Appendix 1

Membership of Project Board

Professor J Finch	Vice Chancellor, University of Keele
Professor R Griffiths To 30/6/04	West Midlands Regional Director of Public Health
Dr Rashmi Shukla From 30/6/04	West Midlands Regional Director of Public Health
Professor. Bernard Crump	Chief Executive, Staffordshire and Shropshire Strategic Health Authority
Mr Mike Brereton	Chair Shropshire Strategic Health Authority
Mr Peter Johnson	Director, North Staffordshire Partnership
Dr Ita O'Donovan	Council Manager & Chief Executive Stoke on Trent City Council
Professor Christine King	Vice Chancellor Staffordshire University
Mr David Crowley	Chief Executive University Hospital of North Staffordshire NHS Trust

Appendix 2

Membership of Working Group

Sue Baddeley	University Hospital of North Staffordshire NHS Trust
Claire Burton	North Staffordshire Health Promotion Dept.
Professor Tom Cochrane	Staffordshire University
Ros Gallagher	University of Keele
Keith Graham	Stoke on Trent City Council
Olaf Horstick To 31/12/03	West Midlands Public Health Director,
Mr Peter Johnson	North Staffordshire Partnership
John Kemm	Government Office of West Midlands
Chris Knighting	University of Keele
Austin Knott	Stoke-on Trent City Council
Sue Laverty	Health Services Management Centre
Paulette Myers	CPHM, Shropshire and Staffordshire SHA
Deborah Richardson To 31/12/03	HIA Co-ordinator North Staffordshire Health Promotion
Lesley Smart To 31/03/04	University Hospital of North Staffordshire NHS Trust

Help was also received from the North Staffordshire Learning and Skills Council.

Appendix 3

Keele University Medical School

Where has the Medical School come from and what has it become?

Keele University's School of Medicine builds upon the existing School of Postgraduate Medicine, which was established in 1978. Undergraduate Medicine was first taught at Keele in 2000 as part of a close partnership with the University of Manchester. The first cohort of 50 medical students commenced their pre-clinical studies in the 2000/01 academic year. In response to the NHS Plan released in 2000, Keele and Manchester submitted a second, successful bid to train an additional 80 medical students per year.

Since the launch of 2000's NHS Plan, the UK Government has sought to create additional capacity within the Health Service, aiming to train an additional 1,000 doctors annually and to employ a further 7,500 consultants, 2,000 GP's, 20,000 nurses and 6,500 therapists by 2005[a]. The Department of Health released their document entitled "Medical Schools: Delivering the Doctors of the Future", in which the case was set out for radical revisions in how trainee doctors should be instructed from an early stage in their course.

As a direct result of the above initiative, Keele's School of Medicine was created in 2001 to teach 130 new doctors per year in the first instance. At that time, Keele became the most recent in a series of University Medical schools and Centres of Medical Education in the UK. The Faculty of Health at Keele University teaches students in several professional areas including Nursing & Midwifery, Physiotherapy, Medicines Management, Medicine and Pharmacy.

In partnership with the NHS Trust and the Department of Health, Keele has embarked upon a £30.6m, four-year schedule of building work, resulting in a

[a] "The NHS Plan; A Plan for Investment, A Plan for Reform" © Crown Copyright 2000

remarkable, three-phase, split-site Medical School complex which is due to be completed at the end of 2004.

Phase 1 of the Undergraduate Medical School (UGMS1) was completed in 2001. It stands on the City General Hospital site and provides modern, integrated and functional facilities that are embedded within the clinical areas of the hospital complex. It contains a lecture theatre, seminar rooms, library and clinical skills labs as well as general working space for staff and students. 25 jobs were created in the process, rising to 42 by 2006, by which time 150 students per year will be taught in this facility.

Phase 2 of Keele's Undergraduate Medical School (UGMS2) was unveiled on the main university campus in September 2003 in time to welcome Keele's first pre-clinical medical students. Located on a signature site bordering the main campus and the University Science & Business Park, UGMS2 houses both the School of Medicine and the Centre for Primary Care Sciences (recently renamed the Institute for Primary Care and Health Sciences). It is a purpose-built facility that has all one would expect from a modern Medical School, including an anatomy suite, a 250+ seat lecture theatre, multi-user scientific laboratories and extensive IT laboratory space. 20 staff posts were created in 2003, expected to rise to 36 by 2006, by which time over 200 undergraduate students will pass through this facility each year.

Phase 3 of the Undergraduate Medical School (UGMS3), located on the City General Hospital Site, forms the final piece of Keele's Medical School and will be ready for occupation by late 2004. UGMS3 will be a combined centre for Undergraduate Medicine, Nursing & Midwifery and elements of Postgraduate Medical education. It will also house a medical library that will be unsurpassed in the West Midlands. Combined NHS and University clinical laboratories will ensure maximum integration between students and health service practitioners and foster a multi-disciplinary approach to learning. UGMS3 is due to open to 55 Year 3 medical students and 750 nursing students in the 2005/06 academic year. The entire Medical School will create up to 150 jobs by the end of the decade.

Phases 1 and 3 of Keele's School of Medicine are collectively entitled the Clinical Education Centre (CEC). The CEC will sit at the heart of a new, £300m NHS redevelopment project entitled "Fit for the Future" (FftF). This project is centred upon the complete regeneration of the City General Hospital site. This development will combine all health facilities in North Staffordshire and will ensure that teaching, training, research and service delivery will be delivered on a single site. The University Hospital of North Staffordshire NHS Trust was created in 2003 to manage the delivery of health secondary services to North Staffordshire.

The benefits resulting from the physical investments made in the health sector, as detailed above, are wide ranging and aim to support economic and social growth in the local area through the following means;

- Train more Healthcare staff in order to respond to Workforce Development Corporation (WDC, monitor and manage growth within the Healthcare sector) and NHS needs
- Encourage commercial R&D collaboration and "Spin Out" businesses between the University and the NHS
- Create more jobs as a result of the above collaborations and encourage investment and regeneration

Training

The Medical School aims to stimulate job creation in the region by training more people over the next 6 years who will hopefully be attracted to an expanding, local job market. Current plans suggest an increase in medical student numbers from 155 in 2003/04 to 610 in 2009/10, representing a rate of growth of almost 400%. The intake of Physiotherapy students remains steady at around 90-100 full time and part time students per academic year. The School of Nursing & Midwifery expects to recruit 263 degree and diploma students in September 2004/January 2005, representing a 19% increase from

the previous year, which might well be expected to continue. In establishing a range of more specialised areas of study, such as Primary Care & Health, Medicines Management and Medical Ethics, the wider areas of the Health faculty (of which the above are part of) hope to attract a burgeoning group of experts conducting in-depth, post-doctoral and professional research and training.

Recent data indicates a 1.6% overall rise within the county's Healthcare sector by 2006, compared with the anticipated 1.5% rise across the West Midlands. This equates to the creation of over 700 new jobs [b] and will see Healthcare becoming the third largest employer in Staffordshire. Keele's Medical School will make a significant contribution to job creation and inward investment in an effort to support a sustainable Healthcare marketplace. Today, some 60% of Keele's medical students take up their first professional duties in North Staffordshire[c]; up to 80% of Physiotherapy placements in North Staffordshire are filled by a Keele graduate[d]; over 80% of Nursing & Midwifery students are recruited locally and will stay in North Staffordshire to work after graduating[e].

Commercial growth through R&D

In 2002/2003, the NHS spent a total of £1.76M on R&D activities and earned a total of £5.25M of income, delivered through a total of 255 projects in the sub-region.[f] Informal reports from the R&D Consortium indicates that growth in this area of activity is almost certain, although at the time of writing, the 2003/2004 report was unavailable to verify this. The Medical School contributes to the commercial expansion of the NHS through efforts such as applied research projects and partnerships, releasing Intellectual Property,

[b] Source: North Staffordshire Health Impact Assessment Interim Report, March 2004

[c] Source: Keele University Medical School student destination records, April 2004

[d] Source: Keele University Dept of Physiotherapy student destination records/NHS Trust records, April 2004

[e] Source: Keele University Department of Nursing & Midwifery student destination records, April 2004

[f] Source: North Staffordshire Research & Development Consortium Annual Report 2002/2003

issuing licenses and supporting commercial partnerships and business “spin-out” activity.

It is hoped that collaboration between the University and the NHS will trigger significant growth in the med-tech sector that is earmarked for priority investment by the Regional Development Agency in the West Midlands. Such collaborations are also essential in attracting health related companies to the sub-region. Such companies are attracted to areas with Medical Schools and modern hospitals by the opportunities to engage with them and to create partnership agreements in order to exploit commercial opportunities, attract sponsorship and win research grants. All parties benefit from these partnerships through strength of collective resources and the ability to reach wider markets in which to promote and sell their product or idea.

By developing a coordinated approach with its commercial and industrial partners, staff at the Medical School can give business a very good reason to stay in the sub-region by providing a route to continued and profitable Research & Development programmes and by releasing Intellectual Property (IP) into the marketplace. IP relates to Copyright and Trademarks. These can be registered and marketed to companies in the form of business propositions that carry positive development opportunities and/or products within them. The Medical School at Keele already possesses some innovative, cutting edge IP and is expected to register further partnership interests with NHS contacts. More companies and jobs will be created around such activity, leading to economic growth, greater employment in the sub-region and reinforcing Keele’s reputation in a range of Health-related disciplines.

Inward Investment

Inward investment is crucial to the prosperity of North Staffordshire because it helps to bring new money and businesses into an area where growth may be depressed. Businesses from around the globe have been made aware of the dramatic growth within the Healthcare and Medical Technologies sectors within North Staffordshire. Much of the sub-regions abilities in these areas are

due to the presence of the Medical School and the latent resources and research facilities that it can offer. Inward investment can also bring a crucial injection of “outside talent” in order to combat regional or local “brain drain”, especially in areas where the various parts of the Medical School cannot satisfy local job demands.

Business Growth

As well as attracting business from outside of the region, businesses are formed every day by local entrepreneurs, some of whom are staff at both the Medical School and the NHS Trust. Many of these staff want to develop their own ideas and create their own businesses around their research. The University and the Medical School supports such activity and actively encourage staff to “spin out” from their academic centers wherever economically viable to do so. This creates commercial success for those involved in establishing such businesses, creates new jobs and training opportunities, supports the growth of “clusters” of related businesses and can attract new blood from outside of the area. It also brings prestige to the Medical School, which in turn attracts more interest in it and what it can offer to commercial markets. In the future, more of these University “spin outs” will emerge from collaborative research projects with Hospital staff and Medical school departments.

Economic & Social Regeneration

It is generally agreed that the core ingredients of education, commerce and employment represent a solid foundation on which to build a prosperous society is. Such a foundation must be supported by integrated transport and communication networks, thriving retail sectors and a feeling of pride within the local citizen base. Positive factors such as good quality housing, low costs of living, high quality workforces, good educational facilities, high rates of business start up and sustainable markets have proven essential in order to substantiate social and economic regeneration. The activities of the university as a whole and of the Medical School in particular play a significant part in this

process. As with many other areas of the University, the Medical School endeavours to cultivate strong links with the NHS, industrial partners, public funding bodies, private businesses and local communities who can gain mutual benefit from the development and delivery of strategic initiatives surrounding Healthcare and Medicine. This ranges from managing multi-million pound contracts to hosting a group of Year 12 students considering a career in Medicine.

