

Gloucestershire First/SWRDA

**Gloucestershire
Workspace
Policy Framework
Technical Appendix 2:
Trends in the Economy**

March 2005

DTZ Pieda Consulting
Greyfriars Gate
5 Greyfriars Rd
Reading
RG1 1NU

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Gloucestershire Workspace Policy Framework Technical Appendix 2: Trends in the Economy

A Final Report

by

DTZ PIEDA CONSULTING

Greyfriars Gate
5 Greyfriars Road
Reading RG1 1NU

Tel: 0118 967 2020
Fax: 0118 950 3759 & 9584378

Also at Belfast, Birmingham, Bristol, Cardiff, Dublin, Edinburgh,
Leeds, London & Manchester

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2.1 INTRODUCTION

This Technical Appendix examines the different sectors of the economy, identifying how well they are performing and are expected to perform in the future based on forecasts undertaken by DTZ Pidea Consulting.

2.2 EMPLOYMENT STRUCTURE BY SECTOR

Location quotient analysis, comparing Gloucestershire to GB is contained within Table 2.1 and Figure 2.1 below. A figure greater than 1 signifies an over-representation or specialisation in the particular sector compared to GB, a figure of exactly 1 shows an equivalent proportion of employment in the sector, a figure of less than one shows an under-representation compared to Great Britain.

Gloucestershire has an over-representation of employment in energy and water, manufacturing, construction, and a slight over-representation in distribution, hotels and restaurants. This over-representation reflects the traditional strength of the Gloucestershire economy in manufacturing, especially mechanical engineering, as well as the strong retail and leisure markets, reflecting the County's growing tourism economy. In addition, Gloucestershire is becoming an important centre for distribution with its motorway links to most parts of the country.

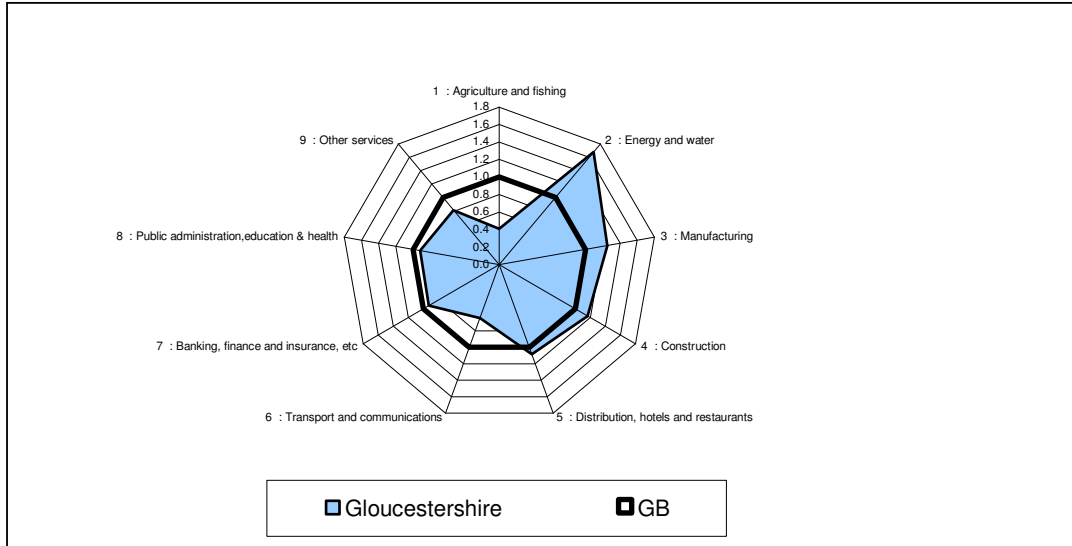
Gloucestershire is under-represented in transport and communications, reflecting partially the scale of public transport facilities in the County. In terms of banking, finance and insurance etc. the County is slightly under-represented in terms of employment, although this sector remains strong in certain locations such as Cheltenham, Gloucester, Stroud and Cirencester with a number of financial companies represented, such as Zurich Financial Group. Employment in public administration, education and health; and other services, which include entertainment, sport and retail services such as hairdressing is also slightly under-represented.

Table 2.1: Gloucestershire Location Quotients – 2001

Standard Industrial Classification 1992	LQ
Agriculture & Fishing	Unreliable Data
Energy & Water	1.7
Manufacturing	1.3
Construction	1.2
Distribution, hotels and restaurants	1.1
Transport and Communications	0.6
Banking, finance and insurance etc.	0.9
Public administration, education and health	0.9
Other services	0.8

Source: Annual Business Inquiry © Crown Copyright Reserved

Figure 2.1: Location Quotients – Gloucestershire and GB



Source: Annual Business Inquiry © Crown Copyright Reserved

2.2 BROAD SECTOR CHANGE

During the last two decades the overall trend in the UK has been one of manufacturing sector decline and the growth of the service sector. Service sector employment now accounts for 76% of jobs in GB compared to 62% in the 1980's.

The rate of employment growth for Gloucestershire over the period 2001-2016 is set to be around 0.4% per annum, which is half the employment rate sustained over the period 1991-2001. In comparison to the UK growth rate, Gloucestershire's will be slightly below the 0.5% per annum growth rate. The halving of the rate of employment growth may have a considerable impact on the property market, although productivity forecasts (as set out in Technical Appendix 1) reveal growth rates for all sectors of the economy.

Forecasts for broad sectors of the Gloucestershire economy have been produced from the Cambridge Econometrics data and the Annual Business Inquiry. Tables 2.3 and 2.4 set out the forecasts from 2001-2016.

Table 2.3 reveals that the key sectors of employment by 2016 are likely to be education and health, other business services, retailing and manufacturing.

Employment growth is expected in education and health, Retailing, Other business services, Construction, Other services (which includes recreational, cultural and sporting activities), Hotels and catering, Distribution, Transport and communications and a small increase in Insurance.

The key drivers of workspace over the period are likely to be in these sectors, as the manufacturing sector slows, although it is recognised that space will be needed for industrial activities, especially within specialist sectors of the economy.

