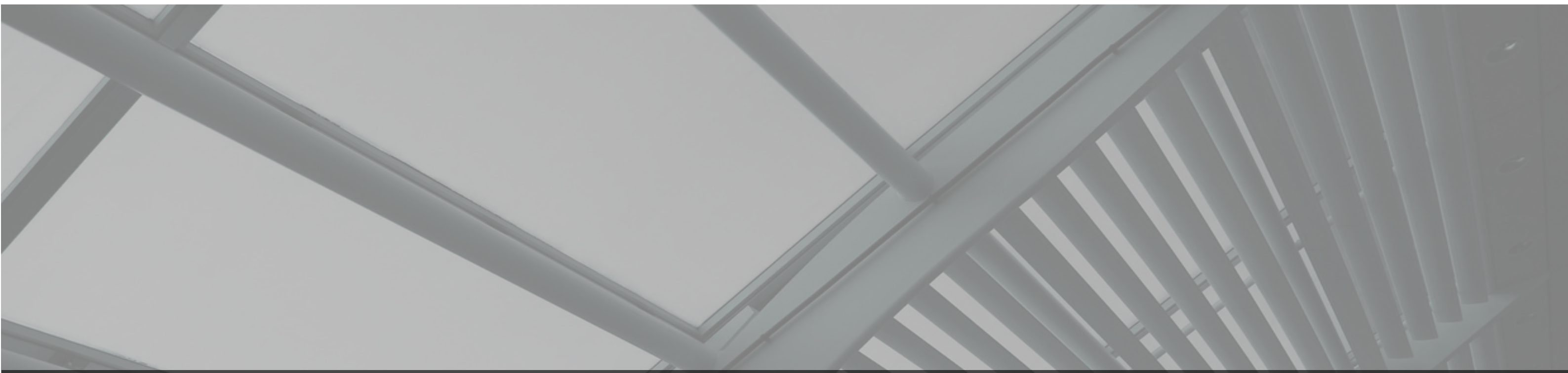

Employment Role and Function of Proposed Strategic Development Locations (SDLs) in South Gloucestershire

Report prepared on behalf of South Gloucestershire Council

March 2019

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Job Number:	18 05 02
Approved by:	Stuart Hardisty
Date:	08/03/2019

1 Introduction

1.1.1 Hardisty Jones Associates (HJA), in partnership with Lambert Smith Hampton (LSH) was appointed by South Gloucestershire Council to provide additional supporting evidence in respect of the potential scale and nature of employment uses to be included within proposed Strategic Development Locations (SDLs) within the South Gloucestershire area. This will test and build on initial research and policy development efforts in respect of the SDLs.

1.2 Background and Context

1.2.1 The four Unitary Authorities of the West of England are working collaboratively to prepare a Joint Spatial Plan (JSP) and concurrently progressing reviews of their Local Plans. As part of the JSP process a number of economic and employment evidence documents have been prepared including an Economic Development Needs Assessment (2016), a series of economic forecasts from Oxford Economics and topic papers drawing the available evidence together.

1.2.2 Hardisty Jones Associates and Lambert Smith Hampton have recently prepared an updated employment evidence report for the West of England authorities[1], which should be treated as a companion document to this report.

1.2.3 As part of the JSP process a number of SDLs have been identified across the West of England to ensure capacity to meet future demand. The prospective roles of the SDLs vary (e.g. in terms of housing and employment). There are five proposed SDLs within South Gloucestershire at:

- Buckover
- Charfield
- Coalpit Heath
- North West and West Yate
- Thornbury

1.2.4 In addition, a further 'contingency' SDL at Chipping Sodbury has been identified.

1.2.5 Each of the SDLs in South Gloucestershire has been identified for mixed-use development including B Use Class employment. The quantum of proposed employment uses within each SDL varies. An initial assessment of employment provision was based on indicative multipliers set out within Barton Willmore's Wolfson Economics Prize 2014 Final Submission "Be a Pioneer" with the intention of ensuring the development of sustainable communities. Manual adjustments to the derived estimates were made to reflect the specific circumstances of some of the SDLs, these were particularly relevant to Buckover and Yate.

1.2.6 Figure 1.1 summarises the proposals including references to key employment generating uses as set out within currently available documentation.

[1] West of England JSP: Updated Employment Evidence – Final Report (WED006) [available here: https://www.jointplanningwofe.org.uk/gf2.ti/-/978402/43632549.1/PDF/-/WED_006_Updated_Employment_Evidence_Nov_2018.pdf]

Figure 1.1: Current SDL Proposals Summary

SDL	Summary of Current Proposals
Buckover	Garden Village of around 3,000 dwellings, with at least 1,500 delivered by 2036. Provision of a range of retail, community and cultural facilities, care home, health and hotel. Provision of a primary school and 3-16 all through school and nursery(s). Provision of around 11ha of employment land to provide a range of local employment opportunities including provision for start-up, SMEs and larger businesses.
Charfield	Provision of around 1,200 dwellings to enable Charfield to become a more sustainable settlement. Replacement of the existing (1FE) primary school with a new 3FE entry school. New and/or improved retail and community facilities. A minimum of 5ha of new employment land (B Uses).
Coalpit Heath	Provision of a new neighbourhood of approximately 1,800 dwellings. This will include a new local centre incorporating one or two new primary schools, local retail outlet and community facility/hub. Up to 5ha of employment land (B uses) is envisaged.
North West and West Yate	A new residential neighbourhood and employment area. A minimum of 2,000 dwellings of which at least 1,000 by 2036. A new local centre, including primary school(s) and/or all through 3-16 school, local retail and community/facility hub. A significant new employment land allocation totaling approximately 30ha to include: • 11ha of land for B1 and B2 office/light industrial and research use; and • 19ha of land allocated for B2/B8 and similar uses.
Thornbury	A maximum of 500 dwellings and around 5ha of additional employment land. A new convenience store/retail or community opportunity.

Source: West of England JSP (Publication Document), Strategic Development Location Templates.

1.3 Approach

1.3.1 South Gloucestershire Council required additional supporting justification to underpin and potentially refine proposals for employment provision at the SDLs.

1.3.2 It was agreed that HJA and LSH would undertake the following:

- Check the validity of the Barton Willmore methodology
- Assess the current and future employment role and function of the five SDLs and the employment zones in which they are located.
- Clarify how the SDLs (individually) contribute to meeting the overall need for employment land in South Gloucestershire.
- Consider how the employment provision at SDLs contributes to the development of sustainable communities.
- Comment on the deliverability and market attractiveness of employment development at the SDLs.

1.3.3 This report sets out the results of the research process. This research has been undertaken fully cognisant of the recently published JSP updated employment evidence.

1.4 Employment Zones

1.4.1 In order to undertake the agreed tasks it was necessary to compile existing data. In many cases the greatest level of detail for which data could be captured was Lower Super Output Area (LSOA). Due to the proximity of some of the proposed SDLs (e.g. Buckover and Thornbury) and the large land coverage of some rural LSOAs it was not possible to build up settlement level analysis. It was therefore agreed to focus on 'employment zones' based on groupings of LSOAs.

1.4.2 South Gloucestershire Council in dialogue with HJA identified a series of seven employment zones within South Gloucestershire:

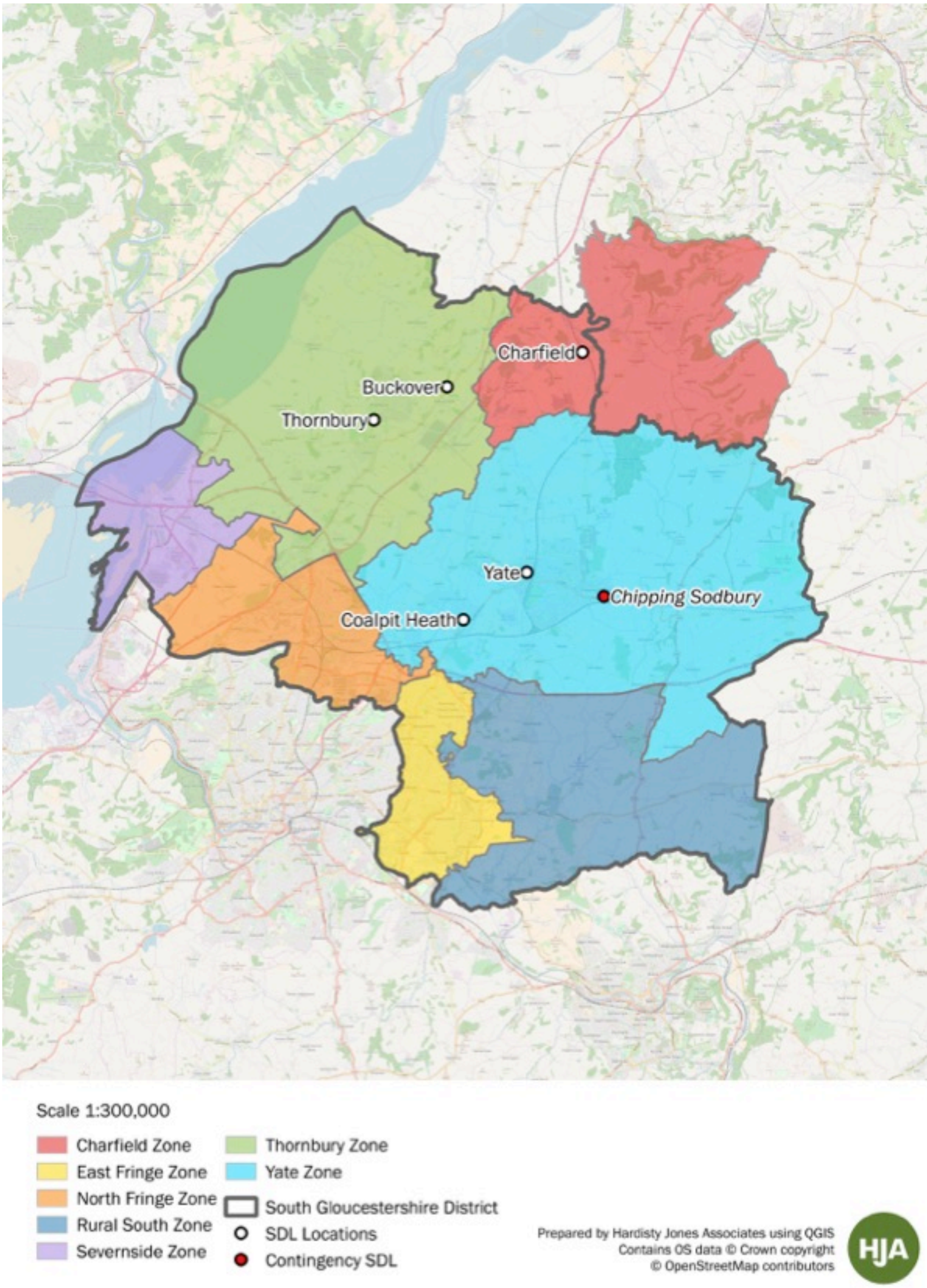
- Charfield;
- Thornbury;
- Yate;
- Severnside;
- North Fringe;
- East Fringe; and
- Rural South.

1.4.3 Figure 1.2 illustrates the zones on a map. The proposed SDLs fall within the Charfield (Charfield), Thornbury (Thornbury and Buckover) and Yate (Yate, Coalpit Heath and Chipping Sodbury contingency) zones.