Science Park links

All of the above activity needs specialised premises to conduct research and business activities. Keele University Science & Business Park is highly instrumental to achieving this in North Staffordshire. Details are referred to in Section 19 of this report and will not be duplicated here.

Appendix 4

Further information on learning and skills

Table A4.1

Employment growth in the healthcare* sector

(average annual average growth, %, total employment)

	UK	West Midlands	Staffordshire
Healthcare*			
1993-1998	1.1	1.2	3.4
1998-2003	1.8	2.6	0.7
2003-2008	1.9	1.5	1.6
Whole economy			
1993-1998	0.9	0.9	1.0
1998-2003	0.8	0.3	-0.3
2003-2008	0.6	0.1	0.1

* SIC 85 Human health activities-hospital, medical, dental and other

Source: Experian Business Strategies, May 2003; based on data from National Statistics

Table A4.2

Characteristics of Healthcare Workforce

	Healthcare*		Whole economy	
	UK	West Midlands	UK	West Midlands
Gender				
Male	26	21	55	55
Female	74	79	45	45
Age				
16-19	2	1	5	5
20-24	5	6	9	9
25-34	22	21	23	22
35-44	31	32	27	27
45-64	38	39	34	35
65+	2	1	2	2
Job Type				
Full time	65	64	75	75
Part time	35	36	25	25
Disability				
Disability	12	15	12	14
No Disability	88	85	87	86
Ethnic Origin				
White	92	85	94	92
Asian	4	8	3	5
Black	3	4	2	2
Mixed/Other	2	3	2	1
Total**	2,128,110	173,430	28,494,660	2,479,750

* SIC 85 ** All persons in employment other than college based schemes

Source: Labour Force Survey, Winter 2002/3

Table A4.3

Coverage of training in Health care and Child and adult care sectors

Percentage of workforce who have received job related training or education in the last 13 weeks

Sector	**% Received training**		**Total Number*** **	
	UK	West Midlands	UK	West Midlands
Health Care*	47%	46%	2,122,300	173,430
Child and adult Care**	44%	47%	1,267,890	121,380
Whole Economy	29%	28%	28,210,490	2,459,120

* SIC 85.3
** SIC 75, 80, 85
*** All men between 16 and 64 and women aged between 16 and 59 in employment other than those on college based schemes

Source Labour Force Survey, Spring 2003

Table A4.4

Employment growth in the child and adult care* sector (total employment)

	UK		West Midlands		Staffordshire	
	Average annual growth, %	Absolute change, 000s	Average annual growth, %	Absolute change, 000s	Average annual growth, %	Absolute change, 000s
Child and adult care*						
1993-1998	1.1	169.7	1.2	15.9	3.4	8.7
1998-2003	1.8	320.3	2.6	37.3	0.7	2.0
2003-2008	1.9	353.4	1.5	24.6	1.6	4.6
Whole economy						
1993-1998	0.9	1,438.7	0.9	127.1	1.0	27.8
1998-2003	0.8	1,450.6	0.3	47.5	-0.3	-7.6
2003-2008	0.6	994.4	0.1	20.2	0.1	2.5

* SIC 85

Source: Experian Business Strategies, May 2003; based on data from National Statistics

Table A4.5

Gender and age structure of the child and adult care* workforce (% of total)

	Child and adult care*		Whole economy	
	UK	West Midlands	UK	West Midlands
Gender				
Male	18%	22%	55%	56%
Female	82%	78%	45%	44%
Age				
16-19	3%	2%	5%	5%
20-24	8%	12%	9%	9%
25-34	19%	18%	23%	21%
35-44	27%	27%	27%	27%
45-64	40%	40%	34%	35%
65+	2%	0%	2%	2%
Total**	1,272,980	121,380	28,631,350	2,478,590
* SIC 85.3				
** All persons in employment other than those on college based schemes				
Columns may not sum to 100 due to rounding				
Source: Labour Force Survey, Spring 2003				

Appendix 5

Skills development schemes in the NHS

Work based learning and the skills escalator

Each local Trust receives funding that has come from the department of health to the Workforce Development Confederations/Strategic Health Authorities for the NHS Learning Account Scheme. The scheme started in 2002 and aims to assist with funding education and training for the non-professional workforce. The scheme allows up to £150 per person per financial year to meet training needs that have been identified by their personal development plan. The aim of this funding is to assist with the personal and professional development of non-professional staff, and help them to progress up the skills escalator. This scheme can be used to fund NVQ and basic adult literacy and numeracy training. From NVQ level three staff are able to access professional training on university courses. As of April 2003 the scheme has been extended to fund non-work related courses in cases where a person has not done any traditional learning since they left school. If a course at college on floral art encouraged a member of staff to get back into learning then this could be funded.

The NHSU Pilot of Learning Accounts

The Trusts within this area are part of the NHSU Pilot Offer to increase up take of the NHS Learning Accounts. The offer includes set providers and set courses which are funded by the workforce development confederation. The offer also includes a dedicated person jointly funded by workforce development confederation and NHSU who will give information, advice and guidance about how the learning accounts can be used.

Cadetships

Within the Newcastle and Stoke on Trent area there is an NHS cadet scheme working in Bucknall Hospital. This scheme employs 16-18 year olds who have five GCSE's. The cadets are an employed member of staff and do their key skills and care level two within their first year, and do care level threes

within their second year. They can then access places at Keele University, with a percentage of modules off their common foundation programmes and continue to complete their nurse training. They are then guaranteed a post back at the hospital for a minimum of two years. Partnership working with Staffordshire Learning and Skills Council has assisted this scheme. The scheme has won the Beacon Award for Excellence.

Upgrading

Upgrading of staff is decided by local trusts on an individual basis. Some trusts across the country offer a monitoring incentive for progression from care level 2 to care level 3 posts but few of the local trusts are presently doing this. Changing working practice facilitators within the Trust will be taking responsibility for upgrading in connection with role redesign. Agenda for Change will also affect the upgrading of staff.

Learning Strategies.

Each Trust is requested to produce a learning strategy for the Workforce Development Confederation on an annual basis. On receipt funding is released for Continuing Professional

Appendix 6

Development of skills for health and care sector through further education colleges

Table A6.1 indicates that the colleges geographically closest to the new hospitals and medical school i.e. Newcastle-under-Lyme and Stoke-on-Trent College offer nearly 40% of the health and social care qualifications delivered in the county. During 2003 Stoke on Trent College was approved as a Centre for Vocational Excellence in Social Care.

Table A6.1

Profile of FE healthcare provision in Staffordshire, by institution, 2001/02

	Total qualification aim enrolments	**Healthcare**	**Child and adult care**
No. of institutions	10	9	9
Total no. of qualification aim enrolments	209,487	20,101	22,061
Council funded	175,086	15,664	17,491
Burton College	15%	11%	10%
Cannock Chase Technical College	9%	12%	12%
Leek College of Further Education and School of Art	4%	1%	2%
Newcastle-under-Lyme College	10%	6%	7%
Rodbaston College	2%	0%	0%
Stafford College	15%	28%	26%
Stoke-on-Trent College	29%	32%	32%
City of Stoke-on-Trent Sixth Form College	6%	1%	1%
Tamworth and Lichfield College	10%	9%	9%
Non-council funded	34,401	4,437	4,570

Source: Individual Student Record (ISR) 25

A range of qualifications is provided by FE colleges (Table A6.2). It can be seen that provision is appropriate to local market skill demands, with an emphasis on health, social and domestic care sectors.

Table A6.2

Colleges and Staffordshire University

Programmes offered in Health and Social Care

Key to colleges

SoT	Stoke-on-Trent College
SoT VI Form	City of Stoke on Trent VI Form College
NuL	Newcastle under Lyme College
Stfd	Stafford College
Leek	Leek College
Cann	Cannock Chase Technical College
Burton	Burton College
Tam/L	Tamworth and Lichfield College
Staffs Univ	Staffordshire University

Award	**SoT****	**SoT VI F**	**NuL**	**Stfd**	**Leek**	**Cann[1]**	**Burton**	**Tam/L**	**Staffs Univ**
RNDipHE Adult Nursing									*
RNDipHE Mental Health Nursing									*
BSc Midwifery Practice									*
RN/BSc Nursing Practice Adult Nursing									*
RN/BSc Nursing Practice Child Nursing									*
RN/BSc Nursing Practice Mental Health Nursing									*
BSc Specialist Nursing Practice									*
HNC/D in Caring Services (Social Care)								*	
HNC/D Health and Social Care							*		
NVQ 4 Care/Registered Manager Award	*								

Table A6.2 Continued

Award	SoT**	SoT VI F	NuL	Stfd	Leek	Cann[1]	Burton	Tam/L	Staffs Univ
NVQ 4 in Care Management							*		
AVCE (GNVQ Advanced) Health and Social Care	*		*		*			*	
BTEC Professional Diploma in the Management of Addiction	*								
BTEC National Diploma in Care	*				*				
BTEC Intermediate Diploma 2 in Care			*						
BTEC Introductory Certificate in Health and Social Care	*								
BTEC 1st Diploma in Care (Social Care)	*			*			*		
GNVQ Intermediate Health and Social Care			*		*			*	
GNVQ Foundation Health and Social Care	*		*					*	
NVQ 3 Caring for Children and Young People							*		
NVQ 3 Working with Children and Young People	*								
NVQ 3 Care	*						*		
NVQ 2 Care	*					*	*		
Care Career Pathway (for NVQ)							*		
C&G Community Mental Health Certificate	*								
Your Induction to Care Topss[2] and LDAF[3]	*								
Foundation to Care Work TOPSS and DAF	*								
C&G Certificate in Supporting Care Practice Intermediate	*								
Institute of Welfare Certificate	*								
Institute of Welfare Diploma	*								

Table A6.2 Continued

Award	SoT**	SoT VI F	NuL	Stfd	Leek	Cann[1]	Burton	Tam/L	Staffs Univ
OCN Management of Substance Abuse	*								
OCN Management of Substance Abuse	*								
Certificate in Working with People who have learning disabilities	*								
Advanced Certificate in working with people who have learning disabilities	*								
Working with people							*		
NCFE Safer Moving and Handling Techniques	*								
NCFE Intermediate certificate in safe handling of medicines	*								
Access to Health and Welfare								*	

1 No information on the Cannock website about full-time courses
2 Topss = the Training Organisation for the Personal Social Services
3 LADF - Learning Disability Awards Framework

** Centre of Vocational Excellence – Care (Adult) Sector

Source: college websites

Key characteristics of students attending further education in Staffordshire are shown in Tables A6.3 and A6.4. The key points to note from these are:

- Female predominance in gender distribution
- Predominantly white
- Low numbers with learning difficulties/disabilities
- Low proportion from deprived area
- Consistently high achievement rates

These characteristics suggest that more could be done to attract students who are less able and resident within deprived areas.