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The construction, education and health sectors are unlikely to create demand for significant amount of workspace. However, the growth of the knowledge economy will be dependent on innovative ideas and techniques that may come from a number of sectors being transformed through incubator units. With the decline in large-scale inward investment and the growth in small businesses, there will be a growing need for business mentoring to nurture high growth innovative companies.

Table 2.3: Broad Sector Forecasts 2001-2016 – Gloucestershire

SECTOR ('000'S)	2001	2006	2011	2016	Absolute Employment Change 2001 - 2016	% Change 2001-2016
Agriculture	13.3	11.0	10.2	9.4	-3.9	-30%
Coal	0.0	0.0	0.0	0.0	0.0	-
Oil and Natural Gas	0.1	0.1	0.1	0.1	0.0	-17%
Other Mining	0.3	0.3	0.2	0.2	-0.1	-30%
Manufacturing	45.4	39.8	36.8	33.6	-11.8	-26%
Electricity, Gas & Water	2.6	2.8	2.6	2.5	-0.1	-4%
Construction	21.2	24.6	25.6	26.8	5.6	26%
Retailing	31.2	32.7	35.0	37.0	5.8	19%
Dist'n NES	17.4	18.3	18.7	19.3	1.9	11%
Hotels & Catering	21.7	23.2	24.5	24.4	2.7	12%
Transport & Communications	10.8	11.2	11.3	11.4	0.6	6%
Banking & Finance	9.8	9.6	9.4	9.2	-0.6	-6%
Insurance	4.2	4.4	4.6	5.1	0.9	21%
Other Business Services	36.0	35.3	38.2	41.7	5.7	16%
Public Admin & Defence	16.3	16.9	16.7	16.1	-0.2	-1%
Education & Health	48.5	52.0	53.6	55.4	6.9	14%
Other Services	12.0	13.9	15.3	16.4	4.3	36%
Total	290.8	296.1	302.8	308.4	17.6	6%

Source: DTZ derived from Cambridge Econometrics Forecasts and Annual Business Inquiry

Agriculture and manufacturing are the two principal sectors in decline in terms of employment, with banking and finance and public administration and defence also showing a slight decline up to 2016. All manufacturing broad sub-sectors are set to decline with the exception of Other Manufacturing, which contains a number of creative industries in arts and crafts and other products (see Table 2.4). Within these sub-sectors, IES¹ suggest that employment growth is expected in medical and precision engineering within the mechanical engineering sub-sector, as it is linked to R&D.

In terms of significant declining manufacturing sectors, Stroud, Tewkesbury and Cheltenham appear to be vulnerable from the forecast decline in employment within the electronics/electrical sector, especially those companies that are production-led.

For the Basic metals and metal products sector, the lower technology companies will continue to be vulnerable to market pressures, which is likely to affect many parts of the County. The Rubber and plastics sector is set for overall decline, although for hi-tech

¹ IES 'Key Sectors of the Gloucestershire Economy' 2002

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manufacturers such as Dupont growth of R&D may lead to a small need for highly skilled workers.

The Other transport equipment sector contains an element of aerospace employment, which is set for a loss of around 1,100 jobs to 2016. The County has some key employers in the sector such as Smiths Industries and Messier Dowty with good prospects in terms of productivity rather than employment, which may create some workspace requirements for local suppliers.

Table 2.4: Forecasts for the Manufacturing Sub-Sectors 2001-2016 – Gloucestershire

MANUFACTURING SUB-SECTORS ('000'S)	2001	2006	2011	2016	ABSOLUTE EMPLOYMENT CHANGE 2001 - 2016	% CHANGE 2001-2016
Food, Drink & Tobacco	4.1	3.9	3.5	3.2	-0.9	-21%
Textiles, Clothing & Leather	0.6	0.5	0.4	0.3	-0.3	-48%
Wood & Wood Products	1.3	1.3	1.2	1.2	-0.1	-7%
Paper, Print & Publishing	4.7	4.5	4.3	4.2	-0.5	-11%
Manufactured Fuels	0.2	0.2	0.1	0.1	-0.1	-43%
Chemicals & Man Made Fibres	2.2	2.1	2.0	1.9	-0.3	-16%
Rubber & Plastic Products	3.7	3.5	3.1	2.6	-1.1	-29%
Non Metallic Mineral Products	1.3	1.2	1.1	1.1	-0.3	-21%
Basic Metals & Metal Products	6.6	5.8	5.1	4.4	-2.2	-33%
Mechanical Engineering	7.2	6.4	5.9	5.4	-1.8	-24%
Electronics/Electrical	8.0	6.0	5.6	5.1	-2.8	-36%
Motor Vehicles	1.9	1.6	1.7	1.7	-0.3	-15%
Other Transport Equipment	2.0	1.6	1.2	0.9	-1.1	-57%
Other Manufacturing	1.5	1.4	1.4	1.5	0.0	-1%
Total Manufacturing	45.4	39.8	36.8	33.6	-11.8	-26%

Source: DTZ derived from Cambridge Econometrics Forecasts and Annual Business Inquiry

A review of the key sectors at District level taken from the IES report, as set out in Table 2.5 identifies strengths and weaknesses. Distribution is the key employment sector for the majority of Districts, with the exception of the Forest of Dean, which has neither a well-formed retail offer or Distribution base. Cheltenham and Gloucester have small proportions of declining sectors, with the majority of employment within growth or stable employment sectors. In contrast, the more rural Districts have some declining sectors of the economy in terms of employment, such as Food Chain Supply and Rubber and Plastics manufacturing.

Cheltenham, Cotswold and Tewkesbury Districts have an over-representation of employees in computing, a key growth sector of the future. Computing services is set to grow by 100% in terms of employment nationally over the period 2001-2016 according to Cambridge Econometrics.

The Forest of Dean and Stroud economies have suffered in recent years with job losses at large employers, such as Xerox and Lister Petter. The Peace Dividend in the early 1990s also created major job losses at Smiths Industries and Messier Dowty within Tewkesbury Borough. The aerospace industry has recovered in terms of productivity, but employment prospects remain low.