1.4.4 Analysis presented at chapter 4 of this report is based on these zones, but seeks to take account of the various settlements within the zones where appropriate. The focus is on the three zones with proposed SDLs. These three zones are located in the northern half of South Gloucestershire, north of the M4 as opposed to the southern parts of the district, much of which forms the fringe of Bristol.

1.4.5 Appendix 1 to this report sets out the definition of the zones. Appendix 2 sets out further detail on the zones which do not contain proposed SDLs.

Figure 1.2: Employment Zones



2 Barton Willmore Methodology

2.1.1 Initial estimates of employment provision at the proposed SDLs were based in part on metrics set out within Barton Willmore's 2014 Wolfson Economics Prize winning *Be a Pioneer*. HJA agreed to review the Barton Willmore document to assess whether it was a valid tool for informing the SDL proposals.

2.1.2 The Barton Willmore document is clearly a thorough, well researched and robust piece of research. The key consideration is its applicability to the SDL proposals. It is explicitly stated within the *Be a Pioneer* report that there should not be a 'one size fits all' approach.

2.1.3 The Barton Willmore research relates to Garden Cities of c.50,000 dwellings. As such, the analysis is focused on the scale and mix of land uses required to create sustainable stand-alone settlements of substantial scale. Existing settlements of a comparable scale cited within the research include Bath, Wakefield, Lincoln and Exeter.

2.1.4 The SDL proposals range from 500 to 3,000 dwellings which for four of the five, form extensions (of varying scales) to existing settlements. Buckover Garden Village will become a stand-alone settlement. Clearly the scale and nature of the proposed SDLs is substantially different to the Garden Cities which form the focus of the Barton Willmore research. Total planned housing development across the five SDLs within the plan period is approximately 6,000 dwellings. When considering the full development potential beyond the plan period this increases to 8,500 dwellings. The total number of dwellings (existing and proposed to 2036) across the Charfield, Thornbury and Yate zones in aggregate only just exceeds 50,000 dwellings.

2.1.5 The issue of scale is important and is likely to impact on the applicability of the Barton Willmore multipliers, particularly for employment (B Use Class) provision. With Garden Cities of significant scale it would be anticipated to have a full range of uses, the Barton Willmore approach sets out proposals for phased development of business and industrial parks at Garden Cities. When considering much smaller schemes the issue is whether a full range of employment uses should be anticipated. Without the necessary scale and critical mass, and the full range of amenities it will be challenging to deliver attractive employment developments which are able to compete with larger centres. That is not say there is no need for local provision, but that there is a need for additional 'bottom-up' market-based advice to test and refine proposals.

2.1.6 At the core of the Barton Willmore research is a desire to deliver sustainable settlements. Provision of one job per dwelling is a core ambition. This benchmark is tested against local data at chapter 4 of this report.

2.1.7 The following sections of this report develop some of the Barton Willmore principles to understand the current and potential future nature of the relevant employment zones in South Gloucestershire. This includes consideration of current ratios of jobs to homes and workers to homes, household size, profile of employment across use classes and existing employment uses. These are then enhanced with high level commercial market commentary to consider what could be deemed 'deliverable' in market terms.

3 Overall Employment Land Supply and Demand Position

3.1.1 This chapter sets out the broader West of England and South Gloucestershire context in terms of the supply and demand of B Use Class sites and premises.

3.2 Demand

3.2.1 The West of England UAs have prepared an updated analysis of B Use Class employment land supply and demand[2]. This identifies a total anticipated requirement for 972,000 – 1,365,000 sqm of office development and 354-628 hectares of industrial development[3]. This allows for the anticipated net changes in the scale of the West of England economy and the need to maintain a modern and suitable stock of commercial employment premises to facilitate the ongoing development of the existing economic base. Historic completions analysis has been used to inform a point in the identified range to be used as a preferred scenario for planning. This indicates a requirement for 972,000sqm of office floorspace and 490ha of industrial and warehouse land.

3.3 Supply

3.3.1 The updated assessment of employment land supply across the West of England finds the following:

- 526,600sqm of office capacity;
- 391ha of industrial and warehouse land; and
- 283ha of mixed B Use Class land (i.e. not identified as specifically for office or industrial and warehouse uses and has potential flexibility to be used for either).

3.3.2 The above figures include B Use Class provision at SDLs across the West of England in line with initial estimates i.e. those set out at Figure 1.1 of this report.

3.3.3 The aggregate West of England level analysis shows sufficient supply in quantitative terms to meet identified requirements as per the preferred scenario with a 14% buffer to allow for flexibility, range and choice. In order to meet a higher level of employment growth (*c.*100,000 net additional jobs) the buffer would fall to 4% (*c.*32 hectares). This will therefore require the Unitary Authorities across the West of England to deliver the full range of identified supply. This highlights the strategic importance of the proposed SDLs in contributing to the identified requirement for B Use Class employment development across the FEMA.

3.3.4 The South Gloucestershire area will play a significant role in meeting the employment land needs of the West of England, particularly for industrial and warehousing. A substantial amount of employment land has been identified in South Gloucestershire as part of the JSP process. This is primarily located within the Severnside, North Fringe and East Fringe zones. Across the South Gloucestershire UA area this comprises:

- 130,700sqm of office capacity (25% of the West of England total);
- *c.*277ha of industrial and warehouse land (71%); and
- *c.*160ha of mixed B Use Class land (57%).

[2] HJA (2019) West of England JSP: Additional and Updated Evidence

[3] The analysis indicates a figure at the low end of the range for offices and in the centre of the range for industrial as a preferred scenario.

3.3.5 Whilst the South Gloucestershire portfolio of sites includes large scale employment locations, which will play a major strategic role in supporting the future growth and development of the West of England economy, it includes a provision of 56 hectares of B Use Class employment land to be provided at the proposed SDLs.

3.3.6 A small amount of B Use Class land supply has been identified at the Charfield, Thornbury and Yate employment zones other than proposed at SDLs. This totals 9.7ha across eight sites as summarised in Figure 3.1 below.

Figure 3.1: Existing Employment Land within Employment Zones

Site	Zone	Size	Uses	Status
Former Visitor Centre, Tortworth	Charfield	0.2ha	B1/B8	Permitted
Units 22-27 Cooper Road	Thornbury	0.4ha	B1/B2/B8	Permitted
2 Cooper Road	Thornbury	0.3ha	B1a/D1	Permitted
Morton Farm, Old Gloucester Rd	Thornbury	1.2ha	B2/B8	Permitted
Henfield Business Park, Coalpit Heath	Yate	0.8ha	B2	Permitted
Quercus Court, Armstrong Way	Yate	1.2ha	B2/B8	Permitted
Land at Armstrong Way	Yate	0.8ha	B8	Permitted
247 Armstrong Way, Great Western Business Park	Yate	0.3ha	B1c/B2/B8	Permitted
North Yate New Neighbourhood	Yate	4.6ha	B1/B2	Permitted

Source: South Gloucestershire Employment Survey and Monitoring to April 2017.

3.3.7 The above indicates that the only provision of any scale within any of the three SDL focused employment zones is at the North Yate New Neighbourhood.

4 Employment Zone and SDL Roles and Functions

4.1.1 This chapter sets out details of the approach to testing the current and potential future roles of the employment zones and the SDLs within them.

4.2 Current Role and Function

4.2.1 The following chapters consider evidence on the current and future economic role and functions of the designated employment zones which contain proposed SDLs. This includes a baseline statistical profile of each zone alongside relevant commentary. Commercial property agents from Lambert Smith Hampton have provided market commentary and insight to supplement the data analysis. Appendix 2 contains statistical profiles for each of the employment zones which do not contain proposed SDLs within South Gloucestershire.

4.2.2 Statistics from a range of sources have been compiled to help build a picture of each zone. The 2011 Census of Population provides the most comprehensive and detailed picture of local areas. This is therefore a core building block. However, because of the passage of time, it is necessary to account for changes since 2011 wherever possible. As a result, information on dwelling completions since 2011 have been collated by South Gloucestershire Council. Employment data from the ONS Business Register and Employment Survey (BRES) has also been reviewed. This includes data up to 2016, at the start of the plan period. BRES data has enabled analysis of total employment levels, recent changes and informed profiling of employment by Use Class[4]. Data from the Valuation Office Agency (VOA) relating to current commercial floorspace has been analysed to understand the current profile of employment property within each zone.

4.3 Future Potential Role and Function

Developing Jobs to Homes Scenarios

4.3.1 Data from the 2011 Census[5] has been used to assess the ratio of both jobs to homes and workers to homes within each employment zone. When compared these provide an indication of the labour market balance in an area. As cited at Chapter 2 of this report, the Barton Willmore *Be a Pioneer* report set out a proposal for one job per home within Garden Cities. The data for the identified employment zones raises questions as to whether that is an appropriate assumption for SDLs in South Gloucestershire. Figure 4.1 summarises the results.

4.3.2 The ratio of jobs to homes varies substantially from zone to zone. The North Fringe has a very high ratio of 2.5, given its importance as an employment area. The East Fringe by comparison has a much lower ratio at 0.7. The SDL relevant employment zones include Charfield with a ratio of 1.0, Thornbury 1.3 and Yate 1.1. Across South Gloucestershire as a whole the ratio is 1.3.

4.3.3 Data on workers per dwelling/home enables a broader perspective. These figures show less variance with all in the 1.2-1.3 range. Comparing the figures for jobs per dwelling and workers per dwelling in any given zone provides some insight into the level of net commuting and labour market

[4] HJA has modelled employment by Use Class for each zone using a SIC to Use Class matrix. This is included at Appendix 3.

[5] These estimates are based on the measure of workers resident in the respective area and workers with workplaces in each respective area. Home based workers and workers with no fixed place of work are both allocated to the area of their home residence for the purpose of this analysis.

balance. Where the level of workers per dwelling is higher than jobs per dwelling it indicates a net outflow of workers.

4.3.4 Across South Gloucestershire both jobs per dwelling and workers per dwelling ratios are consistent at around 1.3. Whilst there remain substantial flows of workers in and out of the UA area there is broad balance between workers and jobs. The data on a zone by zone basis highlights which zones are relatively more important in terms of their workplace function (e.g. North Fringe) and which are more important as residential locations (e.g. Charfield).

4.3.5 There is a clear aim that the proposed SDLs should be developed as sustainable communities, providing a balance of jobs and homes. In order to maintain a balance with the current levels of jobs and homes a figure of one job per dwelling is potentially too conservative. In all three zones which include proposed SDLs provision of jobs at a rate of one per dwelling is likely to lead to increased levels of out commuting as this is below the current average level of workers per dwelling.