Table A6.3

Enrolment profile of FE Provision in Staffordshire, 2001/02

% of total (base=no. of qualification aim enrolments with known information

	Total qualification aim enrolments	**Healthcare**	**Child and adult care**
No. of institutions	10	9	9
Total no. of qualification aim enrolments	209,487	20,101	22,061
Council funded	175,086	15,664	17,491
Gender			
Female	59%	63%	67%
Male	41%	37%	33%
Age			
Under 19	32%	17%	20%
Over 19	68%	83%	80%
Unknown	*418*	*55*	*55*
Ethnicity			
White	94%	97%	97%
Asian	3%	1%	1%
Black	1%	1%	1%
Mixed/Other	1%	1%	1%
Unknown	*7,101*	*623*	*663*
Learning difficulties and/or disabilities			
Yes	10%	6%	6%
No	90%	94%	94%
Unknown	*31,912*	*2,779*	*13,209*
Additional support assessment			
Requires additional support	5%	3%	3%
Does not require additional support	9%	6%	7%
Not been assessed	86%	91%	89%
Widening participation category			
From deprived area	15%	17%	17%
Asylum seeker/refugee	1%	0%	0%
Studying basic skills programme	5%	1%	1%
Other	3%	0%	0%
Not eligible	75%	82%	82%
Non-council funded	34,401	4,437	4,570

Note: some groups may not sum to 100% due to rounding

Source: Individual Student Record (ISR) 25 ISR 22 for City of Stoke-on-Trent Sixth Form College, ISR 23 for Leek College of Further Education and School of Art and Tamworth and Lichfield Colleges

Table A6.4 Achievement in Staffordshire, 2001/02 (base = council-funded qualification aim enrolments)			
	Achievement rate		
	All qualification aim enrolments	**Healthcare qualification aim enrolments**	**Child and adult care qualification aim enrolments**
Total	78%	92%	92%
Sex			
Female	79%	91%	90%
Male	76%	93%	93%
Age			
Under 19	73%	88%	88%
Over 19	80%	93%	92%
Ethnicity			
White	78%	92%	92%
Asian	74%	88%	87%
Black	68%	92%	90%
Mixed/Other	77%	88%	89%
Source: Individual Student Record (ISR) 25 *See footnote 3.*			

ISR 22 for City of Stoke-on-Trent Sixth Form College, ISR 23 for Leek College of Further Education and School of Art and Tamworth and Lichfield Colleges

The definition of achievement used is the same as that used in the LSC Summary Statistics, namely, the total number of qualification aims achieved, expressed as a percentage of the total number of qualification aims for which students have completed the learning programmes. The measure is based on qualification aims, not students; each complete enrolment, where the outcome is known, counts towards the achievement figures. It is, however, not a measure of successes against starts; if a student fails to complete a qualification aim, then it is excluded from the calculations. Where a student has achieved at least half of the credits or modules towards a qualification aim, then this is counted as half an achieved qualification. Further, only council-funded qualification aims are included in the figures, but complementary studies are excluded, those qualifications extending beyond the expected end date and not yet completed are excluded, and those where the qualification is completed but the outcome is as yet unknown are excluded.

Of students attending further education colleges in Staffordshire doing courses in health care 40% enter employment while a further 52% go onto to further education in a further or higher education institutes. For those doing child and adult care courses the figures are similar (39% to employment 51% to further education). (Table A6.5).

Table A6.5
Destinations of further education college students in Staffordshire, 2001/02

	All qualification aims completed	Child and adult care	Healthcare
	%	%	%
Continuing FE`	42	40	40
Higher Education	28	11	12
Employment	23	39	40
Other	7	9	9

Source: ISR25 (ISR 22 for City of Stoke-on-Trent Sixth Form College, ISR23 for Leek College of Further Education and School of Art and Tamworth and Lichfield Colleges)

Work Based Learning Achievement

A number of Work based Learning (WBL) providers deliver training to young people in the form of Modern Apprenticeships and National Vocational Qualifications (NVQs) see Table A6.6.

Table A6.6

Work-based learning providers in Staffordshire

Provider	Childcare		Dental Nursing		Elderly Care	
	AMA	FMA	AMA	FMA	AMA	FMA
5Cs Training	✓	✓				
Cannock College	✓	✓			✓	✓
Moorland Training Services	✓	✓			✓	✓
Newstart Burton College	✓	✓			✓	✓
Performance Through People					✓	✓
Rock House Training Ltd	✓	✓			✓	✓
Smart Training	✓	✓				
Stafford College					✓	✓
Staffordshire Learning & Education Authority (QLS)	✓	✓				
Stoke-on-Trent College	✓	✓			✓	✓
Total People Ltd	✓	✓	✓	✓	✓	✓
VT Plus Training plc					✓	✓

Source:The Learning Matrix 2003 Staffordshire Learning and Skills Council

The destinations information provided in Table A6.7 shows that 51% of those doing work-based learning continue in employment, however it is notable that 15% become unemployed.

Table A6.7
Destinations of work based learning students studying in Staffordshire, 2001/02

	All work-based learning	Child and adult care work-based learning	Healthcare work-based learning
	%	%	%
Employed	51%	51%	51%
In education	4%	4%	4%
In work-based learning	19%	15%	15%
Unemployed	10%	15%	15%
Dissatisfied with course	0%	-	-
Other	16%	16%	16%
Unknown/not recorded	3,879	462	462

Source@ Work-based learning Individualised Learner Record (ILR) 2001/02 periods 1-12

Table A6.8

Student profile of work-based learning provision in Staffordshire, 2001/02

% of total (base=no. of learners with known information)

	Total	Healthcare	Child and adult care
Total no. of learners	9,465	1,103	1,103
Gender			
Female	50%	91%	91%
Male	50%	9%	9%
Age			
15 to 18	59%	31%	31%
19 to 35	41%	69%	69%
Ethnicity			
White	97%	99%	99%
Asian	2%	1%	1%
Black	1%	1%	1%
Mixed/Other	1%	-	-
Unknown	*177*	*	*
Disability or health problems			
Yes	3%	3%	3%
No	97%	97%	97%
Unknown	*1,107*	*10*	*10*
Special training needs			
Additional learning need	8%	9%	9%
Additional social need	2%	-	-
Both	1%	-	-
Need not stated	0%	-	-
No special training needs	88%	91%	91%
Unknown	*9*	-	-
Note: some groups may not sum to 100% due to rounding			
Source: Work-based learning Individualised Learner Record (ILR) 2001/02 periods 1-12			

Appendix 7

Transport data sources

Transport Assessments (TA.)

These are documents that identify the transport effects of the development of a site, and should include reference to all modes of transport, including sustainable modes. They are used to identify issues associated with major trip-generating development proposals, and to recommend solutions for the problems identified. They are of benefit to both developer and planning authority in defining essential works for the accommodation of new movements, and are often, as in the case of the Fit for the Future Project, an essential prerequisite for the award of planning consent.

Transport Assessments referred to in the Health Impact Assessment process are:

City General Site, 2004
North Stoke Development, 2004
Home Farm Development, Keele University,

Travel Plans

A Travel Plan is a general term for a package of measures tailored to meet the needs of individual sites and aimed at promoting cleaner, greener travel choices and reducing reliance on the car. It involves the development of a set of mechanisms, initiatives and targets that together can enable an organisation to minimise/reduce the impact of travel and transport on the environment, whilst also bringing about a number of other benefits to an organisation. The Travel Plans are living documents, which will evolve to be site specific and develop with time and with changing circumstances.

Similarly to a Transport Assessment, the submission and implementation of a Travel Plan is often a requirement to gain planning approval, as set out in Planning Policy Guidance 13

Travel Plans referred to are:

Clinical Education Centre Travel Plan (Medical School), 2003

City General Site Travel Plan, 2004

North Stoke Development Travel Plan, 2004

Environmental Statement (ES) and Appendices.

Environmental Impact Assessment is a document that must be produced for certain types of development before they are granted development consent. The requirement for EIA comes from a European Directive (85/33/EEC as amended by 97/11/EC). The procedure requires the developer to compile an Environmental Statement (ES) describing the likely significant effects of the development on the environment and proposed mitigation measures. The ES must be circulated to statutory consultation bodies and made available to the public for comment. Its contents, together with any comments, must be taken into account by the competent authority (e.g. local planning authority) before it may grant consent. Typical contents of an ES include: consideration of noise and vibration impacts; air quality impacts; landscape and visual impacts.

Environmental Statement referred to:

City General Site, originally produced in 2001 to accompany Public Sector Comparator planning application submission, revised April 2004.

"Making the Connections" – Final Report on Transport and Social Exclusion, Report by the Social Exclusion Unit, February 2003

This report examines the links between social exclusion, transport and the location of services. It is particularly focussed on those opportunities that have the most impact on life-chances, such as access to healthcare. Problems with transport provision and the location of services can reinforce social exclusion, by preventing people from accessing key local services.

National statistics quoted in the report are:

31% of people without a car have difficulties travelling to their local hospital compared with 17% who travel by car.

Over 1.4 million people say that they have missed, turned down, or chosen not to seek medical help over the last 12 months because of transport problems

The report puts forward a plan of action to address problems concerning people's ability in accessing healthcare facilities including:
improving patient transport services
providing advice and information to patients
accessibility (location)and patient involvement

Health Impact Assessment of Local Transport Plan for Greater Nottingham, City of Nottingham/NHS/Nottinghamshire County Council 2001

The remit of the Impact Assessment Steering Group included linking the national initiatives on transport health and environmental issues to the study.

Websites

www.pollution.stoke.gov.uk
www.noise.stoke.gov.uk
www.airquality.stoke.gov.uk

Each site provides relevant local information on the issues concerned.

Appendix 8

Transport Emissions, Noise and Health

Emissions

In most urban areas of the UK transport is the largest source of air pollution, particularly for emissions of carbon monoxide, particulates (including black smoke), nitrogen oxides and hydrocarbons. The emissions of pollutants from road traffic in the UK for 1999 are summarised in the table below

Table A8.1

Emissions From Road Traffic in the UK, 1999. Source: DEFRA, 2001

Pollutant	**Emissions (000 tonnes)**	**% of total UK Emissions**
Carbon Monoxide (CO)	3,293	69
Black Smoke (an indicator of particulates)	130	48
Nitrogen Oxides (NO_x)	714	44
Volatile Organic Compounds (VOCs)	473	27
Carbon Dioxide (CO_2)	31,200	22
Sulphur Dioxide (SO_2)	12	1

In recent years there has been a large increase in the number of vehicles in the UK and an even greater increase in vehicle usage. For example, between 1980 - 2000, vehicle ownership in the UK increased by about 30% to approximately 29 million vehicles. Vehicle usage during the same period increased by 70% to 460 billion vehicle kilometres. This was reflected in increases in vehicle related pollutant emissions.

Transport related pollution is likely to become increasingly important in the future as vehicle numbers and usage are expected to continue to rise. Road vehicles contribute over 60 per cent of the two important pollutants known to affect ill health – fine particles (PM10) and nitrogen dioxide (NO2).

Effects of Air Pollution on People's Health

Poor air quality can damage health and reduce quality of life. The very young, the old and vulnerable members of society are particularly likely to suffer harm.

Particulates

Particulates are very small particles. They are produced not only in vehicle exhausts but also in many industrial and combustion processes including combustion. The particles with particular health impact are those with diameters of $10_{\mu m}$ or less, known as PM_{10}. These are the particles, which are able to pass through the nose and mouth and enter the respiratory system. The main source of PM_{10} in urban air is traffic which accounts for about 70%[1].