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Table 2.5: Key Sectors by Local Authority District in Gloucestershire 2000

District	Key Sectors – 2000	Employment Prospects
Cheltenham	Distribution Education Public Sector/Defence Business Services Financial Services Hotels and Catering Mechanical Engineering Wood/paper/publishing Computing	<i>Growth Sectors:</i> - Distribution - Education - Business Services - Financial Services - Hotels and Catering - Computing
Cotswold	Distribution Education Business Services Hotels and Catering Health Food Supply Chain Computing	<i>Growth Sectors:</i> - Distribution - Education - Business Services - Hotels and Catering - Computing <i>Declining Sectors:</i> - Food Supply Chain
Forest of Dean	Business Services Distribution Health Education Food Supply Chain Mechanical Engineering Hotels and Catering Transport and Communications Wood/paper/publishing Construction Rubber and Plastics	<i>Growth Sectors:</i> - Business Services - Distribution - Education - Hotels and Catering - Construction <i>Declining Sectors:</i> - Food Supply Chain - Rubber and Plastics
Gloucester	Distribution Health Business Services Financial Services Hotels and Catering Transport and Communications Mechanical Engineering Public Sector/Defence Education	<i>Growth Sectors:</i> - Distribution - Business Services - Financial Services - Hotels and Catering - Education
Stroud	Distribution Health Education Business Services Mechanical Engineering Hotels and Catering Food Supply Chain Transport and Communications Medical/Precision Engineering Wood/paper/publishing	<i>Growth Sectors:</i> - Distribution - Education - Business Services - Hotels and Catering - Medical/Precision Engineering <i>Declining Sectors:</i> - Food Supply Chain
Tewkesbury	Distribution Transport and Communications Public Sector/Defence Business Services Hotels and Catering Mechanical Engineering Education Medical/Precision Engineering Computing Rubber and Plastics Aerospace	<i>Growth Sectors:</i> - Distribution - Business Services - Hotels and Catering - Computing - Medical/Precision Engineering <i>Declining Sectors:</i> - Rubber and Plastics

Source: IES 'Key Sectors in the Gloucestershire Economy'

2.3 TARGET GROWTH SECTORS

In response to the changing economic base of the South West Region, the SWRDA have identified a number of target growth sectors. Within the context of Gloucestershire, growth sectors have been identified in the Gloucestershire Economic Strategy. Table 2.6 sets out the sectors identified within the regional and sub-regional economic strategies.

Table 2.6: Growth Sectors

Regional Economic Strategy	Gloucestershire Economic Strategy
Tourism	Leisure & Tourism
Food & Drink	Food Supply Chain
Advanced Engineering	Advanced Engineering
ICT	ICT
Marine	Financial Services
Environmental Technology	Environmental Technology
Creative Industries	Creative Industries
Biotechnology	

Each of the sectors in Gloucestershire has been assessed in terms of spatial and property requirements. It should be noted that economic growth does not correlate directly with property requirements, as technological advancements can reduce the need for both employees and floorspace. The remainder of this section assesses the property requirements for sectors based on employment forecasts and current market trends.

Information taken from the report by DTZ Pieda Consulting and Arthur D Little ‘The Spatial Dynamics of Change in the Region’s Key Sectors’ 2005 for SWRDA will supplement the growth forecasts for broad sectors already undertaken to date. Please note that the Study assesses each of the RDA growth sectors by the Gloucester and Cheltenham Travel-To-Work-Area as defined in 1998.

A full list of the sub-sectors that make-up the key SWRDA sectors is presented at the end of this Appendix.

2.3.1 Leisure and Tourism

The leisure and tourism sector has traditionally been strong in Gloucestershire due in part to the high quality natural environment and sporting/leisure events and attractions. Nationally, changes in lifestyle and incomes have helped to stimulate significant growth in the number and range of eating and drinking establishments, health and fitness centres, cinema etc. Leisure is the most rapidly expanding sector of the national economy and has experienced dramatic changes during the last decade. The Mintel ‘British Lifestyles Report’ indicates that spending on out-of-home entertainment has increased by 29% in real terms between 1991-2001.

This trend has had a significant impact on the property market within many of the County’s principal towns with considerable impact on the form and character of town centres.

The decline in traditional agricultural practices has also led to farm diversification, a key feature of many parts of the County, especially those financially supported by Government aid during the past ten or so years. This has led to the development of new tourist

attractions and self-catering accommodation adding to the range and choice of accommodation for visitors.

Table 2.7: Prospects for Leisure and Tourism

Employment Forecasts
<ul style="list-style-type: none"> • Gloucestershire net employment change 2001-2016 = 2,700; • Gloucester/Cheltenham TTWA net employment change 2001-2026 = 2,800; • Sector is particularly important for all Districts in the County.
Indicators of Future Change
<ul style="list-style-type: none"> • Potential growth in the UK short break market; • Increased disposable income creating potentially huge growth area; • Sport and recreation industry is growing and has potential for continued growth; • Growth in business tourism; • Growth in agri-tourism linked to CAP reform and agricultural restructuring.
Locational Drivers
<ul style="list-style-type: none"> • Availability of a large labour force for some leisure operators is an important locational factor; • Proximity to the national road network, public transport facilities and ICT connectivity, enable a leisure or tourist attraction to attract customers and staff; • The quality of the site environment and image is also a key driver.
Potential Workspace Implications
<ul style="list-style-type: none"> • Continued demand from national eating and drinking operators for high street pitches in strong retail centres; • New build leisure clusters in strategic locations with good accessibility and visibility accommodating restaurants/public houses, hotel and health and fitness centre, conference centres or sporting facilities etc.; • Continued development of tourism accommodation through the conversion of redundant farm buildings, especially with the CAP reforms; and • Possibly some additional tourist attractions to evolve the tourism product, which may require public funding to develop in some cases.

2.3.2 Food Supply Chain

The food supply chain is diverse and encompasses activities from farming through to food processing. The County boasts several large food manufacturers, such as Unilever, Dairy Crest and GlaxoSmithKline and some important food producing areas, such as part of the Vale of Evesham. The introduction of farmers’ markets in many towns across the County has raised the profile of local organic produce, but the majority of agricultural activities in the County remains low tech and low added value. Employment in food manufacture is particularly strong in Gloucester City and Stroud District.

