that if the do-minimal option results in sub-standard or high cost NHS Trust hospital provision then in the long term jobs will be in danger of being lost as patients transfer to other facilities, possibly in the private sector, possibly outside Bristol.
- 5.12 In addition, there would be fewer construction jobs created and the potential for hospital re-development being able to support area and community regeneration would also be lost.
- 5.13 Our overall conclusion, on the balance of the impacts considered in this report, is therefore that the best option may be relocation to the Southmead site.

Annex 1

Detailed distribution of staff from Frenchay by place of residence

Annexe 1: Detailed distribution of staff from Frenchay by place of residence

Numbers:

CODES	A & C	Ancillary	HCA	M & D	Maint	Nurses	P & T Supp	Sci, P&T Qual	Sen Man	Total
BS1	0	1	0	1	0	1	0	2	0	5
BS2	1	3	1	2	0	7	0	2	0	15
Total Central	1	4	1	3	0	7	0	4	0	21
BS3	2	0	3	2	0	7	1	4	3	21
BS4	3	2	5	0	0	22	1	1	1	36
BS13	1	1	1	0	0	2	0	0	0	5
BS14	4	0	1	0	0	7	1	5	0	17
Total South Inner	9	3	11	2	0	38	3	9	4	80
BS18	1	0	0	0	0	0	0	3	0	4
BS31	2	0	0	1	0	3	0	5	1	12
BS39	0	0	0	1	0	1	0	0	0	1
Total South Outer	3	0	0	2	0	3	0	8	1	18
BS5	20	37	42	0	2	82	10	12	3	209
BS15	62	34	58	0	4	72	14	20	7	270
Total East Inner	82	71	101	0	6	154	23	32	10	479
BS16	132	77	110	43	6	229	36	77	33	742
BS17	31	6	16	0	1	37	6	11	2	109
BS30	16	5	10	4	1	16	8	7	2	69
BS36	18	7	16	4	0	21	2	8	3	78
BS37	31	6	45	3	1	39	9	11	0	145
Total East Outer	228	100	197	54	9	341	60	113	40	1,143
BS6	5	0	4	37	1	16	1	20	5	87
BS7	11	5	11	7	1	23	2	17	1	78
BS9	4	0	2	21	0	7	0	11	6	51
BS10	8	2	4	1	0	17	2	1	1	37
BS11	2	4	5	1	0	3	0	1	0	14
Total North Inner	29	11	25	67	2	65	5	49	12	266
BS12	9	1	6	4	1	18	1	9	6	55
BS32	11	1	3	7	0	32	1	14	2	72
BS34	18	3	13	2	2	27	6	10	3	85
BS35	4	3	4	8	0	11	1	3	0	34
Total North Outer	42	7	26	21	3	88	10	37	11	245
BS8	3	0	0	33	0	12	1	14	3	65
BS20	4	0	1	0	0	8	1	3	5	21
BS41	0	0	0	2	0	1	0	1	0	4
Total West Inner	6	0	1	35	0	21	2	17	8	90
BS21	2	0	0	0	0	2	1	3	2	11
BS40	0	0	0	2	0	4	0	1	1	7
BS48	0	0	0	2	0	5	2	4	2	15
BS49	0	0	0	1	0	1	0	0	1	3
Total West Outer	2	0	0	5	0	12	3	7	6	36
Total Bristol zones	402	196	363	188	20	731	107	278	93	2,377
BS19,22-29 (Weston)	2	0	1	0	0	15	0	4	0	22
Bath	1	0	1	12	0	14	0	9	3	39
Somerset	0	0	0	0	0	4	0	0	1	5
Gloucestershire*	8	1	11	14	1	44	2	15	5	99
Other	5	1	4	38	0	30	4	21	9	112
Total outside Bristol	16	2	17	63	1	107	6	49	17	279
Grand Total	418	198	380	251	21	838	113	326	110	2,656

*parts of South Gloucestershire are included in the north outer and east outer zones