Until recently, most attention was paid to PM_{10} and regulatory standards in the UK and Europe are based on this particle category. However, $PM_{2.5}$ (particles of less than 2.5 micron in diameter) and ultrafines (particles of less than 0.1 micron in diameter) are attracting increasing interest.[2]. While there is no doubt that particulates have health effects, it is very uncertain which components of the particulates are important. Williams[3] summarised the situation in the following words. "The difficulty is that while the health effect studies have established a link between effects and broad measures of particles, they have not as yet been able to define the harmful component or components of the particle distribution, in either chemical or physical (ie more specific size fraction) terms."

Health effects of particulates can be demonstrated with increments above the lowest levels to which human populations are exposed. Fine particle pollution has been associated with:-

- initiating & worsening asthmas
- increasing hospital admissions for bronchitis, asthma & other respiratory disease
- a reduction in lung function
- increased upper respiratory symptoms
- increased lower respiratory symptoms
- heart disease – including raised cardiac mortality
- Increased death rates

Nitrogen dioxide

The levels of nitrogen dioxide which might be found near busy streets are unlikely to cause any effect in healthy people but people with asthma are more sensitive and small changes in lung function may occur at levels as low as 300 ppb. Nitrogen dioxide at these levels may also increase sensitivity in people with asthma to other allergens such as house mite and pollen. It is only on very exceptional occasions that a one hour mean of 400 ppb is exceeded.

In epidemiological studies it is difficult to dissociate the effect of nitrogen dioxide from other pollutants (especially particulates) which are usually elevated at the same time. The Expert Panel on Air Quality Standards (EPAQS) took the view that "a long term effect of chronic exposure to nitrogen dioxide whilst not yet demonstrated cannot be ruled out".[4]

Carbon Monoxide

At high concentrations carbon monoxide causes unconsciousness and death but the concentrations that might be produced in a street environment as a result of traffic are far below these levels. Carbon monoxide is one of the many toxic constituents of tobacco smoke and smokers as a result of their habit will be exposed to much higher levels than any found in urban air.

Prolonged exposure to levels of carbon monoxide about 30 ppm (which might be produced in a city street with heavy traffic) could pose a risk to people with pre-existing disease affecting delivery of oxygen to the heart or brain. Those with severe heart or lung disease, anaemia and possibly the foetus in utero may also be susceptible[5 6]. The exposure to carbon monoxide experienced by smokers is much greater than likely environmental exposures from traffic.

Ozone

Ozone is not emitted by cars but is formed as the result of a photochemical reaction between atmospheric oxygen and pollutants such as NO2 and hydrocarbons. Ozone may be distributed considerable distances so that the highest concentrations of ozone may be far removed from the sources of pollutants. In urban areas ozone levels may be lowered as a result of reaction with NO which is also emitted by car exhausts.

Exposure to levels of ozone above 100 ppb for several hours may lead to airways inflammation. EPAQS "found no evidence that exposure to the levels of ozone that are encountered in the UK are likely to lead to long term damage to the respiratory system". [7]

Summary of Health Problems related to Air Pollution

Condition	
Mortality (all cause)	Particulates
Heart Disease	Particulates
Asthma	NO_2 Particulates Poor Air quality probably does not cause asthma but increases the frequency of attacks in those with asthma
Hospital admission for respiratory disease	Particulates

Noise

There are a number of obvious causes of transport-related noise. These include noise from the construction of transport facilities, such as the construction and maintenance of roads and similar, and noise from traffic on existing facilities.

The noise and scale of nuisance produced by vehicles depends on a number of factors, including type of vehicle and vehicle speed. The noise from one heavy goods vehicle is approximately the same as that produced by eight cars. At low speeds noise from engines dominates, whereas at higher speeds (in excess of 40 miles per hour) noise from tyres dominates. Vibrations may be more of an irritation than actual noise. Road surfaces mitigate to a degree, so that porous asphalt surfaces are quieter than concrete. Even as road surfaces are being replaced with quieter asphalt compounds, the reduction in noise is inevitably offset by increases in the amount of traffic. Sound barriers can attenuate traffic noise, but care should be taken to ensure that such barriers are not visually intrusive [8]. European Union directives for car noise have become increasingly stringent, but these rules only apply to new cars and it can be a decade or more before the majority of the car fleet is replaced by new and quieter cars.

Other sources of road traffic noise include nuisance factors such as the sounding of horns or car alarms and ambulance sirens. Road-calming measures such as speed humps may inadvertently cause local variations in noise related to vehicle suspension or if vehicles slow down towards and accelerate away from road humps.

A number of factors must be taken into consideration when attempting to predict noise levels. These include the distance from the source of the noise, the height above ground of the listener, the nature of the ground between source and listener, effect of barriers such as buildings, fences or trees, and atmospheric conditions. Frequency of noise, including low frequencies and

vibrations, and the listener's sensitivity towards noise, also affect the impact that noise has.

Noise calculations can indicate where statutory noise levels are being exceeded but may not adequately describe their effect on humans. It is possible to calculate an average noise level for an area such as a street, although this overlooks the potential for large variations in noise across even a comparatively small area.

Noise and Health

A number of reviews of the effects of noise on health have been produced, including reports from WHO[9] and the Institute of Environmental Health[10]. The Building Research Establishment has undertaken a number of surveys of noise levels[11 12] and people's reactions to different sources of noise. During the period 1990 to 2000 the proportion of people who said they were adversely affected or even depressed by noise from traffic rose, although proportions were initially small.

The principal adverse effects of noise on health may be considered direct and indirect effects.

Direct	Hearing impairment
Indirect	Interference with speech Sleep disturbance Cardiovascular effects Mental health Cognitive performance Annoyance

The most important adverse effect of excessive noise is damage to hearing. The 1999 WHO report suggested that even a lifetime of exposure to an

average LA_{eq} 24hr noise level of 70 dB or peak sound pressure of 140 dB in adults or 120 dB in children would have a negligible effect on auditory health. It would be exceptional for noise from traffic to exceed these levels.

High noise levels interfere with speech. For complete intelligibility speech should be at least 15 dB louder than the ambient noise levels.

Noise also interferes with sleep having three principal effects (i) difficulty falling asleep; (ii) premature awakening; and (iii) alteration in depth of sleep, in particular effects on REM sleep. Physiological effects relating to noise include increased blood pressure and heart rate, changes in breathing and cardiac arrhythmias. Secondary effects of noise at night include daytime fatigue and depression, Studies have shown that people who live close to sources of increased nocturnal noise have higher prescription rates for sedatives and sleeping tablets.

However the consequences of noise are difficult to predict because people can make a variety of adjustments. People who are exposed to noise at night tend to become habituated to the sound so that far from there being a linear relationship between number of noise events and number of awakenings, the number of awakenings if anything reduces with increasing numbers of noise events.

Acute noise can influence the autonomic nervous system, raising blood pressure and heart rate, but this normally settles back down once the noise stressor has faded. Whilst many studies have suggested that exposure to occupational noise is a risk factor for coronary heart disease, few have found a relationship between environmental noise (noisy streets or living near airports) and heart disease. Any effects on the relative risk are likely to be small, but given the large populations affected by environmental noise, even a small increase in risk of heart disease could have a sizeable impact on the numbers of people developing heart disease.

Population studies have suggested that there are associations between noise exposure and a number of indicators of mental health, including wellbeing, psychological profiles and consumption of sedatives and other medications.

Noise is a common source of complaint by residents and annoyance is dose-dependent. Noise that contains impulses, vibrations or low frequencies is generally perceived as causing greater annoyance. Transport noise is considered a nuisance by 23% of the UK population[13]. Noise in excess of 80 dB has been shown to be associated with increased aggression and reduced helping behaviour.

Appendix 9

Stoke-on-Trent City Council Air Quality Management Strategy

The target set by Stoke-on-Trent City Council in relation to air quality is typical of other Local Authorities in the country:

Target

To achieve all 7 National Air Quality Objectives across all of Stoke-on-Trent, but particularly those which are caused by motorised traffic.

Methodology

Air quality monitoring is undertaken in Stoke-on-Trent by the Housing and Consumer Protection Department of Stoke-on-Trent City Council. Eight different air pollutants have been routinely measured in Stoke-on-Trent since 1997/98, of which seven have particular reference to traffic sources. These are:

Benzene
Carbon Monoxide
Nitrogen Dioxide
Ozone
Particulates (Including PM_{10} and Black Smoke)
Lead
Sulphur Dioxide

The pollutants are measured using a range of monitoring techniques, at a variety of locations throughout the City. Apart from Benzene and Black Smoke, each pollutant is measured using automatic analysers at the Automatic Urban Network (AUN) station located in Quadrant Road, Hanley. The station is part of a network of sites funded and supported by the DEFRA. The site of the station was chosen to reflect typical air pollution measurements likely to be found in the centre of a large urban area. Other automatic stations are sited at the locations shown in the Table below

Table A9.1

Location of Other Automatic Monitoring Stations

Roadside Monitoring Site	Pollutants Monitored
Meir Tunnel	Oxides of nitrogen/PM_{10}
Joiners Square, Hanley	Oxides of nitrogen/PM_{10}
Queens Primary School, Burnham Street, Fenton	PM_{10}/ Total Particulate
King Ford, City Road, Fenton	PM_{10}/ Total Particulate
Copeland Street, Stoke	Oxides of nitrogen / PM_{10} / Sulphur Dioxide

Results

The standards for two types of pollutants have been exceeded in the City as follows:

Concentrations of Nitrogen Dioxide, where measurements at monitoring sites located at the kerbsides of major roads and junctions throughout Stoke-on-Trent, exceed one of the national targets to be achieved by 2004. 20% of diffusion tubes are known to have exceeded the value. These roads have no unusual characteristics and clearly indicate the scale of a national problem which has to be addressed at a local level.

Particulates (PM_{10}) – Daily average. Measurements at the Copeland Street station, Stoke, exceeded the standard on a number of occasions throughout the monitoring period. This site was deliberately located next to one of two major trunk roads in the City to study the impact of heavy traffic on air quality and the readings are not representative of the City in general. The site at Queens Primary School, Fenton, has also shown exceedences of the limit.

Particulates (PM_{10}) – Annual average. Measurements at Queens Primary School, Fenton recorded an annual average in excess of the annual limit. The City Council has completed Stage 3 of the Review and Assessment of air quality and is currently nearing completion of Stage 4. Cliffe Vale (East) was designated as an Air Quality Management Area in November 2001 and Fenton (Burnham Street) in August 2002. With the exception of Burnham Street the main problem in the City is the level of Nitrogen Dioxide in localised areas and these are largely due to traffic emissions. Monitoring of these areas will check on the progress being made on any action taken through the Air Quality Action Plans. In order to assist with the preparation of any such Action Plans the City Council has developed a Local Air Quality Strategy. This shows the measures available for improving air quality in any affected areas and provides a foundation for the Action Plans to be developed during 2003/04.

Improving Quality of Life

Like previous years, the results of air quality monitoring undertaken during 2002 in Stoke-on-Trent continue to suggest that the City faces similar air quality issues to other urban areas of the UK. Measurements show that levels of certain air pollutants may exceed national objectives in limited areas of the City unless action is taken to improve local air quality before the target dates are reached in 2004 and 2005.