There are also opportunities to develop the R&D cluster in the County with the presence of Campden and Chorleywood Food Research Association and the Royal Agricultural College, both based in Cotswold District.

Table 2.8: Prospects for Food Supply Chain

Employment Forecasts
<ul style="list-style-type: none"> • Gloucestershire net employment change 2001-2016 (Agriculture/Manufacture of Food, Drinks & Tobacco) = -4,800; • Gloucester/Cheltenham TTWA net employment change 2001-2026 = -2,200; • Sector is particularly important in Gloucester and Stroud for food manufacturing.

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Indicators of Future Change
<ul style="list-style-type: none"> • The sector is expected to experience continued decline in the short term with a levelling off in the medium term; • CAP reform will lead to increased productivity in the sector, although ‘decoupling’ will have the effect of reducing employment; • The growing trend is for smaller numbers of larger farms; • Secondary food processing is likely to increase with a shift to automation in future years; • Local niche produce with the focus on quality, traceability, and reduced food mileage maybe a potential growth area of the sector with local farmers’ markets and farm shops increasing in popularity.
Locational Drivers
<ul style="list-style-type: none"> • Availability of staff is an issue, as the sector is low skilled, and the use of migrant workers is increasing generally across the sector; • Clustering of activity close to the source of supply is also a key consideration for businesses to enable ‘just-in-time’ deliveries; • Site specific factors are important in the development of business activity with proximity to strategic roads and public transport important for both the distribution of goods and staff; • The quality of the site environment is also important to larger value-added manufacturers.
Potential Workspace Implications
<ul style="list-style-type: none"> • Some scope for selective small-scale workshop units for niche local food processing and packaging at farming source e.g. organic produce with good access to strategic locations and other infrastructure; • Potential growth in secondary processing activities, which is likely to require good quality modern manufacturing space close to major towns.

2.3.3 Advanced Engineering

Advanced engineering includes the mechanical engineering, aerospace, electronic/electrical, automotive and other transport equipment sub-sectors.

Engineering has traditionally been one of the cornerstones of the Gloucestershire economy based on the aerospace cluster with local firms supplying the large manufacturers such as Smiths Aerospace and Messier Dowty. Smiths Aerospace has a Centre of Manufacturing Excellence for training at their plant at Bishops Cleeve. The sector has experienced growth in medical and precision engineering with companies such as Corin Medical and Renishaw and Smiths Industries diversifying into this market, and a host of small specialist firms located in rural and urban areas.

Employment in aerospace is forecast to decline, although recent contracts such as the Joint Strike Fighter and Airbus A380 should provide long-term business security. Recent global events make these forecasts harder to predict, as on one hand the increase in military and anti-terrorism activities may provide new market opportunities, and on the other hand the impact on the aviation industry with the threat of terrorism may reduce engineering contracts.

Table 2.9: Prospects for Advanced Engineering

Employment Forecasts
<ul style="list-style-type: none"> • Gloucestershire net employment change 2001-2016 (Mechanical engineering, aerospace, electronic/electrical, automotive and other transport equipment sub-sectors)

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<ul style="list-style-type: none"> • = -6,000; • Gloucester/Cheltenham TTWA net employment change 2001-2026 = -1,700; • Advanced engineering is particularly strong in Tewkesbury, Stroud and Cheltenham
<p>Indicators of Future Change</p> <ul style="list-style-type: none"> • Employment within the sector is in decline, due to pressure on prices forcing production to lower cost locations; • With major supply chain linkages in Aerospace and Automotive sub-sectors large companies such as Smiths Industries, Messier Dowty remain important to the future of the sector regionally; • The key growth sector within advanced engineering will be medical instrumentation, which does not compete on price due to high technologies and low volumes of production.
<p>Locational Drivers</p> <ul style="list-style-type: none"> • Availability of skilled staff remains a key driver of advanced engineering, although there is a fairly old age structure in engineering generally; • Clustering of business activity within the sector is common for companies to link in with the supplier chain for sub-sectors such as aerospace and more added-value activities such as medical instruments increasingly seeking to co-locate with either major teaching hospitals, areas experiencing growth in biotechnology or Universities; • Connectivity is becoming increasingly important in growth sectors such as medical instrumentation in terms of design requiring high bandwidth capacity; • Proximity to the strategic road network is not as important to companies within this sector, although a good and clear route to strategic roads is important, as well as sites that offer 24 hour operations.
<p>Potential Workspace Implications</p> <ul style="list-style-type: none"> • Traditional manufacturing sites in the County, where the focus is on production rather than design may become vacant over the period to 2016; • There should be a shift in demand from B2 industrial to B1 hi-tech space with smaller business units becoming the norm; • High quality incubator and 'move on' space may be required for the growth manufacturing sectors such as medical instrumentation; • Some expansion space may be required for existing companies in-situ.

2.3.4 Information and Communications Technology (ICT)

ICT is revolutionising the entire business world, opening up opportunities for marketing and sales, outsourcing, remote working and self-employment. In terms of ICT manufacturers; software and network support services; and training companies, Gloucestershire has a number of prominent employers, such as Krone UK, Star Technology and QA Training.

The growth of email and the internet has enabled small firms harnessing its power as a business tool to be more footloose in location decision making. Some parts of Gloucestershire, such as Gloucester and Cheltenham are well placed to attract and nurture ICT operators with its high quality environment, high capacity connectivity and educational structure. More rural parts of the County are disadvantaged by a lack of connectivity to broadband. Gloucestershire First in association with SWRDA is seeking to tackle these issues through the formulation of an Action Plan for Broadband.