Figure 4.1 Balancing Jobs and Homes

Employment Zone	Jobs per dwelling	Workers per dwelling
Charfield	1.0	1.3
Thornbury	1.3	1.2
Yate	1.1	1.3
East Fringe	0.7	1.2
North Fringe	2.5	1.3
Severnside	1.8	1.3
Rural South	1.0	1.3
South Gloucestershire Total	**1.3**	**1.3**

Source: 2011 Census, ONS

4.3.6 To develop sustainable and balanced communities within SDLs, and the respective employment zones in which they are located, a range of jobs scenarios could be considered. Options could include a level of jobs:

- **In line with the Barton Willmore *Be a Pioneer*** proposal of one job per dwelling (Option 1). This is below current levels for the Yate and Thornbury zones and would therefore tend towards a poorer balance between jobs and homes than is presently achieved.
- **In line with existing jobs per dwelling ratios** (Option 2). This would broadly maintain the status quo in terms of jobs and homes. However, this does not recognise the relationship between jobs and resident workers in the zone which may be a better indicator of labour market balance.
- **In line with existing workers per dwelling ratios** (Option 3). This may better provide for the jobs requirement arising from the growth in local population. Some account could be taken of reducing household size and an ageing population which may impact on the average number of workers per dwelling. However, the population of new developments often have a younger age profile than the general population and therefore within SDLs the average number of workers per dwelling could be higher than the UA average, thereby continuing to retain broad balance between workers and jobs.
- At a level that will **improve the balance of jobs and workers** in a zone (Option 4). There are a multitude of scenario options depending on the degree to which adjustment would be either desirable in policy terms and achievable in market terms. If the policy ambition is to achieve

broad parity between jobs and workers in an area a target could be set to deliver sufficient jobs in an area to achieve parity by the end of the plan period (or another selected date). Alternatively the focus could be on delivering a measure of improvement.

4.3.7 The range of scenario options were discussed with officers at South Gloucestershire Council. It was agreed that the intention is for SDLs to be planned on the basis of sustainability principles. Whilst it is not possible to control individuals' commuting choices, it is preferable to at least provide the opportunity for a balanced level of workers and jobs. On this basis, Options 3 and 4 were identified as appropriate, with options 1 and 2 failing the requisite test. Of the remaining options, option 3 was preferred as this better provided for the jobs requirement arising from growth in local populations. On this basis Option 3 became the preferred option, with Option 4 being discounted.

4.3.8 The analysis set out in the following chapters therefore considers a ratio of 1.3 jobs per home within each SDL and employment zone. This is applied to the current planned level of housing growth at each SDL and zone.

Understanding the Implications for Employment Land Provision

4.3.9 Following the development of headline job estimates it is necessary to consider the potential distribution of employment across sectors and Use Classes. Two indicative scenarios have been used:

- **Current zone employment profile**. This assumes future employment within the zone is distributed across Use Classes in line with the current profile of employment within the zone.
- **Adjusted zone employment profile**. This amends the current profile to account for forecast changes in sectoral mix based on the Oxford Economics Medium-High scenario which underpins the West of England JSP employment policies.

4.3.10 After generating a broad distribution of employment by Use Class an estimate of the B Use Class land required to accommodate that level of employment is made. This is made on the basis of the following broad assumptions and includes translation of job numbers to FTEs:

- B1a/b Office: 13.2 sqm per FTE worker[6]. Development density of 4,000 sqm per hectare.
- B1c/B2/B8 Industrial and Warehouse: 60 sqm per FTE worker[7]. Development density of 4,000 sqm per hectare.

4.3.11 The analysis indicates that a proportion of future additional employment within the zones will be within industrial settings. This could be deemed at odds with forecasts of employment decline in many manufacturing sectors. Whilst over time there may be changes in the proportion of total employment within any given Use Class, over the medium term these are often fairly modest. Further, a substantial driver for industrial property demand in particular is the replacement of older stock. Such replacement activity will not necessarily take place in the same location as it is lost. This therefore allows for a gradual redistribution of industrial premises across any given area as

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[6] Employment Density Guide, 3rd Edition (HCA, 2015) provides estimates for a range of B1a office functions ranging from 8 – 13 sqm per FTE Net Internal Area (NIA). The Occupier Density Study (2013) indicates an average density of 10.9 sqm for the UK. On this basis, an assumption of 11 sqm per employee has been adopted, with a 20% uplift to provide Gross External Area (GEA). The utilised assumption is therefore 13.2 sqm per FTE.

[7] Best practice guidance (HCA, 2015) indicates a figure for B1(c) light industry at 47 sqm per FTE (NIA). Allowances are made to align to GEA (+20%) with a final assumption of 56.4 sqm per FTE (GEA). B2 General is estimated at 36 sqm per FTE (GIA). Allowances are made to align to GEA (+5%) with a final assumption of 37.8 sqm per FTE (GEA). Latest available estimates suggest a range of 70 – 95 sqm per FTE. The utilised assumption is therefore 60 sqm (GEA) per FTE, as a broad average for B1c/B2/B8 use classes.

time passes. This is an ongoing but long-term process and requires sufficient supply to be provided to enable the cycle of gradual stock upgrading.

5 Charfield Employment Zone

5.1 Current Role and Function

5.1.1 The Charfield zone is a largely rural employment zone in the north of South Gloucestershire and extending into Stroud district. Figure 5.1 sets out a statistical summary.

5.1.2 The 2011 Census indicated a population of *c*3,900 within the South Gloucestershire elements of the zone, including approximately 2,300 residents at the settlement of Charfield and approximately 400 at Cromhall (Bibstone and Townwell). The South Gloucestershire element of the zone accounts for around 1.5% of the South Gloucestershire population.

5.1.3 When including the identified hinterland within the district of Stroud the settlements of Wotton-under-Edge (approximately 5,600 persons) and Kingswood (approximately 1,400 persons) are added. Wotton-under-Edge is the largest settlement in the zone.

5.1.4 The total population of the Charfield zone at the 2011 Census was estimated at 12,500 persons.

5.1.5 Approximately 210 dwellings have been completed in the zone since 2011, equivalent to *c*4% increase which will have allowed for an increase in the total population.

5.1.6 The 2011 Census indicated some 6,300 working residents in the zone. This equates to 50% of the total population. Across the zone there is an average of 1.3 workers per dwelling.

5.1.7 The zone as a whole is a substantial net out commuting zone, with around 50% more people out-commuting for work than in-commuting.

5.1.8 Employment in the zone is estimated at around 5,100 by both the 2011 Census and BRES 2016[8]. This broadly equates to the number of dwellings in the zone. The South Gloucestershire element of the zone accommodates around 1.1% of South Gloucestershire jobs. Manufacturing is the largest sector in the zone and has experienced strong growth in recent years. The zone includes two sites occupied by Renishaw both of which are located within Stroud district although in close proximity to the Charfield settlement. HMP Leyhill and Tortworth Court are other important employers in the zone.

5.1.9 13% of employment is estimated to be within office-based activities (B1a/b) and 32% within industrial and warehousing (B2/B8 uses). Analysis of VOA[9] data indicates approximately 8,700 sqm of office floorspace and 58,700 sqm of industrial and warehouse floorspace across the zone.

5.1.10 Commercial agents at LSH indicated that current market perception is that the zone is not an attractive employment location beyond very locally focused activities. This is based on the lack of critical mass, workforce amenity and transport access.

[8] BRES measures of employment do not capture all self employment and is therefore only a partial estimate of all employment activities.

[9] Valuation Office Agency data is a record of the information on the number and value of the stock of rateable properties in the UK, as well as the floorspace and RV per m2 broken down by sector and geographic location.

Figure 5.1 Charfield Employment Zone Statistical Profile

<table>
<tr><td colspan="15">Population & Housing</td></tr>
<tr><td colspan="7">Current population[10] (Census 2011)</td><td colspan="8">12,520</td></tr>
<tr><td colspan="7">% of South Gloucestershire</td><td colspan="8">N/A</td></tr>
<tr><td colspan="7">Change 2001–2011</td><td colspan="8">+454</td></tr>
<tr><td colspan="7">Average household size (2011)[11]</td><td colspan="8">2.46</td></tr>
<tr><td colspan="7">Number of dwellings (2011)</td><td colspan="8">5,010</td></tr>
<tr><td colspan="7">Recent housing completions (2011/12–2016/17)</td><td colspan="8">210</td></tr>
<tr><td colspan="15">Travel to work and self containment</td></tr>
<tr><td colspan="7">In-commuting</td><td colspan="8">2,410</td></tr>
<tr><td colspan="7">Out-commuting</td><td colspan="8">3,630</td></tr>
<tr><td colspan="7">Live & work in zone (incl. homeworking and itinerant)</td><td colspan="8">2,690</td></tr>
<tr><td colspan="7">Jobs per dwelling[12] (2011)</td><td colspan="8">1.0</td></tr>
<tr><td colspan="7">Workers per dwelling[13] (2011)</td><td colspan="8">1.3</td></tr>
<tr><td colspan="15">Employment</td></tr>
<tr><td colspan="7">Current Employment (BRES 2016)</td><td colspan="8">5,080</td></tr>
<tr><td colspan="7">% of South Gloucestershire</td><td colspan="8">N/A</td></tr>
<tr><td colspan="7">Change 2011–2016</td><td colspan="8">+270 (+5.6%)</td></tr>
<tr><td colspan="7">Largest sectors (employment)</td><td colspan="8">Manufacturing (1,570)</td></tr>
<tr><td colspan="7">Growing sectors (change 2011–2016)</td><td colspan="8">Manufacturing (+400, +34%)</td></tr>
<tr><td colspan="7">Concentrated sectors (LQ)</td><td colspan="8">Manufacturing (3.9)
Construction (1.4)
Accommodation and Food (1.4)</td></tr>
<tr><td colspan="15">Employment by Use Class</td></tr>
<tr><td colspan="15">Use Class</td></tr>
<tr><td>A1</td><td>A2</td><td>A3-5</td><td>B1a</td><td>B1b</td><td>B1c</td><td>B2</td><td>B8</td><td>C1</td><td>C2</td><td>C3</td><td>D1</td><td>D2</td><td>SG</td><td>HW</td></tr>
<tr><td>7%</td><td>0%</td><td>3%</td><td>12%</td><td>1%</td><td>0%</td><td>29%</td><td>3%</td><td>4%</td><td>5%</td><td>0%</td><td>13%</td><td>1%</td><td>3%</td><td>19%</td></tr>
<tr><td colspan="15">Business Workspace</td></tr>
<tr><td colspan="7"></td><td colspan="4">VOA floorspace</td><td colspan="4">% of S Glos</td></tr>
<tr><td colspan="7">Office</td><td colspan="4">8,740</td><td colspan="4">N/A</td></tr>
<tr><td colspan="7">Industrial</td><td colspan="4">58,740</td><td colspan="4">N/A</td></tr>
<tr><td colspan="7">Total</td><td colspan="4">67,470</td><td colspan="4">N/A</td></tr>
</table>

5.2 Future Potential Role and Function

Scenarios and Options

5.2.1 It is anticipated that by the end of the JSP plan period (2036) an additional 1,400 dwellings will be built within the South Gloucestershire element of the zone This includes 1,200 within the proposed SDL at Charfield. When considering the entirety of the Charfield zone, there is only a modest further increase in the number of dwellings with 200 additional dwellings planned within the Stroud element increasing the total to 1,700 dwellings[14] within the plan period.

[10] Usual resident population – the 2011 usual resident population includes residents living in households and those living in communal establishments.
[11] Based on 2011 household population and 2011 number of households.
[12] HJA estimate based on 2011 Census data for total number of jobs in the zone and total number of dwellings.
[13] Based on 2011 Census data for total number of workers and total number of dwellings.
[14] Figures do not sum due to rounding.

5.2.2 Population within the anticipated new housing is estimated at 4,100 persons to the end of the plan period[15].

5.2.3 Part of the rationale for allocating housing at Charfield is to help develop a more sustainable settlement with greater critical mass and achieve a better balance of jobs and homes. On the basis of achieving 1.3 jobs per home[16], 1,560 jobs will need to be provided at the SDL. This figure increases to approximately 2,200 when considering the whole zone.