This supports the findings of the City Council's 'Stage 3 Air Quality Review and Assessment Report' that was published in April 2001. This Report also suggested that, since there are sensitive locations such as residential properties and schools within these areas, there would be a need to declare some or all of them to be Air Quality Management Areas, either in whole or in part.

However, the former DTLR substantially increased its estimates of nitrogen dioxide emissions from vehicles and this undermined the reliability of all predictions based on the former estimates. The recalculation of the

predictions for the City has been a major exercise but the results were reported in August 2003.

Due to its isolated position only one area is unaffected by this change and could be declared as an Air Quality Management Area (AQMA) with an acceptable level of confidence. Consequently, in November 2001, the City Council declared the first Air Quality Management Area in Stoke-on-Trent covering an area of the City known as Cliff Vale (East). In addition, a second AQMA was declared in Fenton (Burnham Street) in August 2002 on the basis of particulate (PM_{10}) levels and not directly transport related.

In order to assist with the preparation of any such Air Quality Action Plans, the City Council has developed a Local Air Quality Strategy. The Air Quality Strategy demonstrates the measures available for improving air quality in any affected areas and provides a foundation for Air Quality Action Plans to be developed during 2003.

The transport element of the Local Air Quality Strategy was contained in the Technical Annex of the 2001 Annual Progress Report. The document was published, following consultation with interested parties, in December 2002 and is now available on the City Council's website www.pollution.stoke.gov.uk.

Whatever and whenever actions to improve air quality are being considered, the City Council will involve the people of Stoke-on-Trent and consult all relevant stakeholders. The Strategy also states the City Council's commitments to:

- adopt a 'corporate' approach;
- consider all the options available to improve air quality;
- use both 'regulatory' and 'non-regulatory' powers; and,
- consider the wider economic, social and environmental consequences of each option; requiring 'relative' contributions to a solution from industry, transport and individuals that are cost-effective and proportionate.

Appendix 10

Physical Activity and Health

The World Health Organisation recommends that half an hour of moderate activity, such as brisk walking (at four miles per hour) or cycling at moderate speed (10miles per hour) for five days per week is sufficient to bring about many of the benefits of physical activity. The British Government has adopted this level in setting targets in its Sports and Physical Activity Strategy[14 15].

The annual Health Survey for England[16] estimated that in 1999 only 33% of men and 21% of women were sufficiently physically active to benefit their health. The West Midlands Regional Lifestyle Survey in 2001 estimated that 71% of the population were physically inactive (though because of weakness in the survey this result should be treated with caution).

At the moment very few journeys are made on foot or bicycle. Estimates for the West Midlands Local Transport Plan (LTP) suggest that cycling accounted for around 2% of total travel, although there has been a small increase in cycling on dedicated off-road routes[17]. Walking in the West Midlands conurbation accounts for a smaller proportion of journeys (18.8%) than the UK as a whole[18]. The Census in 2001 estimated that in the West Midlands 60% of people drove to work, 9.5% walked to work and 2.3% cycled[19].

People may chose to keep physically active in ways other than walking or cycling such as visiting the gym, playing sport or vigorous gardening. However promoting walking and cycling for commuting and local journeys would potentially be a very effective way of introducing people to a form of regular physical activity (“utility exercise”). Physical activity in this context costs very little, takes up no extra time since it is being done during the time spent commuting. Increased walking and cycling will also reduce traffic emissions and congestion.

Health benefits

People who are physically active enjoy many benefits to their health. The risk of many diseases including heart disease, stroke, diabetes mellitus, some kinds of cancer and osteoporosis are all reduced in those who are physically active. Those who are physically inactive are more likely to be obese and to have poorer mental health.

Physical activity is associated with increased risk of some abnormal heart rhythms and some musculo-skeletal disorders but the risk with moderate walking or cycling is very small. Considerable attention has been paid to the risk of injury to pedestrians and cyclists as a result of falls or injuries on roads. However any increased risk of injury is massively outweighed by likely health gains. One study found that, for every year of life lost to cyclists through accidents, a further 20 were gained through the benefits of physical activity[20] [21]. Another study has suggested that people who cycle regularly have levels of fitness equivalent to individuals ten years younger[22].

The health benefits of physical activity include reduced risk of:-

- Coronary heart disease
- Stroke
- Obesity
- Diabetes mellitus
- Some kinds of cancer
- Osteoporosis
- Mental ill health

Coronary heart disease

The relationship between physical activity and coronary heart disease is amongst the most well-studied health effect of exercise. Studies have consistently shown a dose-response effect, with people who are the most active having the lowest mortality rates from heart disease and the least active having the highest rates. Beneficial effects of physical activity on the cardiovascular system include fibrinolysis (breakdown of small clots), enhanced insulin sensitivity, increased levels of high density lipoprotein and reduced blood pressure. Exercise benefits the heart directly through increasing cardiac exercise tolerance, reducing the oxygen demands of heart muscle, and improving the symptoms of angina and mild to moderate cardiac failure. It also has a modest effect on lowering blood pressure, which further reduces the risk of cardiovascular disease. It improves patients' well-being and quality of life[23].

Strokes

Fewer studies have investigated the relationship between physical activity and strokes. An important risk factor for haemorrhagic strokes (in which a blood vessel breaks and bleeds into the brain) is hypertension, and physical activity can reduce blood pressure, so it may reduce the risk of this kind of stroke through this mechanism. Some but not all of the studies found reduced risk of stroke in those who regularly took moderate exercise.

Obesity

Over the past two decades the prevalence of obesity in the UK has virtually tripled, increasing from 8% to 21% of women and from 6% to 17% of men. Over half of women and over two thirds of men are either overweight or obese[24], and obesity in children is also increasing[25]. The UK has had one of the fastest increases in Europe, such that obesity levels are higher than most

other European countries. Prevalence of obesity is higher in the West Midlands than in most other areas of the United Kingdom. In 1998 the National Audit Office found that obesity cost the NHS £500 million per year in direct costs alone[26].

The massive increases in obesity rates are largely the result of declining participation in physical activity, since the number of calories consumed has probably not risen. It has been estimated that fifty years ago the average person undertook the equivalent of a marathon a week more exercise than today.

Obesity can lead to low self esteem, social stigma and poorer quality of life, and it increases the risk of developing a number of important medical conditions, including coronary heart disease, stroke, type II diabetes mellitus, hypertension, certain cancers and osteoarthritis.

The combination of diet and physical activity is one of the most effective means available of managing moderate obesity, although provided that calorie intake is not actually increased, physical activity alone can lead to some weight loss. In addition, physical activity attenuates the risks of obesity; people who are obese but physically active have a lower risk of heart disease than sedentary people of regular weight[27].

Diabetes Mellitus

There are two distinct types of diabetes mellitus, types one and two. Type II diabetes is caused by failure of body tissues to respond to the hormone insulin. Exercise increases the efficiency with which insulin stimulates muscle cells to take up glucose, so it should be no surprise to find that people who are physically active have around half the relative risk of developing type II diabetes compared to those who are sedentary. Incidence increases with age and is more common in overweight or physically inactive people.

Both types of diabetes are themselves risk factors for other medical conditions, especially coronary heart disease. It is worrying that even children are starting to be diagnosed with type II diabetes, and the first reported child cases in the UK were recently described in Birmingham[28]. Each additional 1000 kcal/week of leisure activity, equivalent to walking for half an hour per day, can reduce the prevalence of type II diabetes by 12%.

Cancer

Most of the studies that have investigated the effect physical activity has on cancer have found an inverse relationship between fitness and cancer mortality. Biological explanations for the inverse association include faster transit time of harmful food substances through the gut (in the case of colon cancer), reduced adipose tissue and hence reduced production of oestrogen, and improved immune function which seeks and destroys potentially cancerous cells.

Many studies have shown a protective, inverse relationship between cancer of the colon and physical activity, although exercise seems to offer no protection against rectal cancer. The more exercise undertaken, the greater the protection afforded. Both leisure and occupational physical activity may reduce the risk of breast cancer by up to 30%, though studies are less conclusive. Four hours of moderate exercise per week is quoted as the minimum likely to confer protection against breast cancer[29]. Endometrial cancer appears to be inversely related to physical activity.

Musculoskeletal Disease

Osteoporosis, or “thinning of the bones” is a common problem in Britain, and the prevalence increases with age, since bone density falls with age. Women are more at risk than men, due to the combination of achieving lower peak bone mass, losing the protective effects of oestrogen after the menopause,

and having a longer life expectancy than men. Risk of fractures is inversely proportional to the bone density. Weight-bearing exercise has been shown to increase bone mass and walking or cycling has a modest effect at preventing osteoporosis.

Physical activity protects against fractures of the neck of the femur (hip fractures), and Asian women who walked uphill one or more times per day had 40% fewer hip fractures[30]. Low back pain in one of the most common causes of sickness absence from work. Whilst heavy lifting is a recognised risk factor for the development of low back pain, moderate leisure time physical activity, including walking, is one of the few interventions that has been shown to help prevent lower back pain.

Osteoarthritis is a chronic degenerative disorder of joints. Excessive stress (for example running more than 20 miles per week) and injury to joints are risk factors for the development of osteoarthritis, but moderate levels of physical activity are unlikely to contribute towards its development. Indeed, since weight is a risk factor and physical activity helps prevent obesity, this may be one mechanism by which moderate physical activity reduces the risk of osteoarthritis[31].

Mental Health

It is estimated that one in ten people at any time have symptoms of mild depression. The more physically active a person is, the less likely they are to record symptoms of depression. Among people who were followed up over a period of time those who started with mild depressive symptoms but walked regularly were a third as likely to report depressive symptoms than those who did not walk at all.

A fuller discussion of physical activity and health will be found in the Health Impact Assessment of the Draft Regional Planning Guidance on Transport and Accessibility (Chapter 9).[32]

Appendix 11

Travel Plans

The Government White Paper "A New Deal for Transport: Better for Everyone" (July 1998) recognised the need to extend choice in transport and to secure mobility in ways that support sustainable development and environmental improvements. Planning Policy Guidance 13 (PPG13) was issued in March 2001 to give advice on delivering the Government's integrated transport strategy as part of the land use planning process.

The objectives of the guidance are to integrate planning and transport at the national, regional, strategic and local level to:

- promote more sustainable transport choices for both people and the moving of freight;
- promote accessibility to jobs, shopping, leisure facilities' and services by public transport, walking and cycling, and
- reduce the need to travel, especially by car.

PPG13 states that it is appropriate for local authorities to require planning applications for all major sites to be accompanied by a Travel Plan. The policy recommends that "where travel plans are to be submitted alongside a planning application, they should be worked up in consultation with the local authority and local transport providers."

As a consequence of PPG13 Travel Plans for both the City General site and the North Stoke Development were submitted as part of the planning application for the Fit for the Future Project to Stoke-on-Trent City Council, being the appropriate local planning authority.

Travel Plans

The two submitted Travel Plans relating to the City General site and the North Stoke Development contain sections on; awareness raising and promotional activities; car–sharing; cycling; walking; public transport; target setting and monitoring; and travel plan administration amongst others. They provide the basis from which both hospitals will proceed to encourage staff, visitors and students to access the sites by more environmentally friendly alternatives than driving alone. The Travel Plans are not one off events nor documents to be produced and put on a shelf, but are dynamic processes that will provide benefits to the environment and the local communities as well as to staff, visitors, patients and both Trusts.