Annexe 1: Detailed distribution of staff from Frenchay by place of residence

Percentages

CODES	A & C	Ancillary	HCA	M & D	Maint	Nurses	P & T Supp	Sci, P&T Qual	Sen Man	Total
BS1	0.0	0.5	0.0	0.4	0.0	0.1	0.0	0.6	0.4	0.2
BS2	0.1	1.6	0.3	0.8	0.0	0.8	0.0	0.6	0.0	0.6
Total Central	0.1	2.1	0.3	1.2	0.0	0.9	0.0	1.2	0.4	0.8
BS3	0.4	0.0	0.9	0.8	0.0	0.9	0.4	1.1	2.7	0.8
BS4	0.7	0.8	1.4	0.0	0.0	2.7	1.3	0.4	0.9	1.4
BS13	0.2	0.6	0.3	0.0	0.0	0.2	0.0	0.0	0.0	0.2
BS14	0.9	0.0	0.3	0.1	0.0	0.8	0.9	1.4	0.0	0.6
Total South Inner	2.2	1.4	2.9	0.9	0.0	4.6	2.6	2.9	3.6	3.0
BS18	0.2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.2
BS31	0.5	0.0	0.0	0.5	0.0	0.4	0.0	1.4	0.9	0.5
BS39	0.0	0.0	0.0	0.4	0.0	0.1	0.0	0.0	0.0	0.1
Total South Outer	0.7	0.0	0.0	0.9	0.0	0.4	0.0	2.5	0.9	0.7
BS5	4.8	18.9	11.2	0.0	9.5	9.8	8.8	3.7	3.1	7.9
BS15	14.8	17.0	15.3	0.0	19.0	8.5	12.0	6.1	6.4	10.2
Total East Inner	19.6	35.8	26.5	0.0	28.6	18.3	20.8	9.8	9.4	18.0
BS16	31.5	38.9	28.8	17.2	28.6	27.4	31.8	23.4	29.9	28.0
BS17	7.3	2.9	4.1	0.1	4.8	4.4	5.4	3.4	1.8	4.1
BS30	3.9	2.6	2.6	1.6	4.8	1.9	6.7	2.2	2.2	2.6
BS36	4.3	3.4	4.3	1.6	0.0	2.5	1.8	2.4	2.4	3.0
BS37	7.5	3.0	11.9	1.1	4.8	4.6	7.7	3.4	0.0	5.4
Total East Outer	54.6	50.8	51.8	21.4	42.9	40.8	53.3	34.8	36.3	43.1
BS6	1.1	0.0	1.0	14.5	4.8	1.9	0.9	6.2	4.1	3.3
BS7	2.6	2.5	2.8	2.8	4.8	2.7	2.1	5.2	0.8	2.9
BS9	1.1	0.0	0.6	8.5	0.0	0.8	0.0	3.2	5.3	1.9
BS10	1.9	1.2	1.1	0.4	0.0	2.1	1.8	0.2	1.2	1.4
BS11	0.4	1.8	1.2	0.2	0.0	0.3	0.0	0.3	0.0	0.5
Total North Inner	7.0	5.5	6.7	26.5	9.5	7.7	4.7	15.1	11.3	10.0
BS12	2.2	0.3	1.6	1.5	4.8	2.2	1.1	2.9	5.4	2.1
BS32	2.7	0.3	0.9	2.8	0.0	3.8	1.2	4.3	1.8	2.7
BS34	4.3	1.5	3.4	0.8	9.5	3.2	5.7	3.0	2.7	3.2
BS35	0.9	1.3	1.0	3.1	0.0	1.3	0.9	1.1	0.0	1.3
Total North Outer	10.1	3.3	7.0	8.2	14.3	10.5	8.9	11.3	10.0	9.2
BS8	0.6	0.0	0.0	13.0	0.0	1.4	0.9	4.2	2.7	2.4
BS20	0.8	0.0	0.3	0.0	0.0	1.0	0.9	0.8	4.2	0.8
BS41	0.0	0.0	0.0	0.8	0.0	0.1	0.0	0.3	0.0	0.1
Total West Inner	1.4	0.0	0.3	13.8	0.0	2.5	1.8	5.3	6.9	3.4
BS21	0.5	0.0	0.1	0.0	0.0	0.3	0.9	0.9	1.8	0.4
BS40	0.0	0.0	0.0	0.8	0.0	0.5	0.0	0.2	0.9	0.3
BS48	0.0	0.0	0.0	0.9	0.0	0.6	1.8	1.2	1.6	0.6
BS49	0.0	0.0	0.0	0.4	0.0	0.1	0.0	0.0	0.9	0.1
Total West Outer	0.5	0.0	0.1	2.0	0.0	1.5	2.7	2.3	5.3	1.3
Total Bristol zones	96.2	99.0	95.5	74.9	95.2	87.2	94.8	85.1	84.2	89.5
BS19,22-29 (Weston)	0.5	0.0	0.3	0.0	0.0	1.8	0.0	1.3	0.0	0.8
Bath	0.2	0.0	0.3	4.6	0.0	1.7	0.0	2.8	2.6	1.5
Somerset	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.9	0.2
Gloucestershire*	1.8	0.5	3.0	5.4	4.8	5.2	1.6	4.5	4.2	3.7
Other	1.3	0.5	1.0	15.0	0.0	3.6	3.6	6.4	8.2	4.2
Total outside Bristol	3.8	1.0	4.5	25.1	4.8	12.8	5.2	14.9	15.8	10.5