5.2.4 Figures 5.2 and 5.3 set out indicative profiles of additional employment within the zone and associated estimates of future B Use Class land requirements.

5.2.5 The output of this analysis is an estimated requirement for 0.6 – 0.7ha of office land and 5.6 – 7.2ha of industrial and warehousing land to meet the needs of the proposed SDL housing alone. This increases to 0.8 – 0.9ha of office land and 7.8 – 9.9ha of industrial and warehousing land when considering the whole zone. Figure 3.1 identified 0.2ha of proposed development that could contribute towards this requirement.

Market Commentary

5.2.6 Commercial agents at LSH indicate that growth in the housing stock and proximity to Renishaw have the potential to support new employment development at the Charfield zone. This is anticipated to be primarily in the form of small scale industrial and workshop style development with a focus on activities that service the local market.

5.2.7 In order to attract a greater range of footloose employers it will be necessary to establish Charfield as a more significant employment location than at present and a commensurate change in market perception. Improved transport infrastructure would be essential to ensure excellent motorway connectivity. A proactive economic development strategy, with potential public sector involvement, to bring forward new stock would also likely be required. Improving the range of amenity in the locality for employees is an increasingly important factor to attract employers.

5.2.8 The zone is starting from a small base and therefore it will have to compete with more established locations. Commuting will continue to be a viable option for working residents of the zone given the proximity of major employment hubs.

5.2.9 The strength of manufacturing activity within the Stroud elements of the zone are heavily influenced by the presence of a single large company. As a result, the future prospects of the sector are likely to be heavily related to the performance and decisions of that company as much as the sector as a whole.

[15] Based on 2011 Census average household size. There are some indications of falling household size, however, new housing is often occupied by a younger demographic profile which can lead to higher household sizes. For the purposes of quoting indicative figures the 2011 Census average has been utilised.
[16] See Chapter 4 for explanation of underlying assumption

Figure 5.2: Future Growth Options – Charfield Employment Zone

Planned Housing Growth			
	Within Plan period	Outside Plan period	Total
Charfield SDL	1,200	-	1,200
Charfield Zone (S Glos non-SDL)	200	-	200
Charfield (Stroud element)	200	-	200
Charfield Zone (Total)	1,700	-	1,700
Headline Population Estimate			
	Within Plan period	Outside Plan period	Total
Charfield Zone SDL	2,950	-	2,950
Charfield Zone non-SDL	1,140	-	1,140
Charfield Zone	4,090	-	4,090
Jobs Scenario (1.3 jobs per home)			
	Within Plan period	Outside Plan period	Total
Charfield SDL	1,560	-	1,560
Charfield Zone non-SDL	600	-	600
Charfield Zone	2,160	-	2,160

Figures may not sum due to rounding

Figure 5.3: Future Employment Profiles – Charfield Employment Zone

Employment Distribution Scenarios			
Use Class	Current Zone Profile	Adjusted '2036' Profile[17]	Difference
A	10%	10%	0%
B1 Office	12%	13%	1%
B1c/B2/B8 Industrial and Warehouse	33%	28%	-5%
C/D/Sui Generis	25%	25%	0%
None	19%	20%	0%
SDL – Plan Period			
Use Class	Current Zone Estimate	Adjusted '2036' Profile	Land Reqt (ha)
A	160	160	
B1 Office	180	200	0.6 – 0.7
B1c/B2/B8 Industrial and Warehouse	520	440	5.6 – 7.2
C/D/Sui Generis	390	390	
None	300	310	
Non-SDL – Plan Period			
Use Class	Current Zone Estimate	Adjusted '2036' Profile	Land Reqt (ha)
A	60	60	
B1 Office	70	80	0.2
B1c/B2/B8 Industrial and Warehouse	200	170	2.2 – 2.7
C/D/Sui Generis	150	150	
None	120	120	

[17] Current zone profile adjusted based on Oxford Economics employment forecasts for South Gloucestershire. For example, if the share of office-based employment in South Gloucestershire is forecast to increase by 5% this uplift is applied to the share in the current zone profile.

Total Zone – Plan Period			
Use Class	**Current Zone Estimate**	**Adjusted '2036' Profile**	**Land Reqt (ha)**
A	220	220	
B1 Office	250	280	0.8 – 0.9
B1c/B2/B8 Industrial and Warehouse	720	600	7.8 – 9.9
C/D/Sui Generis	550	540	
None	420	430	

Figures may not sum due to rounding

Summary and Recommendations

5.2.10 The employment role of the Charfield zone is currently characterised by locally focused activities and the major manufacturing activities of Renishaw. In addition HMP Leyhill and Tortworth Court offer employment in other sectors. The South Gloucestershire element of the zone has limited employment activities. The rural nature of the area is characterized by high levels of home-based working. There are high levels of out-commuting and very low levels of workplace self-containment. In comparison to other parts of South Gloucestershire the zone is a very minor employment location.

5.2.11 The low level of current B Use Class floorspace suggests no substantial requirement for replacement floorspace. The major B Use Class requirements in the zone relate to the activities of Renishaw and the specific needs of that business are likely to be a major factor in determining future requirements.

5.2.12 Planned house building will help to grow the range of local amenity and critical mass in the zone, however, agents report it will not generate sufficient scale of place to compete with the major employment locations elsewhere in South Gloucestershire. To become a more successful employment location will require improvements to infrastructure and proactive efforts to bring forward new employment stock.

5.2.13 Achieving local employment levels of 1.3 jobs per new dwelling will require an estimated 6.2 – 7.9ha of B Use Class land to support the SDL with a further 2.2 – 2.8ha if the whole zone is taken into account. 0.2ha of B Use Class employment land has been identified within the zone.

5.2.14 The initial estimates of *c*.5ha within the Charfield SDL proposals fall slightly below the outputs of this analysis. Given the need to overcome current market perceptions it may be appropriate to balance the technical assessment with market views when determining policy. Consideration also needs to be given to the needs of Renishaw and any potential provision to be made within the Stroud District.

5.2.15 A range of non B Use Class employment will come forward to service the growth in the local community, this will include A, C and D uses. A substantial growth in home-based employment would also be anticipated.

6 Thornbury Employment Zone

6.1 Current Role and Function

6.1.1 The Thornbury zone is a largely rural zone that features the notable settlements of Thornbury and Almondsbury. Two Strategic Development Locations are planned for the Thornbury zone – one in Thornbury, and the other a new Garden Village at the small hamlet of Buckover.

6.1.2 The 2011 Census indicated a population of 22,900 within the zone, including approximately 11,500 at Thornbury and 1,500 at Almondsbury. The zone accounts for 8.7% of the South Gloucestershire population.

6.1.3 At the time of the 2011 Census there were approximately 9,600 dwellings within the zone. A further 460 dwellings have been completed in the zone since 2011 which will have enabled growth in the stated population.

6.1.4 The 2011 Census recorded some 11,300 working residents in the zone. On this basis there were 1.2 workers per dwelling across the zone.

6.1.5 The Census figures indicate approximately 12,800 jobs within the zone at 2011[18]. Data from the ONS Business Register and Employment Survey (BRES) records approximately 10,500 jobs in the zone at 2016 and reports a fall in employment within the zone since 2011. However, BRES has limitations in its ability to capture all employment, particularly self-employment. According to BRES some 7% of South Gloucestershire employment is located within the zone.

6.1.6 The Thornbury employment zone has a service sector strength with the largest sectors including education, finance and insurance, wholesale and retail, and health and social work.

6.1.7 HJA estimates 24% of employment within offices and 10% within industrial and warehousing premises within the zone based on BRES data. This highlights the service sector strength of the zone. Analysis of VOA data indicates approximately 22,250 sqm of office floorspace and 80,000 sqm of industrial and warehouse floorspace in the zone.

6.1.8 Commercial agent opinion from LSH indicates that Thornbury is a good commercial location, particularly for smaller B1 offices. It is located sufficiently far away from the North Fringe zone to provide market separation. There are some strongly performing developments offering a cheaper alternative to north Bristol.

[18] This includes all workplace based jobs, homebased workers and itinerant workers that live in the zone.

Figure 6.1 Thornbury Employment Zone Statistical Profile

Population & Housing	
Current population (Census 2011)	22,910
% of South Gloucestershire	8.7%
Change 2001–2011	+680 (+3.0%)
Average household size (2011)	2.40
Number of dwellings (2011)	9,580
Recent housing completions (2011/12–2016/17)	460
Travel to work and self containment	
In-commuting	7,590
Out-commuting	6,110
Live & work in zone (incl. homeworking and itinerant)	5,220
Jobs per dwelling (2011)	1.3
Workers per dwelling (2011)	1.2
Employment	
Current Employment (BRES 2016)	10,550[19]
% of South Gloucestershire	7.1%
Change 2011–2016	–1,170 (–10.0%)
Largest sectors (employment)	Education (1,270) Finance and Insurance (1,230) Wholesale and Retail (1,160) Health and Social Work (1,040)
Growing sectors (change 2011–2016)	Education (+260, +25%)
Concentrated sectors (LQ)	Finance and Insurance (3.3) Construction (1.4) Education (1.4)

Employment by Use Class

Use Class														
A1	A2	A3-5	B1a	B1b	B1c	B2	B8	C1	C2	C3	D1	D2	SG	HW
9%	1%	3%	24%	0%	0%	5%	5%	2%	6%	0%	18%	1%	6%	19%

Business Workspace

	VOA floorspace	% of S Glos
Office	22,250	5.4%
Industrial	79,940	4.7%
Total	102,190	4.8%

6.2 Future Potential Role and Function

Scenarios and Options

6.2.1 It is anticipated that by the end of the JSP plan period (2036) an additional 3,700 dwellings will be built within the Thornbury employment zone. This includes 1,500 dwellings at the Buckover Garden Village SDL and 500 within the Thornbury SDL.

6.2.2 A further 1,500 dwellings are proposed at the Buckover Garden Village SDL beyond the end of the plan period.

[19] A manual adjustment has been made following agreement between South Gloucestershire Council and ONS that some 3,000 jobs within the aerospace manufacturing sector had been mis-recorded.

6.2.3 Population within the anticipated new dwellings is estimated at 8,800 persons by the end of the plan period. This is based on current average household size within the zone.

6.2.4 Figure 6.2 sets out indicative profiles of additional employment within the zone across Use Classes and provides estimates of associated B Use Class land requirements on the basis of the assumptions set out at Chapter 4.

6.2.5 The output of this analysis is an estimated requirement for 1.9 – 2.1ha of office land and 3.4 – 3.9ha of industrial and warehousing land to meet the needs of the proposed SDL housing within the plan period. This increases to 3.4 – 3.8ha of office land and 6.3 – 7.2ha of industrial and warehousing land when considering the wider zone. Figure 3.1 identified 1.9ha of proposed development that could contribute towards this requirement.

6.2.6 Figures 6.2 and 6.3 also sets out indicative estimates for B Use Class land requirements beyond the plan period associated with further proposed housing at the Buckover Garden Village. This takes no account of wider housing development beyond the plan period which has not yet been determined. When considering the SDL driven requirements both within and beyond the plan period these rise to 2.9 – 3.2ha of office land and 6.0 – 6.8ha of industrial and warehouse land.