To ensure that the Travel Plans for the City General site and the North Stoke Development progress and grow, senior management support, and therefore full commitment by the Trusts concerned, has been secured. A Travel Plan Co-ordinator will be nominated by each Trust and a Steering Group for each of the Travel Plans will be set up to act as the driving forces behind the Plans. Liaison with local public transport providers will be carried out to ensure that bus services to the sites continue and improve. Targets for modal shift will be set in following agreement with the Local Authority, once base line figures have been established.

The soft measures contained within the Travel Plans will complement the infrastructure (hard measures) that has been included within the site layout of both hospitals. These include the provision of cycle parking facilities, which will be positioned close to building entry points and which will be clearly visible, safe, secure and well lit. Shower and locker facilities are also to be provided for the use of those members of staff who wish to cycle or walk to work. Cycle and pedestrian access to the sites is segregated from motorised traffic and as far as possible pedestrian pathways within the sites will be also segregated from motorised vehicles for the safety of both pedestrians and cyclists. Routes within the sites will be direct and well lit. Public transport stops have been incorporated throughout the City General site and suitable

shelters and waiting areas for users will be provided. With these basics being provided within the site the initiatives contained within the Travel Plan will have a sound starting point from which to progress.

Controls Assurance and NEAT

Controls Assurance underpins the Duty of Quality, and is "a process designed to provide evidence that NHS bodies are doing their reasonable best to manage themselves so as to meet their objectives and protect patients, staff the public and other stakeholders against risks of all kinds" (HSC 1999/123)

The Controls Assurance Standard for Fleet and Transport Management, (criterion 3) states the requirement to produce a "Transport Plan." The Travel Plans that have been produced for the City General site, the North Stoke Development and the Clinical Education Centre (Medical School) as part of the planning process for the Fit for the Future Project fulfil this requirement.

The submitted Travel Plans consider those trips made to the site by staff, patients and visitors. Fleet vehicle and delivery/contractors vehicle trips are outside the scope of the Travel Plans, how ever for the University Hospital of North Staffs Trust these issues are contained and addressed within the recently drafted and approved Fleet and Transport Management Policy, which has been prepared response to a requirement of the Controls Assurance Standards. This policy also contains directions on the environmental aspects of the procurement and operation of vehicles i.e. the most environmentally beneficial fuels and vehicles should be chosen whenever possible.

The NHS Environmental Assessment Tool (NEAT) also advocates the implementation of a Travel Plan for NHS establishments, and scores positively where they have been drafted, authorised and implemented.

The Travel Plans are also consistent with aims contained within the current Stoke-on-Trent City Council Local Transport Plan, as a large employer within the area to encourage the use of sustainable transport modes.

Appendix 12

Outcome of stakeholder workshops

1. Workshop 1 held on the 20th January

Participants

There were 9 participants from a variety of agencies serving the City of Stoke on Trent, who were interested in learning how to undertake health impact assessments.

Method

Participants way of an introduction they were given a short 10-minute presentation as to the prospective development of the site, some of the new services and some of the potential changes to service delivery. They were then asked to identify the likely health impacts of the new hospital. The participants worked in three groups and used the rainbow diagram as a reference guide.

Results

Group One identified the following positive and negative impacts:

Positive Outcomes	Negative
• Bring students into the area • Commercial impact – housing/spending • Social cohesion (more diverse population) • Filling medical staff vacancies • Improved status and profile of the area.	• Bring students into the area • Social (in) cohesion • Private landlords • Low levels of suitable accommodation • Increased demand for statuary services e.g. GP's etc

Group Two identified the following impacts:

- Bringing students into the area. Social cohesion/accommodation need/commercial impacts
- Interface between services to assess need
- Adequate skills/staffing levels needed to fulfil need
- Job creation. Immigration verses local need
- Suitable housing. Will this be available
- Impact on local employment
- Knock on effects of caring on carers health
- Addressing GP vacancies. Recruitment for oversees decrease.
- Transport problems
- Discharge – care packages/impact on those around you
- Resources to support recovery.

Group Three identified the following impacts:

- More GP's trained and retained which means better access to health care.
- There will be an impact on actual building, which will affect employment, maybe more jobs for local people. However there will also be some negative impacts. Traffic noise, pollution, risks to people moving round the site, disruptive to visitors, personal safety access etc. Need to consider security, potential for vandalism think about staging closures and building work.
- Reputation of the area will increase
- Maybe change to dynamics of the area with a change in tenure/accommodation. Led to lack of community due to transient nature of population.
- Childcare facilities may be under pressure as more people in the area.
- May get migration of lower paid workers who can't find work/Increase in crime rates
- Discrimination

Recommendations

The groups made the following recommendations:

- In order that there should be a bigger impact on unemployed, unskilled and under educated people attention should be paid to lower level (easier) access jobs and life long learning.
- More waste would be produced so waste management was important.
- In order to reduce energy requirement use of solar energy should be considered.

2. Workshop 2 held on 27 January 2004

Participants

The participants were a well informed patient panel that has been working with the Fit for the Future team over the past eighteen months.

Method

Participants were invited by letter to participate in a focus group and told that their responses could be used as part of the HIA. The group was held at the North Staffs Royal Infirmary from 4.00 to 6.00 p.m. using a focus group format. Participants were asked to identify the potential impacts of the hospital project on North Staffordshire. They were asked to use the rainbow determinants of health diagram as a reference guide.

Results

The following impacts were identified

Nature of Impact of New Hospital Build	Eval-uation	Comment
Doctors coming to North Staffs to train and staying in the area.	Positive	Direct
More confidence in services at the hospital.	Positive	Direct (older people may not feel this as service provision may not be what they are used to)
Professional networks will develop locally	Positive	Direct
Quality of care will improve	Positive	Direct
Staff conditions will improve/Better environment at the hospital.	Positive	Direct effect on the health of staff Indirect on patients (may mean that staff stay longer)
Staff morale will improve	Positive	Direct
Research will attract money	Possibly positive	Direct (this should be encouraged as long as it is for the good of the hospital and not about individuals)
Improve access for patients and families not having to travel so far for follow up care.	Positive	Indirect
People will be cared for at home and in their community so more hospital beds available	Positive	Direct
Give the area a certain cachet	Positive	Direct but needs to be built on for the future
Might replace the idea that the traditional industries have gone.	Positive	Indirect. Raising profile and perception of area. Giving it 'City' status.

Nature of Impact of New Hospital Build	Eval-uation	Comment
The hospital will have one identity.	Positive	Direct (this idea needs to be promoted – follow up will be at local centres but this may mean that people are more likely to attend follow up)
Will bring people in with specialist skills	Positive	Direct. Will give the hospital an identity
More accommodation would be needed and this would have a knock-on effect locally	Maybe positive	Direct – if those who can afford accommodation take all the space then there may be less for those who can't afford it.
May mean that new style accommodation is built (luxury apartments)	Positive	Indirect
Shops/clubs/pubs there will be a commercial factor knock-on effect.	Positive	Indirect (better lifestyle will encourage facilities to set up and keep others in the area)
Local people will get work will the building of the hospital is happening	Positive	Direct for those who get work. Might improve people's health for those. However there will be an impact while hospital is being built.
Car parking may be worse may be better.	Undecided	
Maybe some resentment between locals and students	Negative	Direct

Recommendations

The group recommended that the hospital and its developments should be promoted nationally and locally. The latter is very important so people see it's something for them.

3. Workshop 3 held on 5th February 2004

Participants

Primary care staff attending a training event at the Royal Infirmary. The focus of the day was primary care in relation to the 'Fit for the Future' project.

Method

Participants were invited to complete a questionnaire during the training event. Completion was voluntary and 14 people completed the questionnaire.

The introduction to the questionnaire was as follows:-

A project is underway in North Staffordshire to rebuild the main hospitals, improve other health facilities, develop a new medical school and restructure the way health care is delivered (Fit for the Future Project). This will include building new hospitals on the City General and Haywood Hospital sites and developing closer links between hospital services, family doctor and community services.

In light of these developments we would like to ask you to participate in a Health Impact Assessment exercise that is being carried out on the above projects. A Health Impact Assessment is a way of deciding what are the positive and negative impacts of a new project, programme or policy on the health of the local community, its environment, employment opportunities and local commerce. In undertaking a Health Impact Assessment it is hoped that a clear picture of these impacts can be gained and therefore there will be an opportunity to maximise the positive impacts and minimise the negatives.

We are seeking your involvement as we believe that you are important stakeholders in what happens both during the building of the hospital, the changing of the way services are delivered and use of the hospital thereafter.

Your views will make up an important part of the research for the Health impact Assessment. All information will be treated in strictest confidence.

Results

The building of a new hospital in North Staffordshire and changing the way services are delivered will:

Numbers giving each response

	Much better	Better	No Change	Worse	Much worse
Change health care provision	6	8			
Affect employment opportunities in North Staffordshire	3	9	2		
Affect how people in other parts of the country think about North Staffordshire	3	5	5		
Make North Staffordshire a better place to live	1	8	4		
Affect business and commerce opportunities in North Staffordshire	2	9	3		

In addition to the selected responses chosen there were 3 other comments:

There would be impacts on availability of housing
Health promotion work would be needed to ensure long-term impacts were good.
Quality of primary care could deteriorate if things were not managed properly.

4 Questionnaire to persons attending Area Panels

Questionnaires were distributed to people attending Area Panels held during June and July for

- Burslem South, Northwood and Birches Head
- Hanley, West,Shelton, Hartshill and Penkhull
- Fenton, Longton North
- Weston, Meir North, Meir Park and Sandon

Each panel was attended by about 10 people and 31 questionnaires were returned

The introduction to the questionnaire was a s follows:-

A project is underway in North Staffordshire to rebuild the main hospitals, improve other health facilities, develop a new medical school and restructure the way health care is delivered (Fit for the Future Project). This will include building new hospitals on the City General and Haywood Hospital sites and developing closer links between hospital services, family doctor and community services.

In light of these developments we would like to ask you to participate in a Health Impact Assessment exercise that is being carried out on the above projects. A Health Impact Assessment is a way of deciding what are the positive and negative impacts of a new project, programme or policy on the health of the local community, its environment, employment opportunities and local commerce. In undertaking a Health Impact Assessment it is hoped that a clear picture of these impacts can be gained and therefore there will be an opportunity to maximise the positive impacts and minimise the negatives.

We are seeking your involvement as we believe that you are important stakeholders in what happens both during the building of the hospital, the changing of the way services are delivered and use of the hospital thereafter.

Your views will make up an important part of the research for the Health Impact Assessment. All information will be treated in strictest confidence.

If you would like to participate then please answer the following questions:

The building of a new hospital in North Staffordshire and changing the way services are delivered will:

Numbers giving each response

	Much Better	Better	No Change	Worse	Much Worse
Change health care provision	8	20	1		
Affect employment opportunities in North Staffordshire	3	20	6		
Affect how people in other parts of the country think about North Staffordshire	3	15	10		
Make North Staffordshire a better place to live	7	19	4		
Affect business and commerce opportunities in North Staffordshire	5	12	9		

Other impacts that were mentioned were

Positive

- Improved health
- Reduction in waiting lists

Negative

- Not enough parking
- Problems with service delivery during construction work

5. Questionnaire to Stoke-on Trent City Council Citizens panel. – March 2004

In 1998 a panel was established containing approximately 1000 residents representative of the population in terms of age, sex and employment status. This panel is regularly consulted by postal survey. In March 2004 questions were included about the rebuilding of the hospitals and redesign of health services with a cvlosed set of responses.