Table 2.10: Prospects for ICT

<p>Employment Forecasts</p> <ul style="list-style-type: none"> • Gloucester/Cheltenham TTWA net employment change 2001-2026 = 7,300; • Cambridge Econometrics forecast a 100% increase in employees nationally in computing services between 2001-2016; • Particularly important sector to grow Gloucester and Cheltenham PUA with smaller developments in market towns.
<p>Indicators of Future Change</p> <ul style="list-style-type: none"> • Strong growth is forecast for the sector, especially in software development; • Telecommunications sector likely to see strong growth in productivity (GVA), with little change in employment; • ICT manufacturing continues to change with production being moved to lower cost locations, although the design activity should remain in the UK.
<p>Locational Drivers</p> <ul style="list-style-type: none"> • Connectivity is a key driver with state-of-the-art high capacity ICT links required to maintain an area's attractiveness to business start-ups and inward investment; • Availability of skilled staff is another key drivers with highly qualified employees required, especially in terms of software development; • There is a tendency for ICT companies to cluster/co-locate together, and therefore opportunities to create the right environment to develop such businesses; • Quality of life factors can be important for staff and Directors, in terms of schools, entertainment and cultural facilities; • Some activity, especially in software development may operate from a home-base.
<p>Potential Workspace Implications</p> <ul style="list-style-type: none"> • B1 high quality business park accommodation with excellent broadband provision; • B1 high quality office space within urban centre locations; • Potential for converted offices in more rural locations for small businesses seeking quality of life; • Potential for affordable incubator space linked to educational institutions to nurture knowledge transfer.

2.3.5 Financial Services

The financial and business services sector is under going considerable structural change with the globalisation of back office functions, such as sales and customer support services to developing countries such as India, and a number of financial mergers and acquisitions, leading to rationalisation of office space and staffing.

The financial and business services sector remains a principal employer in Gloucestershire. There is a cluster of large organisations within Gloucester and Cheltenham, as well as significant employers in market towns. Key employers include Cheltenham & Gloucester, Zurich Financial Services, Endsleigh Insurance, Stroud & Swindon Building Society, St James Place, Chelsea Building Society, Lincoln Financial Group UK and Ecclesiastical Insurance.

Gloucestershire with its pool of financial expertise and rail and road links to Heathrow and London should maintain its position as a key location for the financial organisations currently represented, many of which have HQ rather than back office facilities.

Table 2.11: Prospects for Financial Services

<p>Employment Forecasts</p> <ul style="list-style-type: none"> • Gloucestershire net employment change between 2001-2016 = 6,000 jobs (including R&D and computing); • Financial services is strong in and around Cheltenham and Gloucester with pockets of employment in key market towns. Local professional services, such as estate agents, accountants, solicitors etc. are important to the growth of market towns across the County.
<p>Indicators of Future Change</p> <ul style="list-style-type: none"> • Financial services, including insurance are undergoing structural change with the outsourcing of business functions overseas, known as “offshoring”. Back offices rather than HQ offices are particularly under threat from this growing trend; • Forecasts reveal that growth in banking and finance will decline by 600 jobs between 2001-2016, whilst insurance will increase by 900 jobs which, is unlikely to create significant workspace requirements in the County; • The majority of the growth is within the local professional services sub-sector, which is dominated by the SME market; • Wireless technology should increase opportunities for footloose operations.
<p>Locational Drivers</p> <ul style="list-style-type: none"> • Accessibility by road and rail remains important to the business services sector, to access customer markets and attract staff. This is less of an issue for local professional services serving a market town; • Dedicated car parking remains a key requirement of occupiers; • Site environment and image remains important, with towns such as Cheltenham offering a prestige location for inward investors; • ICT connectivity is becoming increasingly important to interact with clients, with high capacity broadband essential for business; • Quality of life issues such as housing, schools, culture and entertainment can be a key locational driver for Directors and staff of financial and business services.
<p>Potential Workspace Implications</p> <ul style="list-style-type: none"> • Continued demand for appropriate town centre offices in the principal towns in the County to cater for firms within the business services sector, including both freehold and leasehold properties; • A range of units to provide for inward investment and upgrade or expansion space for local business and financial companies; • High quality office space in business park environments in edge-of or out-of-town locations at market towns, where modern space or larger units within the historic core is unavailable; • Flexible workspace, such as workstation space for SMEs in town centres.

2.3.6 Environmental Technology

The environmental services sector is the fastest growing global industry after ICT and identified as a key emerging sector in the South West and Gloucestershire. The environmental technology sector can embrace activities such as air pollution control, renewable energy, waste management, environmental consultancy services, sustainable land management, monitoring and analytical systems etc.

The sector is a key driver for sustainable economic growth enabling enhanced performance in agriculture and waste management. There are a number of small niche companies within the environmental technology sector in Gloucestershire, as well as major contractors and utilities harnessing new environmental techniques.

The precise workspace requirements for the environmental technology sector is difficult to gauge and may change over time as new products and facilities are developed.

Table 2.12: Prospects for Environmental Technology

Employment Forecasts
<ul style="list-style-type: none"> • Gloucester/Cheltenham TTWA net employment change 2001-2026 = 1,700
Indicators of Future Change
<ul style="list-style-type: none"> • The principal areas of future growth will be waste management and consultancy, this is likely to counteract any reductions created by automation and consolidation in the utilities industries; • The utilities will experience a slow decline in terms of numbers of employees, although productivity should increase; • There is likely to be growth in the construction sector related to infrastructure investment by utility companies; • Opportunities to produce power from waste or renewable forms of energy, such as wave and wind are likely to increase.
Locational Drivers
<ul style="list-style-type: none"> • Availability of skilled workforce remains a key locational requirement of businesses within this sector, especially in terms of consultancy based practices; • Consultancy based practices are footloose in their choice of location, which may make rural areas particularly attractive, especially with good access to airports; • Proximity to major roads is a key factor in the development of waste disposal and landfill sites.
Potential Workspace Implications
<ul style="list-style-type: none"> • Small office space for consultancy practices with good broadband connectivity in urban or rural locations; • Sites for the development of renewable energy at specific locations, such as Sharpness Docks; • Potential to establish an incubator in association with key educational institutions such as University of Gloucestershire, Royal Agricultural College and Hartpur College.

2.3.7 Creative Industries

The creative industries sector including media and publishing is a growing sector nationally. The Department for Culture, Media and Sport defines creative industries as “*those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property*”.