Market Commentary

6.2.7 LSH commercial agents indicated that Thornbury and Buckover would be considered a similar market area. Locations with good access to the motorway in this zone could work well. Demand would be expected to come primarily from small occupiers, predominantly with a local focus. B1 and B2 may both work. Agents reported that it is unlikely that major employers or large scale industrial would be attracted given the range of more strategic industrial employment locations elsewhere in the district and West of England unless there was improved connectivity and the delivery of more suitable stock. Overall LSH agents perceive potential for Thornbury to develop a greater office role.

6.2.8 Modern occupiers are looking for a range of supporting amenity in order to attract staff, this will be a particular requirement for Buckover Garden Village if it is to be a successful location.

6.2.9 Viability is a potential challenge, particularly for office development. There is a requirement for *c.*£20 per sq ft to justify development. Viability is less of a barrier for industrial development, particularly for smaller units suited to the local market. Vacant office space at Almondsbury is also a potential short term challenge, with Almondsbury providing better motorway access.

Figure 6.2: Future Growth Options – Thornbury Employment Zone

Planned Housing Growth			
	Within Plan period	Outside Plan period	Total
Buckover SDL	1,500	1,500	3,000
Thornbury SDL	500	-	500
Thornbury Zone non-SDL	1,700	-	1,700
Thornbury Zone	3,700	1,500	5,200
Headline Population Estimate			
	Within Plan period	Outside Plan period	Total
Thornbury SDL	4,800	3,600	8,400
Thornbury Zone non-SDL	3,980	-	3,980
Thornbury Zone	8,780	3,600	12,380
Jobs Scenario (1.3 jobs per home)			
	Within Plan period	Outside Plan period	Total
Thornbury Zone SDL	2,600	1,950	4,550
Thornbury Zone non-SDL	2,160	-	2,160
Thornbury Zone	4,760	1,950	6,710

Figures may not sum due to rounding

Figure 6.3: Future Employment Profiles – Thornbury Employment Zone

Employment Distribution Scenarios			
Use Class	**Current Zone Profile**	**Adjusted '2036' Profile**	**Difference**
A	13%	13%	0%
B1 Office	24%	26%	2%
B1c/B2/B8 Industrial and Warehouse	11%	9%	-2%
C/D/Sui Generis	33%	33%	0%
None	19%	19%	0%
SDL – Plan Period			
Use Class	**Current Zone Estimate**	**Adjusted '2036' Profile**	**Land Reqt (ha)**
A	340	340	
B1 Office	620	680	1.9 – 2.0
B1c/B2/B8 Industrial and Warehouse	290	240	3.4 – 3.9
C/D/Sui Generis	870	860	
None	490	500	
Non-SDL – Plan Period			
Use Class	**Current Zone Estimate**	**Adjusted '2036' Profile**	**Land Reqt (ha)**
A	280	280	
B1 Office	510	570	1.5 – 1.8
B1c/B2/B8 Industrial and Warehouse	240	200	2.9 – 3.3
C/D/Sui Generis	720	710	
None	400	410	

Total Zone – Plan Period			
Use Class	**Current Zone Estimate**	**Adjusted '2036' Profile**	**Land Reqt (ha)**
A	630	620	
B1 Office	1,130	1,250	3.4 – 3.8
B1c/B2/B8 Industrial and Warehouse	520	440	6.3 – 7.2
C/D/Sui Generis	1,590	1,570	
None	890	910	
SDL – Outside Plan Period			
Use Class	**Current Zone Estimate**	**Adjusted '2036' Profile**	**Land Reqt (ha)**
A	260	250	
B1 Office	460	510	1.4 – 1.5
B1c/B2/B8 Industrial and Warehouse	220	180	2.6 – 2.9
C/D/Sui Generis	650	640	
None	370	370	

Figures may not sum due to rounding

Summary and Recommendations

6.2.10 Whilst the zone includes a large hinterland the main settlement of Thornbury is a functioning employment centre, particularly in terms of local office and service occupiers. The ratio of jobs per dwelling is marginally higher than workers per dwelling, resulting in the zone being a net importer of labour.

6.2.11 There is substantial planned house building in the zone, including a new Garden Village at Buckover and the SDL at Thornbury. The Garden Village will be delivered through and beyond the current plan period.

6.2.12 Achieving local employment levels of 1.3 jobs per dwelling will require an estimated 5.3–6.0ha of B Use Class land to support the SDLs within the plan period with a further 4.0–4.4ha required to support the Buckover Garden Village SDL beyond the plan period. Figure 6.4 sets out the summary position for each of the SDLs. An additional 4.4–5.0ha will be required if the wider zone is taken into account. Figure 3.1 identifies approximately 2ha of potential B Use Class employment development which can contribute to this requirement within the plan period.

Figure 6.4: Estimated Employment Land Requirement for Thornbury SDLs (Plan Period and Beyond)

	B1a/b	B2/B8	Total
Buckover SDL	2.8 – 3.0	5.2 – 5.8	8.0 – 8.8
Thornbury SDL	0.5	0.9 – 1.0	1.4 – 1.5
Zone SDL Totals	**3.3 – 3.5**	**6.1 – 6.8**	**9.3 – 10.3**

Figures may not sum due to rounding

6.2.13 Current SDL proposals as summarised at Figure 1.1 include 11ha[20] at Buckover Garden Village plus 5ha at Thornbury. This exceeds the 9.3-10.4ha aggregate total for the two SDLs arising from the technical modelling. However, the SDLs could play a role in meeting wider needs arising from

[20] There has been some uncertainty as to whether the quoted figures for Buckover Garden Village relate to B Uses alone, or can encompass other non B Use Class employment generating uses. Emerging proposals from the landowner/site promoter identifies 14ha of employment generating uses in total including 9.4ha of B Uses and 4.6ha of non B Use Class employment generating uses (A, C and D uses). Source: Buckover Garden Village, Land Use Budget and Development Key Principles (November 2016) Hunter Page Planning for The Tortworth Estate.

the Thornbury zone. When determining policy one might also take into account any unmet needs from the Charfield SDL.

6.2.14 Over the course of the plan period there is also likely to be a requirement to deliver new supply to meet the needs of modern occupiers as existing stock within the zone becomes dilapidated. If this cannot take place within existing employment sites this could drive demand for additional employment land within the zone.

7 Yate Employment Zone

7.1 Current Role and Function

7.1.1 The Yate zone is a largely rural zone that features the notable settlements of Yate and Chipping Sodbury. Three Strategic Development Locations are planned for the Yate zone – one at Yate, another at Coalpit Heath, and a contingency SDL at Chipping Sodbury. Figure 7.1 sets out a statistical summary of the Yate employment zone.

7.1.2 The 2011 Census indicated a total population of 57,800 persons, making the Yate employment zone by far the largest of the three considered as part of this SDL analysis. The zone is centred on the town of Yate, with a population of approximately 29,500. Chipping Sodbury accommodates a further 4,400 residents.

7.1.3 Census data indicates some 23,700 dwellings across the zone at 2011. Records indicate a further approximately 1,230 dwellings completed in the zone since 2011 which will have enabled further growth in the population.

7.1.4 Approximately 30,000 working residents were recorded within the zone at the time of the 2011 Census, indicating a ratio of 1.3 workers per dwelling. This compares to around 1.1 jobs per dwelling. As a result there is a substantial level of net out commuting from the zone to other locations for work.

7.1.5 Data from the ONS Business Register and Employment Survey (BRES) records total employment in the zone at 2016 at approximately 25,000 jobs. This represents a fall of some 5,500 since 2011 which is a potential matter of some concern[21]. The largest employment sectors are wholesale and retail, and manufacturing. Public administration is also heavily concentrated in the zone, recognising the presence of South Gloucestershire Council's main office base.

7.1.6 HJA estimates 21% of employment within office based activities and 19% within industrial and warehousing based activities. The remainder of employment is distributed across other use classes (A: 15%, C: 4% and D:13%) and none (including homeworking and itinerant working). Analysis of VOA data indicates approximately 47,000sqm of office floorspace and 425,200sqm of industrial and warehouse floorspace within the zone.

7.1.7 LSH commercial agents indicate that Yate is the primary employment destination within the zone, however, Chipping Sodbury and Coalpit Heath work as part of the same area. Access is the primary concern in the zone, particularly in comparison to the other substantial employment locations en route to Yate which offer better motorway access in particular. The area is seen as predominantly an industrial location (evidenced by the VOA data) which primarily attracts local and lower value occupiers.

7.1.8 At present there is a range of voids with a substantial component of 1980s stocks which would be rated 'average' at best. A significant proportion of existing stock will need to be replaced over the course of the next 20 years which will require a lot of redevelopment and refurbishment. Some refurbishment activity has started, but there will be a requirement for replacement in addition.

[21] These losses were largely in the 2011-12 period and concentrated within two sectors. There can be significant volatility in BRES data at the very local level which may explain some of this variation. BRES employment data has shown a gradual increase from 2012 onwards.

7.1.9 The office market in Yate is currently poor. The only newly constructed office buildings are the South Gloucestershire Council headquarters and Merlin Housing Association at Chipping Sodbury. This shows the importance of public sector occupiers to the office market.

Figure 7.1 Yate Employment Zone Statistical Profile

Population & Housing	
Current population (Census 2011)	57,790
% of South Gloucestershire	22.0%
Change 2001–2011	+532 (+0.9%)
Average household size (2011)	2.45
Number of dwellings (2011)	23,700
Recent housing completions (2011/12–2016/17)	1,230
Travel to work and self containment	
In-commuting	10,990
Out-commuting	15,410
Live & work in zone (incl. homeworking and itinerant)	14,520
Jobs per dwelling (2011)	1.1
Workers per dwelling (2011)	1.3
Employment	
Current Employment (BRES 2016)	24,960
% of South Gloucestershire	16.7%
Change 2011–2016	–5,470 (–21.9%)
Largest sectors (employment)	Wholesale and Retail (5,240) Manufacturing (2,910)
Growing sectors (change 2011–2016)	Wholesale and Retail (+760, +17%)
Concentrated sectors (LQ)	Public Administration (1.8)

Employment by Use Class														
Use Class														
A1	A2	A3-5	B1a	B1b	B1c	B2	B8	C1	C2	C3	D1	D2	SG	HW
11%	1%	3%	21%	0%	0%	11%	8%	1%	3%	0%	12%	1%	4%	21%

Business Workspace		
	VOA floorspace	**% of S Glos**
Office	47,060	11.4%
Industrial	425,230	25.0%
Total	472,290	22.4%

7.2 Future Potential Role and Function

Scenarios and Options

7.2.1 It is anticipated that by the end of the JSP plan period (2036) an additional 7,300 dwellings will be built within the Yate employment zone.. This includes 1,800 dwellings at the Coalpit Heath SDL and 1,000 dwellings at the Yate SDL. This could increase to more than 8,800 if the Chipping Sodbury contingency SDL were to be utilised. An additional 1,000 dwellings are proposed at the Yate SDL beyond the end of the plan period.

7.2.2 Headline additional population figures estimated on the basis of anticipated housing are 17,830 within the plan period. This could rise above 21,500 if the Chipping Sodbury SDL were included.