The question was
A project is underway in North Staffordshire to rebuild the main hospitals, improve other health facilities, develop a new medical school and restructure the way health care is delivered (Fit for the Future Project). This will include building new hospitals on the City General and Haywood Hospital sites and developing closer links between hospital services, family doctor and community services.

How do you think this will affect things in North Staffordshire?

1. Much better 2. Better 3. No Change
4. Worse 5 Much Worse 6. Don't Know

Percentage making different responses

	1	2	3	4	5	6
Improve health care for those who need it	34.6	42.6	10.1	1.0	0.5	11.2
Affect employment opportunities in North Staffordshire	18.9	47.5	17.2	0.7	0.9	14.8
Affect how people in other parts of the country think about North Staffordshire	22.0	33.9	29.0	0.3	0.2	14.7
Make North Staffordshire a better place to live	26.9	39.0	22.3	0.9	0.3	10.6
Affect business and commerce opportunities in North Staffordshire	14.8	32.7	32.2	-	0.3	19.9

Appendix 13

Further details on IMD 2004

Table A13.1

Indices of Deprivation Stoke on Trent (160 SOAs)

Super Output Area Level – SOA in Worst decile and Worst quartile

XXX = most deprived 10%
X = most deprived 25%
SOAs with no domains in worst quartile are not included in table

IMD Index of Multiple Deprivation
INC Income
EMP Employment
HEA Health and disability
EST Education Skills and Training
CRI Crime
LIV Living Environment
(Barriers to Housing and Services not included) in table

The number after each ward indicates the total number of SOAs in that ward

SOA		IMD	INC	EMP	HEA	EST	CRI	LIV
EO1014210	Abbey Green (8)	XXX	XXX	XXX	XXX	XXX	X	
EO1014211	Abbey Green (8)	XXX	XXX	XXX	XXX	XXX		
EO1014212	Abbey Green (8)	XXX	XXX	XXX	XXX	XXX		
EO1014213	Abbey Green (8)	X	X	XXX	XXX	XXX		
EO1014215	Abbey Green (8)				X	X		
EO1014217	Abbey Green (8)	XXX	XXX	XXX	XXX	XXX		
EO1014218	Bentilee and Townsend (8)	XXX	XXX	XXX	XXX	XXX		
EO1014219	Bentilee and Townsend (8)			X	X			
EO1014220	Bentilee and Townsend (8)	XXX	XXX	XXX	XXX	XXX	X	
EO1014221	Bentilee and Townsend (8)	XXX	XXX	XXX	XXX	XXX	X	X
EO1014222	Bentilee and Townsend (8)	XXX	XXX	XXX	XXX	XXX	XXX	
EO1014223	Bentilee and Townsend (8)	XXX	XXX	XXX	XXX	XXX	XXX	
EO1014224	Bentilee and Townsend (8)	XXX	XXX	XXX	XXX	XXX	XXX	
EO1014225	Bentilee and Townsend (8)							X
EO1014226	Berryhill and Hanley East (7)	X	X	X	XXX	XXX		
EO1014227	Berryhill and Hanley East (7)	X		X	X	X		X
EO1014228	Berryhill and Hanley East (7)				X			
EO1014229	Berryhill and Hanley East (7)	XXX	X	XXX	XXX	XXX	X	
EO1014230	Berryhill and Hanley East (7)	X		X	X	X	X	X
EO1014231	Berryhill and Hanley East (7)	XXX	X	XXX	XXX		X	X
EO1014232	Berryhill and Hanley East (7)	X		X	X	X		X
EO1014233	Blurton (8)			X	X			
EO1014234	Blurton (8)	XXX	XXX	XXX	XXX	XXX	X	
EO1014235	Blurton (8)	X	X	XXX	XXX		X	
EO1014236	Blurton (8)	XXX	XXX	XXX	XXX	XXX		
EO1014237	Blurton (8)	XXX	XXX	XXX	XXX	XXX	X	
EO1014238	Blurton (8)	XXX	XXX	XXX	XXX	XXX		
EO1014239	Blurton (8)			X	X	X		
EO1014240	Blurton (8)	X	X	XXX	X	X		

Table A13.1 (Continued)

SOA		IMD	INC	EMP	HEA	EST	CRI	LIV
EO1014241	Burslem North (8)	X	X	X	XXX	XXX	XXX	
EO1014242	Burslem North (8)	XXX	X	XXX	XXX	XXX	X	
EO1014243	Burslem North (8)						X	
EO1014244	Burslem North (8)	XXX	XXX	XXX	XXX	XXX	X	
EO1014245	Burslem North (8)				X		X	X
EO1014246	Burslem North (8)	X	X	X	XXX	XXX	XXX	X
EO1014247	Burslem North (8)	X		X	X	XXX	XXX	XXX
EO1014248	Burslem North (8)	X		X	X	X	X	XXX
EO1014249	Burslem South (8)	XXX	XXX	XXX	XXX	X	X	XXX
EO1014250	Burslem South (8)	XXX	XXX	XXX	XXX	XXX	XXX	XXX
EO1014251	Burslem South (8)	XXX	XXX	XXX	XXX	XXX	XXX	XXX
EO1014252	Burslem South (8)	X			X	X	X	X
EO1014253	Burslem South (8)				X	X		
EO1014254	Burslem South (8)	XXX	XXX	XXX	XXX	XXX	XXX	XXX
EO1014255	Burslem South (8)	XXX	XXX	XXX	XXX	XXX	X	
EO1014256	Burslem South (8)	XXX	XXX	XXX	XXX	X	XXX	X
EO1014257	Chell and Packmoor (8)	X		X	X	X	X	
EO1014259	Chell and Packmoor (8)			X	XXX	X	X	
EO1014260	Chell and Packmoor (8)	XXX	X	XXX	XXX	XXX	XXX	
EO1014261	Chell and Packmoor (8)	XXX	XXX	XXX	XXX	XXX	XXX	
EO1014262	Chell and Packmoor (8)	XXX	X	XXX	XXX	XXX	XXX	
EO1014263	Chell and Packmoor (8)	XXX	XXX	XXX	XXX	XXX	X	
EO1014264	Chell and Packmoor (8)			X	X		X	
EO1014266	East Valley (8)	X	X	X	X	X	X	X
EO1014267	East Valley (8)				X	X	X	
EO1014268	East Valley (8)	X	X	XXX	XXX	XXX	X	
EO1014269	East Valley (8)	XXX	XXX	XXX	XXX	XXX	X	
EO1014271	East Valley (8)				X		X	
EO1014273	Fenton (8)	X	X	X	X	X	X	XXX
EO1014274	Fenton (8)	XXX	X	XXX	XXX	XXX	XXX	
EO1014275	Fenton (8)	XXX	X	XXX	XXX	XXX	X	XXX
EO1014276	Fenton (8)	X	X	X	X	X	X	XXX
EO1014277	Fenton (8)			X	X	X	X	X
EO1014278	Fenton (8)	X		X	X	X	X	X
EO1014279	Fenton (8)	X	X	X	X	X	X	X
EO1014280	Fenton (8)			X	X	X		
EO1014281	Hanley West and Shelton (7)	X	X	X	XXX	X		XXX
EO1014282	Hanley West and Shelton (7)				XXX		X	
EO1014283	Hanley West and Shelton (7)				X	X	X	XXX
EO1014284	Hanley West and Shelton (7)				X			XXX
EO1014285	Hanley West and Shelton (7)	XXX	X	XXX	XXX	X	XXX	XXX
EO1014286	Hanley West and Shelton (7)	XXX	XXX	XXX	XXX	X	X	XXX
EO1014287	Hanley West and Shelton (7)	XXX	XXX	XXX	XXX	X	XXX	X
EO1014288	Hartshill and Penkhull (8)							X
EO1014290	Hartshill and Penkhull (8)							X
EO1014291	Hartshill and Penkhull (8)	X	X	X	X		X	
EO1014292	Hartshill and Penkhull (8)							X
EO1014293	Hartshill and Penkhull (8)				X			XXX
EO1014294	Hartshill and Penkhull (8)				X			
EO1014295	Hartshill and Penkhull (8)				X			X
EO1014296	Longton North (9)	X		X	X	X		
EO1014297	Longton North (9)				X			
EO1014298	Longton North (9)	XXX	X	XXX	XXX	XXX		

Table A13.1 (continued)

SOA		IMD	INC	EMP	HEA	EST	CRI	LIV
EO1014299	Longton North (9)				X	X		
EO1014300	Longton North (9)	XXX	X	XXX	XXX	XXX		
EO1014301	Longton North (9)				X	X		
EO1014302	Longton North (9)	XXX	X	XXX	XXX	XXX	X	
EO1014304	Longton South (9)				X			
EO1014305	Longton South (9)	X	X	X	XXX	XXX		X
EO1014306	Longton South (9)	X	X	X	XXX	XXX		X
EO1014307	Longton South (9)	X	X	XXX	XXX	XXX		X
EO1014308	Longton South (9)			X	X			
EO1014309	Longton South (9)	X	X	XXX	XXX	X	X	
EO1014311	Longton South (9)	X	X	X	X	XXX	X	
EO1014312	Longton South (9)			X		X		
EO1014313	Longton South (9)	XXX	X	XXX	XXX	XXX		
EO1014316	Meir Park and Sandon (9)	XXX	XXX	XXX	XXX	XXX	X	
EO1014317	Meir Park and Sandon (9)	XXX	XXX	XXX	XXX	XXX	X	
EO1014319	Meir Park and Sandon (9)				X			
EO1014321	Meir Park and Sandon (9)	X		X	X	X		X
EO1014322	Meir Park and Sandon (9)	X	X	XXX	XXX	X		
E01014323	Northwood & Birches Head	X			X	X	X	XXX
E01014326	Northwood & Birches Head						X	
E01014327	Northwood & Birches Head				X	X	X	X
E01014328	Northwood & Birches Head	X	X	X	X	X	XXX	X
E01014329	Northwood & Birches Head	X			X	X	X	X
E01014330	Northwood & Birches Head	XXX	XXX	XXX	XXX	X	XXX	X
EO1014331	Norton and Bradeley (7)	XXX	X	XXX	XXX	XXX	XXX	
EO1014333	Norton and Bradeley (7)				X		X	
EO1014334	Norton and Bradeley (7)	X		X	X	X	X	
EO1014335	Norton and Bradeley (7)				X			
EO1014336	Norton and Bradeley (7)	XXX	XXX	XXX	XXX	XXX	X	
EO1014337	Norton and Bradeley (7)	X	X	X	X	XXX	XXX	
EO1014338	Stoke and Trent Vale (8)	X					X	X
EO1014339	Stoke and Trent Vale (8)	X			X	X		XXX
EO1014340	Stoke and Trent Vale (8)	X		X	X	X	X	XXX
EO1014341	Stoke and Trent Vale (8)	X	X	X	X	XXX		X
EO1014342	Stoke and Trent Vale (8)	X	X	XXX	XXX	X		X
EO1014343	Stoke and Trent Vale (8)				X	X		X
EO1014344	Stoke and Trent Vale (8)	X	X	X	XXX	X		X
EO1014345	Stoke and Trent Vale (8)	X	X	X	XXX	X	X	XXX
EO1014353	Trentham and Hanford (8)	X	X	X	X	X		
EO1014354	Tunstall (8)	XXX	XXX	XXX	XXX	X	XXX	X
EO1014355	Tunstall (8)	X	X	X	XXX	X	XXX	XXX
EO1014356	Tunstall (8)	X	X	X	X	X	X	X
EO1014357	Tunstall (8)	X	X	X	XXX	X	X	
EO1014358	Tunstall (8)	XXX	XXX	XXX	XXX	XXX	XXX	
EO1014359	Tunstall (8)	X	X	X	XXX	XXX	XXX	
EO1014360	Tunstall (8)				X	X	X	
EO1014361	Tunstall (8)	X	X	X	X	XXX	XXX	XXX
EO1014362	Weston and Meir North (8)				X			
EO1014363	Weston and Meir North (8)			X				
EO1014364	Weston and Meir North (8)	X		X	X		X	
EO1014365	Weston and Meir North (8)			X	X			
EO1014366	Weston and Meir North (8)	XXX	XXX	XXX	XXX	XXX	X	
EO1014367	Weston and Meir North (8)	XXX	XXX	XXX	XXX	XXX	X	
EO1014368	Weston and Meir North (8)	XXX	X	XXX	XXX	XXX	X	
EO1014369	Weston and Meir North (8)	X	X	XXX	XXX	XXX		