The creative industries sector includes activities such as advertising, art, crafts, design, film, music, performing arts, publishing, software and computer services and television and radio. Part of the creative industries sector is digitally based and requires high capacity, state-of-the-art broadband connectivity. The other part of the sector is performance and visual requiring different infrastructure and workspace requirements.

Gloucestershire has a wide range of large companies, SMEs and self-employed within this sector, all with differing property requirements. The larger firms include Brann Ltd, Minerva, Nelson Thornes and Paper House Group. The high environmental quality to be found within the County also breeds lifestyle creative industries, such as arts and crafts and antiques that take advantage of the tourism market and the affluence to be found in many parts of Gloucestershire. In addition, there are potential clusters of media activity that

could be developed in the County, with Cheltenham Film Studios providing a short-term opportunity to nurture related activities.

A large number of creative industries will remain micro-businesses, often working from a home-base with no space requirements, harnessing the power of ICT in the form of email and the internet. Other creative industries, such as in graphic design and computer software may grow rapidly requiring a more formal business base for increasing numbers of staff with high speed ICT links and meeting rooms.

Table 2.13: Prospects for Creative Industries

Employment Forecasts
<ul style="list-style-type: none"> • Gloucester/Cheltenham TTWA net employment change 2001-2026 = 1,500 • The creative industries sector is important for all Districts.
Indicators of Future Change
<ul style="list-style-type: none"> • This sector is SME dominated and links closely with the development of ICT with potential overlaps around animation, audio, visual etc; • Growth in the sector will be overwhelmingly focused around the digital content sub-sector, with some growth anticipated in cultural sub-sectors; • The cultural sub-sectors, such as arts and crafts play an important role in the tourism and leisure development of an area.
Locational Drivers
<ul style="list-style-type: none"> • Connectivity is a key driver for the digital content companies, such as multimedia, publishing, film and TV with broadband provision critical; • Clustering of activity is important within the digital sub-sectors, especially in terms of design, advertising and publishing; • Quality of life factors will be critical for the cultural sub-sectors, such as arts and crafts and performing arts; • The sector generally requires highly skilled staff; • Some level of home-working is likely.
Potential Workspace Implications
<ul style="list-style-type: none"> • High quality business park accommodation for certain requirements, such as printing and publishing principally through relocation of existing businesses from older stock; • Town centre office buildings close to other ICT or creative activities and social facilities for media, advertising and marketing companies; • Cluster of workspace within converted buildings with good access to leisure facilities; • Converted redundant buildings e.g. MOD or farm buildings in sustainable locations for remote-based firms harnessing ICT, as well as for a host of manufacturing activities such as arts, crafts, fashion across the County linked to tourist markets; • Specific creative clusters providing flexible, affordable incubation space supported by research or educational institutions; • Flexible products such as Live/work space.

In addition to the sector identified in the Gloucestershire Economic Strategy, the RDA identifies Biotechnology and Marine as two key sectors. These are assessed as follows:

2.3.8 Biotechnology

The biotechnology sector includes R&D activities, as well as manufacture of pharmaceutical products.

The sector is not well developed in the County as there is no world-class R&D facility or centre of learning specialising in biotechnology. Employment forecasts indicate some

potential to develop the sector, which could include nurturing new business start-ups as part of specialist incubators/innovation centres that also incorporate other high technology industries such as advanced engineering, environmental technology and ICT.

Table 2.14: Prospects for Biotechnology

Employment Forecasts
<ul style="list-style-type: none"> • Gloucester/Cheltenham TTWA net employment change 2001-2026 = 600 • A small by growing component of the County economy.
Indicators of Future Change
<ul style="list-style-type: none"> • There is significant growth in the global market for biotechnology, although the County lags behind other locations, where there is a well developed infrastructure base; • There remains an issue regarding the public acceptance of biotechnology research, which may limit the development of this sector; • Access to Venture Capital is crucial to the development of biotech companies that require capital for R&D activities over a number of years, before production can take place.
Locational Drivers
<ul style="list-style-type: none"> • Availability of very highly skilled individuals are required at graduate or postgraduate levels, which requires in-migration of these workers or training through Universities and research facilities; • Clustering of business activity within the sector is common for companies to link with key universities, research facilities and major drug companies; • High capacity connectivity is essential, and demand is likely to increase for state-of-the-art bandwidth; • Proximity to major transport nodes, for rapid accessibility to strategic roads, rail and air will be essential, enabling transport of goods, global business relationships and commuting opportunities for staff travelling to company locations; • Site security is becoming increasingly important for both products and staff.
Potential Workspace Implications
<ul style="list-style-type: none"> • High quality incubator space to develop start-up businesses with business mentoring depending on strength of demand; • Potential Technology/Enterprise Park in the long term if and when sector becomes well established to provide 'Move on' space that may incorporate laboratory/production/distribution uses with flexibility and connectivity for continuing expansion on the same site without relocating;

2.3.9 Marine

The marine sector includes Manufacture of engines and turbines, Building and repairing of ships, Building repairing of pleasure boats etc ships, and is a small component of the economy of Gloucestershire.

Table 2.15: Prospects for Marine

Employment Forecasts
<ul style="list-style-type: none"> • Gloucester/Cheltenham TTWA net employment change 2001-2026 = -100 • A small component of the County economy.
Indicators of Future Change
<ul style="list-style-type: none"> • There is likely to be increases in leisure and niche markets; • The servicing market for leisure crafts is time sensitive rather than price sensitive and therefore will not be subject to decline; • Increased leisure activity could lead to growth in this sub-sector;

<ul style="list-style-type: none"> The fortunes of the sector are dependent on a few major employers.
Locational Drivers
<ul style="list-style-type: none"> Access to water courses is the key locational attribute for businesses seeking to maintain and service leisure craft, such as docks and launches
Potential Workspace Implications
<ul style="list-style-type: none"> Demand for workspace is be very limited in terms of boat repairs and will focus on the existing canal network in the County, plus Sharpness Docks and Lydney Docks.

In addition, the assessment of the broad sectors identifies two key sectors of the economy that are likely to impact on workspace provision.