7.2.3 Achieving 1.3 jobs per home across the Yate employment zone will require 3,640 additional jobs within the plan period to meet the need arising from the two proposed SDLs and a further 1,300 beyond the plan period (excluding the Chipping Sodbury SDL). When considering the wider zone the jobs requirement within the plan period rises to 9,460.

7.2.4 Figure 7.3 sets out indicative profiles of additional employment within the zone across Use Classes and associated estimates for B Use Class sites and premises requirements. This is based on the assumptions as set out at Chapter 4 of this report.

7.2.5 The output of this analysis is an estimated requirement for 2.3-2.6ha of office land and 8.8-10.3ha of industrial and warehouse land arising from the two proposed SDLs within the plan period. A further requirement for approximately 0.8–0.9ha of office land and 3.2–3.7ha of industrial and warehouse land beyond the plan period is identified. The aggregate SDL requirement at completion is therefore estimated at 15.1-17.0ha.

7.2.6 When taking into account the wider zone the aggregate requirement rises to 29.1–33.5ha within the plan period. Figure 3.1 identified development potential of 7.7ha identified within the Yate employment zone which would contribute towards the aggregate requirement to the end of the plan period.

7.2.7 The Yate SDL has also been identified as a key opportunity to meet wider needs for replacement of B Use Class employment stock and to consolidate its role as an employment location and as one of the principal market towns in the sub-region. Wider redevelopment and regeneration opportunity at the town will drive a requirement for new B Use Class capacity to offset losses to other uses.

Market Commentary

7.2.8 LSH commercial agents anticipate that Yate will remain as the primary employment location with the zone. As noted above there will be a substantial requirement for replacement of ageing and poor quality stock over the course of the next 20 years. There is evidence of demand and the scale of Yate as an urban centre is sufficient to attract interest.

7.2.9 Further improvement to central Yate to offer a better quality of amenity will have a positive impact on the wider employment market. Agents consider there to be particular potential for Yate to improve its performance in the industrial market.

7.2.10 Access is the key factor in the success of Yate as a more significant employment location. Yate has to compete with locations such as Emersons Green and sites along the inner ring road and around the M32. Improved transport infrastructure such as a new motorway junction providing a step change in connectivity would have significant impact on the market perception of Yate and changing its positioning within the location hierarchy.

7.2.11 Coalpit Heath does not have the range of amenities at present to be attractive to larger occupiers, but is well located on the A432 (the main arterial connecting Yate and Bristol). Chipping Sodbury typically provides a complementary role to Yate if there is insufficient capacity – this is expected to continue unless there is a substantive change in accessibility.

Figure 7.2: Future Growth Options Yate Employment Zone

Planned Housing Growth			
	Within Plan period	Outside Plan period	Total
Coalpit Heath SDL	1,800	-	1,800
Yate SDL	1,000	1,000	2,000
Yate Zone non-SDL	4500	-	4,500
Chipping Sodbury[22]	1,500	-	1,500
Yate Zone (excl. C.Sodbury SDL)	7,300	1,000	8,300
Yate Zone (inc. C.Sodbury SDL)	8,800	1,000	9,800
Headline Population Estimate			
	Within Plan period	Outside Plan period	Total
Yate Zone SDL	6,860	-	6,860
Yate Zone non-SDL	10,970	2,450	13,420
Yate Zone (excl. C.Sodbury SDL)	17,830	2,450	20,280
Yate Zone (inc. C.Sodbury SDL)	21,510	2,450	23,960
Jobs Scenarios (excluding Chipping Sodbury SDL)			
	Within Plan period	Outside Plan period	Total
Yate Zone SDL	3,640	1,300	4,940
Yate Zone non-SDL	5,820	-	5,820
Yate Zone (excl. C.Sodbury SDL)	9,460	1,300	10,760
Yate Zone (inc. C.Sodbury SDL)	11,410	1,300	12,710

Figure 7.3: Future Employment Profiles – Yate Employment Zone (excl. Chipping Sodbury contingency SDL)

Employment Distribution Scenarios			
Use Class	Current Zone Profile	Adjusted '2036' Profile	Difference
A	15%	15%	0%
B1 Office	21%	24%	2%
B1c/B2/B8 Industrial and Warehouse	20%	17%	-3%
C/D/Sui Generis	22%	21%	0%
None	21%	22%	1%
SDL – Plan Period			
Use Class	Current Zone Estimate	Adjusted '2036' Profile	Land Reqt (ha)
A	560	550	
B1 Office	780	860	2.3 – 2.6
B1c/B2/B8 Industrial and Warehouse	740	620	8.9 – 10.3
C/D/Sui Generis	790	780	
None	780	800	
Non-SDL – Plan Period			
Use Class	Current Zone Estimate	Adjusted '2036' Profile	Land Reqt (ha)
A	900	890	
B1 Office	1,240	1,370	3.8 – 4.1
B1c/B2/B8 Industrial and Warehouse	1,180	990	14.1 – 16.5
C/D/Sui Generis	1,260	1,240	
None	1,240	1,270	

[22] Contingency SDL

Total Zone – Plan Period			
Use Class	Current Zone Estimate	Adjusted '2036' Profile	Land Reqt (ha)
A	1,460	1,440	
B1 Office	2,020	2,230	6.1 – 6.7
B1c/B2/B8 Industrial and Warehouse	1,920	1,620	23.0 – 26.8
C/D/Sui Generis	2,040	2,020	
None	2,020	2,070	
SDL – Outside Plan Period			
Use Class	Current Zone Estimate	Adjusted '2036' Profile	Land Reqt (ha)
A	200	200	
B1 Office	280	310	0.8 – 0.9
B1c/B2/B8 Industrial and Warehouse	260	220	3.2 – 3.7
C/D/Sui Generis	280	280	
None	280	280	

Figures may not sum due to rounding

Recommendations

7.2.12 The Yate employment zone is focused heavily on the settlement of Yate at present. This is the largest existing employment centre considered across the three employment zones relevant to the proposed SDLs.

7.2.13 Achieving local employment levels of 1.3 jobs per new dwelling at the proposed SDLs will drive an estimated requirement for 2.3-2.6ha of office land and 8.8-10.3ha of industrial and warehouse land within the plan period. A further requirement for approximately 0.8–0.9ha of office land and 3.2–3.7ha of industrial and warehouse land beyond the plan period is identified. The aggregate SDL requirement at completion is therefore estimated at 15.1-17.0ha. The SDL level figures are summarised in Figure 7.4.

Figure 7.4: Estimated Employment Land Requirement for Thornbury SDLs (Plan Period and Beyond)

	B1a/b	B2/B8	Total
Coalpit Heath SDL	1.5 – 1.7	5.7 – 6.6	7.2 – 8.3
North & West Yate SDL	1.6 – 1.8	6.4 – 7.4	8.0 – 9.2
Yate Zone SDLs	**3.1 – 3.5**	**12.1 – 14.0**	**15.2 – 17.5**

Figures may not sum due to rounding

7.2.14 The Yate SDL is also identified to play a wider role in meeting requirements for replacing employment stock lost to other uses through regeneration and to consolidate Yate as a key sub-regional market town and employment location. Regeneration proposals are not sufficiently developed to quantify the potential replacement requirement. The derived estimates should therefore be seen as a minimum.

7.2.15 When taking into account the wider zone the aggregate requirement rises to 29.1–33.5ha within the plan period on the basis of 1.3 jobs per home. Figure 3.1 identified development potential of 7.7ha identified within the Yate employment zone which would contribute towards the aggregate requirement to the end of the plan period.

7.2.16 Current emerging SDL proposals as summarised at Figure 1.1 include 30ha at North West and West Yate comprising 11ha for B1 and B2 office, light industrial and research use and 19ha for B2/B8 or similar. A further 5ha for B Class Uses are proposed at Coalpit Heath. These figures are higher than the SDL derived estimates as set out in this analysis. However, no quantitative adjustment has been made in this analysis for regeneration driven replacement or policy-on provision. The existing proposals of c35ha across the two SDLs are reasonable when these factors are taken into account.

8 Conclusions

8.1.1 The analysis set out in this report has considered the employment role and provision of B Use Class land at proposed SDLs within South Gloucestershire and the wider 'employment zones' in which they are located.

8.1.2 Initial analysis, which has informed plan development to this point had been heavily based on Barton Willmore's *Be a Pioneer* report. This provided a detailed consideration of issues relating to the development of Garden Cities including employment requirements. In reviewing the applicability of the Be a Pioneer analysis to SDLs in South Gloucestershire it was concluded that more locally specific analysis could be provided.

8.1.3 Top down analysis of B Use Class employment land supply and demand at the West of England level, which is informing the West of England Joint Spatial Plan has drawn on the initial analysis, which proposed an indicative estimate of c.56ha of employment land across the five SDLs proposed within South Gloucestershire. The sub-regional analysis confirmed the need for employment provision of this order to ensure a portfolio of supply to meet identified requirements, particularly if a 100,000 net additional jobs scenario is pursued.

8.1.4 Bottom up analysis set out within this report has identified that to deliver balanced communities, provision for around 1.3 jobs per home is appropriate. This is a departure from previous analysis structured around 1 job per home. The analysis within this report has considered the implications of accommodating this level of employment at both the SDLs and within the wider employment zones. However, it has not sought to address any existing imbalances between the number of jobs and workers in each of the zones.

8.1.5 There is potential for the SDLs to play a wider strategic employment role beyond meeting those needs identified as directly arising from proposed housing growth. This could include meeting some of the need arising from wider growth in the respective employment zones or other strategic requirements.

8.1.6 In all zones employment will be spread across all Use Classes and none (i.e. employment within the A, B, C, D Use Classes, Sui Generis uses and those not requiring sites and premises). The analysis in this report has focused only on B Use Class requirements.

8.1.7 Figure 8.1 provides a summary of previously derived estimates alongside the estimates derived from the analysis set out in this report.

Figure 8.1 Summary of Estimated B Use Class Land Requirements

SDL (Zone)	Previous Analysis/ Proposals (SDL only – Plan Period and Beyond)	Current Analysis (SDL only – Plan Period and Beyond)	Current Analysis (Total Employment Zone within Plan Period)	Current Analysis (Total Employment Zone within Plan Period plus SDL beyond)
Charfield (Charfield)	5ha	6-8ha	9-11ha	9-11ha
Thornbury (Thornbury)	5ha	1.5ha	10-11ha	14-15ha
Buckover Garden Village (Thornbury)	11ha*	8-9ha		
Coalpit Heath (Yate)	5ha	7-8ha	29-34ha**	33-38ha**
North & West Yate (Yate)	30ha	8-9ha**		
Total	**56ha***	**31-36ha****	**47-55ha****	**55-64ha****

Figures may not sum due to rounding.
* Based on 11ha at Buckover which includes non B Uses. Emerging proposals include 9.4ha of B Use Class land.
**Does not include any provision for replacement resulting from regeneration activities in Yate or policy based uplifts to consolidate the role of Yate as a key market town and employment location within the sub-region.

8.1.8 Charfield is the smallest of the three zones including proposed SDLs in terms of both population and employment. Proposed housing development will help to increase the critical mass of the area and support a broader range of local amenity. However, the area is not currently perceived as an employment location. It is anticipated that demand will be predominantly locally focused and there will be a requirement for improved infrastructure and proactive public sector involvement to establish employment activity. Current SDL driven analysis suggests a greater requirement than previously indicated, in shaping policy these higher figures should be considered in the context of market opinion.