*parts of South Gloucestershire are included in the north outer and east outer zones

Annex 2

Detailed distribution of staff from Southmead by place of residence

Annexe 2: Detailed distribution of staff from Southmead by place of residence

Numbers:

CODES	A & C	Ancillary	HCA	M & D	Maint	Nurses	P&T Supp	Sci, P&T Qual	Sen Man	Total
BS1	0.9	2.4	1.0	5.0	0.0	1.0	1.0	7.0	0.0	18.3
BS2	1.0	3.1	6.2	5.1	0.0	5.6	0.0	2.0	1.0	24.0
Total Central	1.9	5.5	7.2	10.1	0.0	6.6	1.0	9.0	1.0	42.3
BS3	0.9	1.8	5.7	2.0	2.0	21.7	2.7	7.0	4.0	47.8
BS4	2.0	4.8	7.6	4.6	2.0	14.4	2.9	7.4	5.0	50.6
BS13	2.0	2.8	6.3	0.0	1.0	7.9	0.8	4.0	0.0	24.7
BS14	3.7	0.0	3.0	0.0	1.0	12.7	1.2	7.4	0.0	29.0
Total South Inner	8.5	9.4	22.5	6.6	6.0	56.6	7.5	25.9	9.0	152.1
BS18	1.2	2.8	0.0	0.9	0.0	6.4	0.8	1.6	0.9	14.6
BS31	1.5	0.5	1.5	0.0	0.0	4.2	0.5	1.2	1.6	11.1
BS39	0.0	0.0	0.0	1.0	0.0	1.4	0.0	1.6	0.0	4.0
Total South Outer	2.8	3.3	1.5	1.9	0.0	12.0	1.3	4.4	2.5	29.6
BS5	6.0	11.6	17.1	0.0	1.0	34.7	6.0	14.5	5.0	95.8
BS15	10.9	8.4	15.0	1.9	2.0	24.8	12.3	16.9	5.2	97.3
Total East Inner	16.9	20.0	32.1	1.9	3.0	59.4	18.3	31.4	10.2	193.1
BS16	25.0	5.5	18.8	13.6	2.4	75.7	7.9	44.2	10.0	203.3
BS17	10.8	1.4	2.1	2.0	4.0	5.6	2.0	9.9	0.8	38.5
BS30	3.6	1.3	9.4	0.0	0.0	14.2	1.4	8.0	4.8	42.8
BS36	10.7	2.1	6.2	0.0	0.0	15.2	2.4	7.3	2.3	46.2
BS37	9.5	0.0	12.9	0.9	0.0	16.1	2.6	12.0	1.0	54.8
Total East Outer	59.6	10.3	49.4	16.5	6.4	126.8	16.3	81.3	19.0	385.5
BS6	12.8	2.7	7.3	38.1	0.0	35.6	2.7	44.4	5.8	149.4