2.3.10 Distribution

The distribution sector is fuelled by the continuing high spending by consumers on the High Street and through the internet, increasing in part the requirements for distribution units in strategic locations.

The County has several locations that could be developed further for distribution, such as Sharpness Docks, land at RAF Quedgeley/Waterwells Business Park and Tewkesbury Business Park. Gloucestershire is not as popular a distribution location compared to other locations in the Country, such as the M1 around Northampton and North Bristol, but there is potential to attract major distributors.

Table 2.16: Prospects for Distribution

Employment Forecasts
<ul style="list-style-type: none"> Gloucestershire net employment change between 2001-2016 = 2,500 (Distribution NES and Transport and Communications sectors) M5 is key location in Gloucestershire
Indicators of Future Change
<ul style="list-style-type: none"> Continued high street spending will continue to fuel requirements for distribution; The increasing costs of road haulage may impact on the distribution component of the sector in future years, increasing the attractiveness of shipping and rail freight; The growth in the construction sector is likely to increase demand for trade counters in service centres.
Locational Drivers
<ul style="list-style-type: none"> For national distributors within this sector, the strategic location of the distribution point is the most critical factor, as the costs of transport far outweigh costs of the capital and operating costs of the warehouse building; Access to a large labour pool remains important for national operators seeking strategic locations; Immediate access to the national road network via an all-ways junction; The quality of the estate on which the units are situated is not a key site specific requirement, although most of the sites being developed close to the M5 are on good quality, newly developed business parks; Future option of rail freight provides a slight competitive advantage, although the freight facility must be strategically positioned to link in with a shipping port; Local wholesalers tend to cluster together on established industrial estates within market towns, preferring a modern, but not high quality unit with open storage.
Potential Workspace Implications
<ul style="list-style-type: none"> Large sites, or big units with high bay space are required, as well as immediate access to the national road network; Trade counters/wholesale units on estates within market towns.

2.3.11 Public Administration/Defence

The public administration/defence is strong in Gloucestershire employing 16,000 people with local government and GCHQ the main employers. Defence has been reduced in recent years within the County with the closure of several MOD sites such as Kemble, Little Rissington, Quedgeley. There remain several facilities, most notably at Ashchurch and Fairford.

Although jobs are expected to fall in the sector, there are opportunities from the Lyons Review that may stimulate demand for workspace in the County with the relocation of 20,000 civil servant jobs from London and the South East. The 'Independent Review of Public Sector Relocation: Comparative Assessment of Locations' prepared for the Lyons Review by King Sturge (December 2003) assessed locations against six scenarios of different types of public sector activity, which includes:

1. Information Support Contact Centres – handling telephone calls, issuing forms and standard guidance and data processing;
2. Interactive Contact Centres – requiring specialist knowledge and ability to interact with customers over the telephone;
3. Back Office processes – including clerical, routine processing and support functions that do not require higher level skills;
4. Higher Value Back Office functions – likely to relate to IT, HR and finance functions requiring higher level skills
5. Policy functions – policy making, policy delivery and regulatory activity with staff usually requiring a first degree/additional qualifications and requiring access to London;
6. Science functions – Technical staff with first degree/additional qualifications.

102 Locations were chosen for assessment against the different public sector activities using the following 12 variables:

- District population
- Population growth projection 2000-2010
- Working age population
- Unemployment rate
- Average weekly earnings
- Total employment
- Catchment population (within 30 minutes)
- Built office stock
- Prime office rents (in town)
- Prime office rents (out of town)
- Current surplus in the Government estate
- Future surplus in the Government estate

These 12 indicators were supplemented with other factors largely relating to the skills base for each work-type scenario to ensure that the most appropriate labour market was captured. The results of the assessment were as follows:

Table 2.17: Lyons Review – King Sturge Report Findings

Public Sector Function - Scenarios	Gloucester	Cheltenham
Information Support Contact Centres Base Case	3 rd Quartile	4 th Quartile
Interactive Contact Centre Base Case	3 rd Quartile	4 th Quartile
Back Office Base Case	3 rd Quartile	4 th Quartile
Higher Value Back Office Base Case	3 rd Quartile	2 nd Quartile
Policy Base Case	2 nd Quartile	2 nd Quartile
Policy Small Operations Scenario	1 st Quartile	1 st Quartile
Science Base Case	2 nd Quartile	3 rd Quartile
Science Small Operations Scenario	1 st Quartile	2 nd Quartile

Source: King Sturge

The findings of the King Sturge report identifies some distinct opportunities for both Gloucester and Cheltenham, especially in regards to the policy and science functions for small-scale relocations from London and the South East.

SWRDA are championing six priority locations in the region for potential civil service jobs from the Lyons Review. The six locations are Gloucester, Bristol, Swindon, Taunton, Exeter and Plymouth. A list of locations for smaller relocation projects has also been drawn up by SWRDA, but these do not include any towns within Gloucestershire. The regeneration agenda in Gloucester with the URC makes the City a key priority location to be promoted.

Table 2.17: Prospects for Public Administration/Defence

Employment Forecasts
<ul style="list-style-type: none"> • Gloucestershire net employment change between 2001-2016 = -200 • All Districts have strong employment within this sector, especially Cheltenham and Gloucester.
Indicators of Future Change
<ul style="list-style-type: none"> • Civil service and defence jobs are set to be lost in future years through Government reforms. 84,000 jobs are set to be lost in the civil service with 20,000 lost in defence; • 20,000 civil service jobs in London and the South East are being relocated to other parts of the Country as part of the Lyons Review; • Continued Government reform may lead to a decline in the sector over the period, depending on rationalisation.
Locational Drivers
<ul style="list-style-type: none"> • Government bodies and departments seeking office premises, often require good accessibility by road and rail with car parking facilities; • Good quality office stock/available sites, and the existing skills base were key considerations in the Lyons Review; • Connectivity to high speed broadband links is essential.
Potential Workspace Implications
<ul style="list-style-type: none"> • Lyons Review highlights Gloucester and Cheltenham as potential locations, although SWRDA are championing Gloucester for potential civil service jobs. • Potential release of MOD sites that offer new opportunities to the economic development of the County; • Potential to secure some new public sector investment through the Lyons Review and other Government or QUANGOs.