8.1.9 The Thornbury zone includes two proposed SDLs. The area is a much larger employment centre when compared to Charfield and has a strong office/service sector focus at present. The current analysis suggests a B Use Class requirement below previously proposed levels. However, with good motorway access and as an established employment location there would be potential to consider a higher level of provision, particularly to meet needs arising from replacement of existing stock.

8.1.10 The Yate zone is the largest of the three considered and includes two proposed SDLs. , The technical assessment based on SDL housing alone indicates a level of B Use Class employment provision below previously proposed figures. However, there has been a long standing policy intention to use the SDL at Yate to consolidate the role of the town as a key employment location and also to meet replacement needs arising from regeneration activities in the town. Provision for such factors will increase the requirement at the Yate SDL above the quoted figures.

Appendix 1: Employment Zone Definitions

Zone	2011 LSOA	
Charfield	E01014884 : South Gloucestershire 003A	E01022416 : Stroud 015C
	E01014885 : South Gloucestershire 003B	E01022417 : Stroud 015D
	E01022381 : Stroud 015A	E01022418 : Stroud 015E
	E01022415 : Stroud 015B	
East Fringe	E01033339 : South Gloucestershire 019G	E01014928 : South Gloucestershire 027D
	E01014901 : South Gloucestershire 020A	E01014958 : South Gloucestershire 027E
	E01014902 : South Gloucestershire 020B	E01014915 : South Gloucestershire 028A
	E01014903 : South Gloucestershire 020C	E01015003 : South Gloucestershire 028B
	E01014965 : South Gloucestershire 020D	E01015005 : South Gloucestershire 028C
	E01014964 : South Gloucestershire 021A	E01015007 : South Gloucestershire 028D
	E01014966 : South Gloucestershire 021B	E01015008 : South Gloucestershire 028E
	E01014967 : South Gloucestershire 021C	E01014943 : South Gloucestershire 029A
	E01014969 : South Gloucestershire 021D	E01014944 : South Gloucestershire 029B
	E01033334 : South Gloucestershire 021F	E01014972 : South Gloucestershire 029C
	E01033336 : South Gloucestershire 021G	E01015002 : South Gloucestershire 029D
	E01014897 : South Gloucestershire 022A	E01015004 : South Gloucestershire 029E
	E01014898 : South Gloucestershire 022B	E01015006 : South Gloucestershire 029F
	E01014899 : South Gloucestershire 022C	E01014936 : South Gloucestershire 030A
	E01014900 : South Gloucestershire 022D	E01014938 : South Gloucestershire 030B
	E01014959 : South Gloucestershire 023A	E01014939 : South Gloucestershire 030C
	E01014960 : South Gloucestershire 023B	E01014940 : South Gloucestershire 030D
	E01014961 : South Gloucestershire 023C	E01014941 : South Gloucestershire 030E
	E01014968 : South Gloucestershire 023D	E01014942 : South Gloucestershire 030F
	E01014955 : South Gloucestershire 025A	E01014945 : South Gloucestershire 030G
	E01014956 : South Gloucestershire 025B	E01014916 : South Gloucestershire 031A
	E01014957 : South Gloucestershire 025C	E01014917 : South Gloucestershire 031B
	E01014974 : South Gloucestershire 025D	E01014918 : South Gloucestershire 031C
	E01014977 : South Gloucestershire 025E	E01014919 : South Gloucestershire 031D
	E01014922 : South Gloucestershire 026A	E01014920 : South Gloucestershire 031E
	E01014923 : South Gloucestershire 026B	E01014921 : South Gloucestershire 031F
	E01014924 : South Gloucestershire 026C	E01014866 : South Gloucestershire 032A
	E01014973 : South Gloucestershire 026D	E01014931 : South Gloucestershire 032B
	E01014975 : South Gloucestershire 026E	E01014932 : South Gloucestershire 032C
	E01014976 : South Gloucestershire 026F	E01014933 : South Gloucestershire 032D
	E01014925 : South Gloucestershire 027A	E01014934 : South Gloucestershire 032E
	E01014926 : South Gloucestershire 027B	E01014935 : South Gloucestershire 032F
	E01014927 : South Gloucestershire 027C	E01014937 : South Gloucestershire 032G
North Fringe	E01014861 : South Gloucestershire 005A	E01014883 : South Gloucestershire 012F
	E01014872 : South Gloucestershire 009A	E01014979 : South Gloucestershire 015A

Zone	2011 LSOA	
	E01014874 : South Gloucestershire 009B	E01014980 : South Gloucestershire 015B
	E01014876 : South Gloucestershire 009C	E01014982 : South Gloucestershire 015C
	E01014877 : South Gloucestershire 009D	E01014983 : South Gloucestershire 015D
	E01014879 : South Gloucestershire 009E	E01014984 : South Gloucestershire 015E
	E01014881 : South Gloucestershire 009F	E01014978 : South Gloucestershire 017A
	E01014946 : South Gloucestershire 011A	E01014981 : South Gloucestershire 017B
	E01014947 : South Gloucestershire 011B	E01014996 : South Gloucestershire 017C
	E01014948 : South Gloucestershire 011C	E01033331 : South Gloucestershire 017E
	E01014949 : South Gloucestershire 011D	E01033333 : South Gloucestershire 017F
	E01014950 : South Gloucestershire 011E	E01014904 : South Gloucestershire 018A
	E01014951 : South Gloucestershire 011F	E01014905 : South Gloucestershire 018B
	E01014952 : South Gloucestershire 011G	E01014906 : South Gloucestershire 018C
	E01014873 : South Gloucestershire 012A	E01014907 : South Gloucestershire 018D
	E01014875 : South Gloucestershire 012B	E01014908 : South Gloucestershire 018E
	E01014878 : South Gloucestershire 012C	E01014909 : South Gloucestershire 018F
	E01014880 : South Gloucestershire 012D	E01014910 : South Gloucestershire 018G
	E01014882 : South Gloucestershire 012E	
Rural South	E01014867 : South Gloucestershire 019A	E01014869 : South Gloucestershire 024B
	E01014868 : South Gloucestershire 019B	E01014870 : South Gloucestershire 024C
	E01033338 : South Gloucestershire 019F	E01014871 : South Gloucestershire 024D
	E01014865 : South Gloucestershire 024A	
Severnside	E01014953 : South Gloucestershire 005C	E01014954 : South Gloucestershire 005D
Thornbury	E01014985 : South Gloucestershire 001A	E01014992 : South Gloucestershire 002C
	E01014986 : South Gloucestershire 001B	E01014993 : South Gloucestershire 002D
	E01014987 : South Gloucestershire 001C	E01014863 : South Gloucestershire 004A
	E01014988 : South Gloucestershire 001D	E01014864 : South Gloucestershire 004B
	E01014989 : South Gloucestershire 001E	E01014962 : South Gloucestershire 004C
	E01014990 : South Gloucestershire 002A	E01014963 : South Gloucestershire 004D
	E01014991 : South Gloucestershire 002B	E01014862 : South Gloucestershire 005B
Yate	E01014929 : South Gloucestershire 003C	E01015013 : South Gloucestershire 010E
	E01014930 : South Gloucestershire 003D	E01014911 : South Gloucestershire 013A
	E01015014 : South Gloucestershire 006A	E01014912 : South Gloucestershire 013B
	E01015015 : South Gloucestershire 006B	E01014913 : South Gloucestershire 013C
	E01015016 : South Gloucestershire 006C	E01014914 : South Gloucestershire 013D
	E01015017 : South Gloucestershire 006D	E01014892 : South Gloucestershire 014A
	E01015018 : South Gloucestershire 006E	E01014893 : South Gloucestershire 014B
	E01015019 : South Gloucestershire 007A	E01014894 : South Gloucestershire 014C
	E01015020 : South Gloucestershire 007B	E01014895 : South Gloucestershire 014D
	E01015021 : South Gloucestershire 007C	E01014896 : South Gloucestershire 014E
	E01015022 : South Gloucestershire 007D	E01014998 : South Gloucestershire 016A

Zone	2011 LSOA	
	E01014886 : South Gloucestershire 008A	E01014999 : South Gloucestershire 016B
	E01014887 : South Gloucestershire 008B	E01015000 : South Gloucestershire 016C
	E01014888 : South Gloucestershire 008C	E01015001 : South Gloucestershire 016D
	E01014889 : South Gloucestershire 008D	E01014994 : South Gloucestershire 019D
	E01015009 : South Gloucestershire 010A	E01014995 : South Gloucestershire 019E
	E01015010 : South Gloucestershire 010B	E01014890 : South Gloucestershire 024E
	E01015011 : South Gloucestershire 010C	E01014891 : South Gloucestershire 024F
	E01015012 : South Gloucestershire 010D	

Appendix 2: Non SDL Employment Zone Profiles

East Fringe Employment Zone

Baseline Analysis	
Description	
The East Fringe Zone is a small, but dense urban zone that features the notable settlement of Kingswood (approx. 40,700). The area includes Bristol & Bath Science Park and a range of employment parks. There are no SDL's currently planned for the East Fringe Zone.	
Population & Housing	
Current population (Census 2011)	101,850
% of South Gloucestershire	38.8%
Change 2001–2011	+6,610 (+6.9%)
Average household size (2011)	2.37
Number of dwellings (2011)	43,590
Recent housing completions (2011/12–2016/17)	2,310
Travel to work and self containment	
In-commuting	13,290
Out-commuting	33,680
Live & work in zone (incl. homeworking and itinerant)	19,020
Jobs per dwelling (2011)	0.7
Workers per dwelling (2011)	1.2
Employment	
Current Employment (BRES 2016)	30,700
% of South Gloucestershire	20.6%
Change 2011–2016	+3980 (+13.0%)
Largest sectors (employment)	Wholesale and Retail (5,480) Business Services (4,800) Health and Social Work (4,670)
Growing sectors (change 2011–2016)	Business Services (+1,670, + 53%)
Concentrated sectors (LQ)	Business Services (1.7) Construction (1.6)

Employment by Use Class

Use Class														
A1	A2	A3-5	B1a	B1b	B1c	B2	B8	C1	C2	C3	D1	D2	SG	HW
14%	1%	4%	16%	0%	0%	5%	5%	0%	4%	0%	19%	1%	4%	24%

Business Workspace

	VOA floorspace	% of S Glos
Office	48,570	11.7%
Industrial	299,210	17.6%
Total	347,770	16.5%

North Fringe Employment Zone

Baseline Analysis	
Description	
The North Fringe Zone is a small, but dense urban zone that features the notable settlements of Bradley Stoke (approx. 20,600) and Filton (approx. 10,600). There are important employment areas across the North Fringe. There are no SDL's currently planned for the North Fringe Zone.	
Population & Housing	
Current population (Census 2011)	61,740
% of South Gloucestershire	23.5%
Change 2001–2011	+8,006 (+14.9%)
Average household size (2011)	2.39
Number of dwellings (2011)	25,690
Recent housing completions (2011/12–2016/17)	2,750
Travel to work and self containment	
In-commuting	46,870
Out-commuting	16,900
Live & work in zone (incl. homeworking and itinerant)	16,690
Jobs per dwelling (2011)	2.5
Workers per dwelling (2011)	1.3
Employment	
Current Employment (BRES 2016)	71,870
% of South Gloucestershire	48.4%
Change 2011–2016	+2,510 (+3.6%)
Largest sectors (employment)	Wholesale and Retail (9,930) Manufacturing (9,780) Public Administration (9,000)
Growing sectors (change 2011–2016)	Professional Services (+2,110, +50%) Accommodation and Food (+1,060, +38%)
Concentrated sectors (LQ)	Public Administration (3.4) Information and Communication (1.9) Manufacturing (1.7) Finance and Insurance (1.7)