BS7	66.8	54.3	51.7	10.9	1.0	115.0	24.0	45.8	9.3	378.7
BS9	32.4	9.5	8.1	47.8	1.0	44.2	3.6	44.1	7.7	198.4
BS10	80.9	91.2	61.6	34.0	4.0	134.1	28.6	30.6	4.0	469.0
BS11	10.1	6.0	14.5	1.0	2.0	17.2	4.4	7.0	0.0	62.2
Total North Inner	203.0	163.7	143.1	131.8	8.0	346.2	63.2	171.8	26.9	1257.7
BS12	46.2	9.6	22.8	2.1	4.0	38.3	5.4	17.2	4.6	150.2
BS32	19.0	3.4	12.4	9.6	0.4	47.8	5.5	19.1	2.2	119.2
BS34	35.9	16.5	28.4	1.0	2.0	37.4	6.6	16.4	3.0	147.2
BS35	20.0	4.6	16.6	3.5	0.0	23.6	5.0	11.0	0.0	84.2
Total North Outer	121.0	34.2	80.2	16.1	6.4	147.1	22.4	63.6	9.7	500.8
BS8	3.8	0.0	1.0	35.3	0.0	12.3	2.0	14.8	3.0	72.2
BS20	8.4	1.0	10.5	8.1	4.0	36.4	5.3	12.2	1.7	87.6
BS41	1.6	0.0	1.4	0.0	0.0	1.9	0.0	2.0	0.0	6.9
Total West Inner	13.8	1.0	12.9	43.4	4.0	50.5	7.3	29.0	4.7	166.7
BS21	3.8	0.0	10.6	0.2	0.0	15.6	1.4	8.2	0.0	39.8
BS40	0.0	0.0	1.0	3.6	0.0	2.2	0.0	3.2	0.5	10.5
BS48	1.0	1.0	3.2	3.8	0.0	9.4	0.0	4.4	1.0	23.8
BS49	0.8	0.0	0.6	0.7	0.0	5.5	0.7	1.9	2.6	12.8
Total West Outer	5.6	1.0	15.4	8.3	0.0	32.7	2.1	17.7	4.1	86.8
Total Bristol zones	433.0	248.3	364.3	236.7	33.9	838.0	139.4	434.1	87.1	2814.7
BS19,22-29 (Weston)	4.3	1.6	1.3	3.1	0.0	23.4	0.0	11.9	2.9	48.5
Bath	3.5	0.0	0.0	7.9	0.0	9.5	0.0	12.1	2.0	35.0
Somerset	1.8	0.0	0.0	1.1	0.0	3.0	0.0	1.5	3.0	10.4
Gloucestershire*	13.2	0.0	3.9	8.6	0.6	29.0	1.7	26.2	7.4	90.6
Other	9.0	0.0	2.9	33.4	0.0	29.0	1.0	26.3	7.7	109.4
Total outside Bristol	31.7	1.6	8.2	54.1	0.6	93.8	2.7	78.1	23.0	293.7
Grand Total	464.7	249.9	372.5	290.7	34.5	931.8	142.0	512.2	110.1	3108.4