2.5 PRINCIPAL FINDINGS

The above demonstrates the changing nature of demand for employment sites and premises. If the Gloucestershire economy is to fulfil its full potential a range of appropriate sites and premises must be provided in the future. Traditional employment sites and premises may become redundant as modern occupiers increasingly seek high quality premises in high quality locations.

Within Gloucestershire, a set of diverse growth sectors have been identified with varying property and locational requirements. Several sectors are anticipated to require more flexible forms of workspace in future years, especially within the creative industries and business services sectors.

Whilst demand clearly still exists for office and industrial premises, the specification of the units is becoming an increasingly important issue, which is affecting the locational choice of businesses. In addition the growth of ICT has two main impacts on businesses: the expansion and creation of businesses offering ICT services to other firms; and, more significantly, the adoption of new working practices and business reorganisation.

Further advances in ICT, including the development of wireless technology, will enable business to consider a broader range of location. This is particularly relevant to those active in the knowledge sectors that increasingly are shifting life style to more rural locations or towns outside the traditional commercial and administrative centres. The advances in ICT will stimulate the development of offices in new locations and increase demand for rural workspace.

Despite, the forecast decline in the whole manufacturing sector, certain sub-sectors within advanced engineering are identified as growth sectors in the County. This will create demand for high quality manufacturing/R&D space. Generally these units will need to be located in a high quality environment, away from traditional 'industrial estates'.

In addition, the growth sectors will require the provision of incubation space in order to nurture business start ups.

ANNEX 1: SECTOR DEFINITIONS (SIC 92)

SECTOR DEFINITIONS (SIC 92)

Advanced Engineering (incl. Aerospace)

2940	Manufacture of machine tools
3130	Manufacture of insulated wire and cable
3210	Manufacture of electronic valves etc
3310	Manuf: medical/surgical equipment etc
3320	Manuf: instruments for measuring etc
3330	Manuf: industrial process control equip.
3340	Manufacture of optical instruments etc
3410	Manufacture of motor vehicles
3420	Manufacture of motor vehicles bodies etc
3430	Manufacture of parts for motor vehicles
3530	Manufacture of aircraft and spacecraft

Food & Drink

100	MAFF/DAFF Agricultural data
111	Growing of cereals and other crops nec
112	Growing of vegetables etc
113	Growing of fruit/nuts/beverage & spices
121	Farming of cattle, dairy farming
122	Farming of sheep/goats/horses/asses etc
123	Farming of swine
124	Farming of poultry
125	Other farming of animals
130	Growing of crops and farming of animals
141	Agricultural service activities
142	Animal husbandry activities
501	Fishing
502	Operation of fish hatcheries & farms
1511	Production and preserving of meat
1512	Production and preserving poultry meat
1513	Production: meat & poultry meat products
1520	Processing/preserving of fish
1531	Processing and preserving of potatoes
1532	Manufacture of fruit and vegetable juice
1533	Processing/preserving: fruit/veg nec
1541	Manufacture of crude oils and fats
1542	Manufacture of refined oils and fats
1543	Manufacture: margarine/similar fats
1551	Operation of dairies and cheese making

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1552	Manufacture of ice cream
1561	Manufacture of grain mill products
1562	Manufacture of starches/starch products
1571	Manufacture of feeds for farm animals
1572	Manufacture of prepared pet foods

Food & Drink cont.

1581	Manufacture of bread etc
1582	Manufacture of rusks, biscuits etc
1583	Manufacture of sugar
1584	Manufacture of cocoa; chocolate etc
1585	Manufacture of macaroni, noodles etc
1586	Processing of tea and coffee
1587	Manufacture of condiments and seasonings
1588	Manufacture of homogenised food etc
1589	Manufacture of other food products nec
1591	Manufacture of alcoholic beverages
1592	Production of ethyl alcohol
1593	Manufacture of wines
1594	Manufacture of cider/other fruit wines
1595	Manuf: other non-dist. fermentation. beverages
1596	Manufacture of beer
1597	Manufacture of malt
1598	Production of mineral waters/soft drinks

ICT

2233	Reproduction of computer media
3002	Manufacture of computers etc
3220	Manufacture of TV/radio transmitters etc
3230	Manufacture of TV/radio receivers etc
6420	Telecommunications
7210	Hardware consultancy

Leisure & Tourism

5511	Hotels and motels, with restaurant
5512	Hotels and motels, without restaurant
5521	Youth hostels and mountain refuges
5522	Camping sites, including caravan sites
5523	Other provision of lodgings nec
6330	Activities of travel agencies etc nec
9232	Operation of arts facilities
9233	Fair and amusement park activities
9234	Other entertainment activities nec

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9251	Library and archives activities
9252	Museum activities etc
9253	Botanical and zoological gardens etc
9261	Operation of sports arenas and stadiums
9262	Other sporting activities
9271	Gambling and betting activities
9272	Other recreational activities nec

Marine Technologies

2911	Manufacture of engines and turbines
3511	Building and repairing of ships
3512	Building repairing of pleasure boats etc

Biotechnology

2441	Manufacture of pharmaceutical products
2442	Manufacture: pharmaceutical preparations
7310	Research: natural sciences/engineering

Environmental Technologies

3710	Recycling of metal waste and scrap
3720	Recycling of non-metal waste and scrap
7430	Technical testing and analysis
9000	Sewage and refuse disposal etc
2923	Manufacture of ventilation equipment etc.
4524	Construction of water projects
4100	Collection/Purification etc. of water
4511	Demolition and wrecking of buildings
4532	Insulation work activities
3120	Manufacture: electricity distribution apparatus

Creative Industries

2211	Publishing of books
2212	Publishing of newspapers
2213	Publishing of journals and periodicals
2214	Publishing of sound recordings
2215	Other publishing
7420	Architectural/Engineering activities
7440	Advertising
7481	Photographic Activities
9211	Motion picture and video production
9212	Motion picture and video distribution

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9213	Motion picture projection
9220	Radio and television activities
9231	Artistic and Literary creation etc.