Table A13.2

Indices of Deprivation Newcastle under Lyme (81 SOAs)

Super Output Area Level – SOA in Worst decile and Worst quartile

XXXX = most deprived 10%

X = most deprived 25%

SOAs with no domains in worst quartile are not included in table

Conventions and abbreviations as for Table A13.1

SOA	Ward	IMD	INC	EMP	HEA	EST	CRI	LIV
EO1029535	Audley and Bignall End (4)		X	X	X	X		
EO1029537	Bradwell (4)					X		
EO1029538	Bradwell (4)	X	X	XXX	XXX	XXX		
EO1029541	Butt Lane (4)		X	X	X	X		
EO1029543	Butt Lane (4)	X	X	X	XXX	XXX	X	
EO1029545	Chesterton (5)					X		
EO1029547	Chesterton (5)	X	X	X	XXX	X		
EO1029548	Chesterton (5)	X	X	XXX	XXX	XXX		
EO1029549	Clayton (3)			X	X			
EO1029552	Cross Heath (4)			X	X	X		
EO1029553	Cross Heath (4)	X	X	X	X	XXX		
EO1029554	Cross Heath (4)	XXX	XXX	XXX	XXX	XXX	X	
EO1029555	Cross Heath (4)					X	X	
EO1029557	Halmerend (2)						X	
EO1029558	Holditch (3)	X	X	X	X	XXX		
EO1029559	Holditch (3)			X	X	X		
EO1029560	Holditch (3)	X	X	XXX	X	XXX		
EO1029561	Kidsgrove (5)	X		X	X	XXX		
EO1029564	Kidsgrove (5)	X		X	X	XXX	X	X
EO1029566	Knutton and Silverdale (3)	XXX	XXX	XXX	XXX	XXX		
EO1029567	Knutton and Silverdale (3)			X	X			
EO1029568	Knutton and Silverdale (3)			X	X	X		
EO1029578	May Bank (4)			X				
EO1029585	Porthill (3)							X
EO1029587	Ravenscliffe (3)					X		
EO1029591	Seabridge (4)			X	X			
EO1029593	Silverdale and Parksite (2)	X	X	X	X	X		
EO1029597	Talke (3)			X		XXX		
EO1029598	Thistleberry (4)	X	X	X	XXX	X	X	
EO1029599	Thistleberry (4)			X	X			
EO 1029602	Town (3)				X		XXX	XXX
EO 1029603	Town (3)			X				X
EO 1029604	Town (3)	X		X	XXX		XXX	X
EO1029609	Wolstanton (4)							X
EO1029610	Wolstanton (4)							X
EO1029611	Wolstanton (4)			X	X	X		

Table A13.3

Indices of Deprivation Staffordshire Moorlands (59 SOAs)

Super Output Area Level – SOA in Worst decile and Worst quartile

XXXX = most deprived 10%

X = most deprived 25%

SOAs with no domains in worst quartile are not included in table

Conventions and abbreviations as for Table A13.1

SOA		IMD	INC	EMP	HEA	EST	CRI	LIV
EO1029763	Biddulph East (4)	X	X	X	X	X	XXX	
EO1029765	Biddulph East (4)	XXX	X	XXX	XXX	XXX	XXX	
EO1029766	Biddulph East (4)			X	X	X	X	
EO1029774	Biddulph West (3)						X	
EO1029782	Cheadle North East (2)	X		X	X	X		
EO1029783	Cheadle North East (2)			X		X		
EO1029787	Cheadle West (3)			X	X			
EO 1029797	Dane (1)							X
EO1029798	Forsbrook (3)				X			
EO10298054	Leek East (3)							XXX
EO1029805	Leek East (3)						X	
EO1029807	Leek North (4)				X			
EO1029808	Leek North (4)					X		X
EO1029809	Leek North (4)	X	X	X	X	XXX		
EO1029810	Leek North (4)	X	X	X	X	X		
EO1029812	Leek South (3)			X	X			X

Table A13.4

Indices of Deprivation Stoke on Trent (160 SOAs)

Super Output Area Level – SOA in Best decile and Best quartile

XXXX = least deprived 10%

X = least deprived 25%

SOAs with no domains in best quartile are not included in table

Conventions and abbreviations as for Table A13.1

SOA		IMD	INC	EMP	HEA	EST	CRI	LIV
EO1014258	Chell and Packmoor (8)		X					X
EO1014265	East Valley (8)	X	X					
EO1014272	East Valley (8)		X					
EO1014299	Longton North (9)		X					
EO1014284	Hanley West and Shelton (7)			X				
EO1014289	Hartshill and Penkhull (8)					X		
EO1014303	Longton North (9)		X					
EO1014314	Meir Park and Sandon (9)		X					
EO1014315	Meir Park and Sandon (9)		X					
EO1014318	Meir Park and Sandon (9)		X					X
EO1014320	Meir Park and Sandon (9)		XXX			X		X
EO1014325	Northwood & Birches Head (8)		X					
EO1014325	Northwood & Birches Head (8)		X					
EO1014347	Trentham and Hanford (8)		X					X
EO1014348	Trentham and Hanford (8)		X			X		
EO1014349	Trentham and Hanford (8)		XXX					
EO1014350	Trentham and Hanford (8)	X	X					X
EO1014351	Trentham and Hanford (8)							X
EO1014352	Trentham and Hanford (8)	X	XXX			X		X

Table A13.5

Indices of Deprivation Newcastle-under-Lyme (81 SOAs)

Super Output Area Level – SOA in Best decile and Best quartile

XXXX = least deprived 10%

X = least deprived 25%

SOAs with no domains in best quartile are not included in table

Conventions and abbreviations as for Table A13.1

SOA		IMD	INC	EMP	HEA	EST	CRI	LIV
EO1029536	Bradwell (4)		X				X	X
EO1029540	Butt Lane (4)							X
EO1029544	Chesterton (5)		X					XXX
EO1029546	Chesterton (5)	X	XXX	X				X
EO1029557	Halmerend(2)	X	X					
EO1029562	Kidsgrove (5)		X					X
EO1029565	Kidsgrove (5)	X	XXX	X				X
EO1029569	Loggerheads and Whitmore							X
EO1029570	Loggerheads and Whitmore		X			XXX		
EO1029571	Loggerheads and Whitmore		X			X		XXX
EO1029572	Loggerheads and Whitmore	X	XXX			X	X	XXX
EO1029573	Madeley (4)	X				X	X	
EO1029574	Madeley (4)		X					X
EO1029576	Madeley (4)	XXX	XXX	XXX		X		X
EO1029577	May Bank (4)		X					
EO1029579	May Bank (4)		X					
EO1029580	May Bank (4)		X					
EO1029582	Newchapel (2)							X
EO1029586	Ravenscliffe (3)		XXX					X
EO1029589	Seabridge (4)	XXX	XXX	X		XXX		XXX
EO1029590	Seabridge (4)							X
EO1029592	Seabridge (4)	XXX	XXX	X		X		XXX
EO1029596	Talke (3)							X
EO1029600	Thistleberry (4)		X			X		
EO1029601	Thistleberry (4)	X	X			XXX		
EO1029605	Westlands (4)	X	X			XXX		
EO1029606	Westlands (4)	XXX	XXX	X		XXX		X
EO1029608	Westlands (4)	X	XXX			XXX	X	XXX
EO1029610	Wolstanton (4)		X					

Table A13.6

Indices of Deprivation Staffordshire Moorlands (59 SOAs)

Super Output Area Level – SOA in Best decile and Best quartile

XXXX = least deprived 10%

X = least deprived 25%

SOAs with no domains in best quartile are not included in table

Conventions and abbreviations as for Table A13.1

SOA		IMD	INC	EMP	HEA	EST	CRI	LIV
EO1029761	Alton (1)					X		
EO1029762	Bagnall and Stanley (1)					X		
EO1029764	Biddulph East (4)							X
EO1029767	Biddulph Moor (1)	X	X			X	XXX	X
EO1029769	Biddulph North (3)							X
EO1029769	Biddulph North (3)		X			X		X
EO1029770	Biddulph North (3)	X	X				X	XXX
EO1029771	Biddulph South (1)							X
EO1029773	Biddulph West (3)		X					
EO1029775	Brown Edge and Endon (3)		X					XXX
EO1029776	Brown Edge and Endon (3)	X	XXX			X	X	X
EO1029779	Cellarhead (2)		XXX					XXX
EO1029780	Cellarhead (2)							X
EO1029781	Cheadle North East (2)						X	X
EO1029784	Cheadle South East (2)		X				X	X
EO1029785	Cheadle West (3)		XXX				X	XXX
EO1029786	Cheadle West (3)							XXX
EO1029788	Checkley (4)	X	X			X	XXX	
EO1029789	Checkley (4)						X	X
EO1029790	Checkley (4)						X	
EO1029791	Checkley (4)	X	X					
EO1029792	Cheddleton (3)						X	
EO1029793	Cheddleton (3)						X	
EO1029795	Churnet (2)						X	
EO1029797	Dane (1)		X					
EO1029799	Forsbrook (3)						X	X
EO1029800	Forsbrook (3)		X					X
EO1029801	Hamps Valley (1)		X		X		X	
EO1029802	Horton (1)		X			X		
EO1029803	Ipstones (1)						XXX	
EO1029805	Leek East (3)	X	X			X		
EO1029815	Leek West (3)	X	X				X	X
EO1029816	Leek West (3)	X	X				X	XXX
EO1029817	Manifold (1)		X				X	
EO1029818	Werrington (2)	X	X			X	X	X
EO1029819	Werrington (2)		X				X	

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