*parts of South Gloucestershire are included in the north outer and east outer zones

Annexe 2: Detailed distribution of staff from Southmead by place of residence

PERCENTAGES

CODES	A & C	Ancillary	HCA	M & D	Maint	Nurses	P & T Supp	Sci, P&T Qual	Sen Man	Total
BS1	0.2	1.0	0.3	1.7	0.0	0.1	0.7	1.4	0.0	0.6
BS2	0.2	1.2	1.7	1.8	0.0	0.6	0.0	0.4	0.9	0.8
Total Central	0.4	2.2	1.9	3.5	0.0	0.7	0.7	1.8	0.9	1.4
BS3	0.2	0.7	1.5	0.7	5.8	2.3	1.9	1.4	3.6	1.5
BS4	0.4	1.9	2.0	1.6	5.8	1.5	2.0	1.4	4.5	1.6
BS13	0.4	1.1	1.7	0.0	2.9	0.8	0.5	0.8	0.0	0.8
BS14	0.8	0.0	0.8	0.0	2.9	1.4	0.8	1.5	0.0	0.9
Total South Inner	1.8	3.8	6.0	2.3	17.4	6.1	5.3	5.1	8.2	4.9
BS18	0.3	1.1	0.0	0.3	0.0	0.7	0.5	0.3	0.8	0.5
BS31	0.3	0.2	0.4	0.0	0.0	0.5	0.4	0.2	1.5	0.4
BS39	0.0	0.0	0.0	0.3	0.0	0.2	0.0	0.3	0.0	0.1
Total South Outer	0.6	1.3	0.4	0.7	0.0	1.3	0.9	0.9	2.3	1.0
BS5	1.3	4.6	4.6	0.0	2.9	3.7	4.2	2.8	4.5	3.1
BS15	2.3	3.4	4.0	0.6	5.8	2.7	8.7	3.3	4.8	3.1
Total East Inner	3.6	8.0	8.6	0.6	8.7	6.4	12.9	6.1	9.3	6.2
BS16	5.4	2.2	5.1	4.7	7.0	8.1	5.6	8.6	9.1	6.5
BS17	2.3	0.5	0.6	0.7	11.6	0.6	1.4	1.9	0.7	1.2
BS30	0.8	0.5	2.5	0.0	0.0	1.5	1.0	1.6	4.4	1.4
BS36	2.3	0.8	1.7	0.0	0.0	1.6	1.7	1.4	2.1	1.5
BS37	2.0	0.0	3.5	0.3	0.0	1.7	1.8	2.3	0.9	1.8
Total East Outer	12.8	4.1	13.3	5.7	18.6	13.6	11.4	15.9	17.2	12.4
BS6	2.7	1.1	2.0	13.1	0.0	3.8	1.9	8.7	5.3	4.8
BS7	14.4	21.7	13.9	3.7	2.9	12.3	16.9	8.9	8.4	12.2
BS9	7.0	3.8	2.2	16.5	2.9	4.7	2.5	8.6	7.0	6.4
BS10	17.4	36.5	16.5	11.7	11.6	14.4	20.1	6.0	3.6	15.1
BS11	2.2	2.4	3.9	0.3	5.8	1.8	3.1	1.4	0.0	2.0
Total North Inner	43.7	65.5	38.4	45.4	23.2	37.2	44.5	33.6	24.4	40.5
BS12	9.9	3.9	6.1	0.7	11.6	4.1	3.8	3.4	4.2	4.8
BS32	4.1	1.4	3.3	3.3	1.2	5.1	3.8	3.7	2.0	3.8
BS34	7.7	6.6	7.6	0.3	5.8	4.0	4.6	3.2	2.7	4.7
BS35	4.3	1.8	4.5	1.2	0.0	2.5	3.5	2.2	0.0	2.7
Total North Outer	26.0	13.7	21.5	5.5	18.6	15.8	15.8	12.4	8.8	16.1
BS8	0.8	0.0	0.3	12.2	0.0	1.3	1.4	2.9	2.7	2.3
BS20	1.8	0.4	2.8	2.8	11.6	3.9	3.7	2.4	1.5	2.8
BS41	0.3	0.0	0.4	0.0	0.0	0.2	0.0	0.4	0.0	0.2
Total West Inner	3.0	0.4	3.5	14.9	11.6	5.4	5.1	5.7	4.3	5.4
BS21	0.8	0.0	2.8	0.1	0.0	1.7	1.0	1.6	0.0	1.3
BS40	0.0	0.0	0.3	1.2	0.0	0.2	0.0	0.6	0.5	0.3
BS48	0.2	0.4	0.9	1.3	0.0	1.0	0.0	0.9	0.9	0.8
BS49	0.2	0.0	0.2	0.2	0.0	0.6	0.5	0.4	2.4	0.4
Total West Outer	1.2	0.4	4.1	2.8	0.0	3.5	1.5	3.5	3.7	2.8
Total Bristol zones	93.2	99.3	97.8	81.4	98.1	89.9	98.1	84.8	79.1	90.6
BS19,22-29 (Weston)	0.9	0.7	0.3	1.0	0.0	2.5	0.0	2.3	2.7	1.6
Bath	0.8	0.0	0.0	2.7	0.0	1.0	0.0	2.4	1.8	1.1
Somerset	0.4	0.0	0.0	0.4	0.0	0.3	0.0	0.3	2.7	0.3
Gloucestershire*	2.8	0.0	1.1	3.0	1.9	3.1	1.2	5.1	6.7	2.9
Other	1.9	0.0	0.8	11.5	0.0	3.1	0.7	5.1	7.0	3.5
Total outside Bristol	6.8	0.7	2.2	18.6	1.9	10.1	1.9	15.2	20.9	9.4

*parts of South Gloucestershire are included in the north outer and east outer zones

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