Employment by Use Class

Use Class														
A1	A2	A3-5	B1a	B1b	B1c	B2	B8	C1	C2	C3	D1	D2	SG	HW
10%	1%	3%	18%	1%	0%	13%	4%	1%	4%	0%	11%	1%	3%	31%

Business Workspace

	VOA floorspace	% of S Glos
Office	285,430	68.9%
Industrial	429,750	25.3%
Total	715,170	33.8%

Severnside Employment Zone

Baseline Analysis	
Description	
The Severnside Zone is a small, rural zone which features a number of small settlements. The area incorporates some large scale employment areas. There are no SDL's currently planned for the Severnside Zone.	
Population & Housing	
Current population (Census 2011)	3,650
% of South Gloucestershire	1.4%
Change 2001–2011	+205 (+6.0%)
Average household size (2011)	2.41
Number of dwellings (2011)	1,540
Recent housing completions (2011/12–2016/17)	0
Travel to work and self containment	
In-commuting	2,260
Out-commuting	1,430
Live & work in zone (incl. homeworking and itinerant)	510
Jobs per dwelling (2011)	1.8
Workers per dwelling (2011)	1.3
Employment	
Current Employment (BRES 2016)	3,070
% of South Gloucestershire	2.1%
Change 2011–2016	+430 (+14.0%)
Largest sectors (employment)	Transportation and Storage (1,010) Wholesale and retail (820)
Growing sectors (change 2011–2016)	Business Services (+170, +680%) Manufacturing (+150, +33%)
Concentrated sectors (LQ)	Transportation and Storage (6.6) Manufacturing (2.6) Wholesale and Retail (1.7)

Employment by Use Class

Use Class														
A1	A2	A3-5	B1a	B1b	B1c	B2	B8	C1	C2	C3	D1	D2	SG	HW
26%	0%	1%	4%	0%	0%	19%	14%	0%	1%	0%	3%	0%	3%	29%

Business Workspace

	VOA floorspace	% of S Glos
Office	10	0.0%
Industrial	375,400	22.1%
Total	375,410	17.8%

Rural South Employment Zone

Baseline Analysis	
Description	
The Rural South Zone is a large, rural zone which features the notable settlements of Pucklechurch (approx. 2,900), Wick (approx. 2,000), and Marshfield (approx. 1,700). There are no SDL's currently planned for the Rural South Zone.	
Population & Housing	
Current population (Census 2011)	10,910
% of South Gloucestershire	4.2%
Change 2001–2011	+870 (+8.7%)
Average household size (2011)	2.43
Number of dwellings (2011)	4,570
Recent housing completions (2011/12–2016/17)	20
Travel to work and self containment	
In-commuting	2,650
Out-commuting	3,920
Live & work in zone (incl. homeworking and itinerant)	1,810
Jobs per dwelling (2011)	1.0
Workers per dwelling (2011)	1.3
Employment	
Current Employment (BRES 2016)	4,360
% of South Gloucestershire	2.9%
Change 2011–2016	–190 (–4.5%)
Largest sectors (employment)	Construction (600) Wholesale and Retail (640)
Growing sectors (change 2011–2016)	Wholesale and Retail (210, +49%)
Concentrated sectors (LQ)	Construction (3.5)

Employment by Use Class

Use Class														
A1	A2	A3-5	B1a	B1b	B1c	B2	B8	C1	C2	C3	D1	D2	SG	HW
5%	0%	4%	14%	1%	0%	8%	7%	1%	6%	0%	14%	1%	4%	34%

Business Workspace

	VOA floorspace	% of S Glos
Office	7,760	1.9%
Industrial	81,380	4.8%
Total	89,140	4.2%

HJA

Appendix 3: Forecast Methodology Details

SIC Use Class Matrix

i. The proportion of employment in each category in this matrix is based upon the share of reported employment as recorded by the Business Register and Employment Survey (BRES) in different activities. This approach was applied to each of the sub-sectors in turn and with analysis going down to 4 digit SIC codes. The matrix therefore reflects the current structure of each zone's economy in detail.

Homeworking

ii. It is important to consider the effects of homeworking. 2011 Census of Population data shows us that homeworking accounts for some 14% of all workers.

iii. Data on homeworking by sector is relatively limited and crude because of the aggregation of broad sectors. Agriculture and others is the sector with the highest reported homeworking.

iv. In some sectors, homeworking may be a reflection of home-based businesses, which might include some itinerant working, e.g. the construction sector. The level of detail in the data does not allow clear conclusions to be drawn.

v. The SIC/Use Class matrix used for assessing employment by Use Class already makes allowance for employment that does not require land in the 'None' category. This could include some who report being home-based, or itinerant workers. It could also include those with home-based businesses in a wide range of sectors. It would not therefore be appropriate to apply the homeworking figures from the Census as standardised deductions by sector. However, it should be utilised in some capacity. The data clearly suggests that, at the South Gloucestershire level:

- A proportion of manufacturing based employment is homebased.
- Homeworking in office based sectors is important in the area.
- A very small proportion of public administration employment is home based.
- 'Other services' includes a significant element of home based activity.

Sector	Share of homeworking
A, B, D, E Agriculture, energy and water	22%
C Manufacturing	8%
F Construction	15%
G Wholesale and retail trade; repair of motor vehicles and motor cycles	7%
H Transport and storage	9%
I Accommodation and food service activities	9%
J Information and communication	19%
K Financial and insurance activities	7%
L Real estate activities	15%
M Professional, scientific and technical activities	17%
N Administrative and support service activities	11%
O Public administration and defence; compulsory social security	4%
P Education	6%
Q Human health and social work activities	6%
R, S, T, U Other	15%

Employment distribution by use class – 'Current zone estimate'

vi. The matrix for each zone can be found in Appendix 4. From these matrices, the current spread of employment across the headline use categories was determined, and these are shown in the future employment profiles in the main report.

Employment distribution by use class – 'Adjusted '2036' profile'

vii. The use class matrix was then used to distribute the Oxford Economics employment forecasts across the use classes, and then combined to form the headline categories. The change between 2016–2036 was then indexed to 2016 to give the proportion of change over the period.

Use class category	Proportion of change 2016–2036
A	98.9%
B1a Office	110.5%
B1b/B1c/B2/B8 Industrial and Warehouse	84.1%
C/D/Sui Generis	99.0%
None	102.4%

viii. This proportion of change was then applied to the current zone estimate for each zone to calculate an adjusted 2036 employment distribution by use class.

Appendix 4: SIC to Use Class Matrix

Charfield Employment Zone (including South Gloucestershire and Stroud areas)

	A : Agriculture, forestry and fishing	B : Mining and quarrying	C : Manufacturing	D : Electricity and gas	E : Water and waste management	F : Construction	G : Wholesale and retail trade	H : Transportation and storage	I : Accommodation and food services	J : Information and communication	K : Financial and insurance activities	L : Real estate activities	M : Professional services	N : Administrative and support services	O : Public administration and defence	P : Education	Q : Human health and social activities	R : Arts, entertainment and recreation	S : Other service activities	Total
A1	0%	0%	0%	0%	0%	0%	48%	0%	7%	0%	0%	0%	0%	4%	0%	0%	0%	0%	63%	7%
A2	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	41%	2%	1%	0%	0%	0%	0%	0%	0%	0%
A3-5	0%	0%	0%	0%	0%	0%	0%	0%	32%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%
B1a	0%	0%	0%	0%	0%	5%	0%	0%	0%	74%	52%	83%	65%	26%	2%	0%	11%	0%	2%	12%
B1b	0%	0%	0%	0%	0%	0%	0%	0%	0%	7%	0%	0%	12%	0%	0%	0%	0%	0%	0%	1%
B1c	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
B2	0%	0%	92%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	29%
B8	0%	0%	0%	0%	0%	0%	26%	45%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%
C1	0%	0%	0%	0%	0%	0%	0%	0%	47%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4%
C2	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	67%	0%	23%	0%	0%	5%
C3	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
D1	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	27%	94%	61%	0%	0%	13%
D2	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	82%	0%	1%
SG	0%	0%	0%	0%	78%	0%	18%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	2%	11%	3%
None	100%	100%	8%	100%	22%	95%	8%	55%	13%	19%	7%	15%	17%	69%	4%	6%	6%	15%	24%	19%

Thornbury Employment Zone

	A : Agriculture, forestry and fishing	B : Mining and quarrying	C : Manufacturing	D : Electricity and gas	E : Water and waste management	F : Construction	G : Wholesale and retail trade	H : Transportation and storage	I : Accommodation and food services	J : Information and communication	K : Financial and insurance activities	L : Real estate activities	M : Professional services	N : Administrative and support services	O : Public administration and defence	P : Education	Q : Human health and social activities	R : Arts, entertainment and recreation	S : Other service activities	Total
A1	0%	0%	0%	0%	0%	0%	59%	0%	10%	0%	0%	0%	0%	5%	0%	0%	0%	0%	52%	9%
A2	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	6%	24%	1%	0%	0%	0%	0%	0%	0%	1%
A3-5	0%	0%	0%	0%	0%	0%	0%	0%	43%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	3%
B1a	0%	0%	0%	0%	0%	3%	0%	32%	0%	51%	87%	62%	75%	22%	23%	0%	9%	0%	9%	24%
B1b	0%	0%	0%	0%	0%	0%	0%	0%	0%	4%	0%	0%	3%	0%	0%	0%	0%	0%	0%	0%
B1c	0%	0%	1%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
B2	0%	0%	90%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%	5%
B8	0%	0%	0%	0%	0%	0%	22%	38%	0%	4%	0%	0%	0%	3%	0%	0%	0%	0%	0%	5%
C1	0%	0%	0%	0%	0%	0%	0%	0%	25%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	2%
C2	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	42%	0%	33%	0%	0%	6%
C3	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
D1	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	8%	31%	94%	52%	4%	11%	18%
D2	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	59%	0%	1%
SG	0%	0%	0%	78%	78%	0%	11%	1%	0%	0%	0%	0%	4%	3%	0%	0%	0%	21%	4%	6%
None	100%	100%	9%	22%	22%	97%	8%	29%	20%	41%	7%	15%	17%	51%	4%	6%	6%	15%	24%	19%

Yate Employment Zone

	A : Agriculture, forestry and fishing	B : Mining and quarrying	C : Manufacturing	D : Electricity and gas	E : Water and waste management	F : Construction	G : Wholesale and retail trade	H : Transportation and storage	I : Accommodation and food services	J : Information and communication	K : Financial and insurance activities	L : Real estate activities	M : Professional services	N : Administrative and support services	O : Public administration and defence	P : Education	Q : Human health and social activities	R : Arts, entertainment and recreation	S : Other service activities	Total
A1	0%	0%	0%	0%	0%	0%	51%	0%	14%	0%	0%	0%	0%	5%	0%	0%	0%	0%	42%	11%
A2	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	25%	12%	0%	0%	0%	0%	0%	0%	0%	1%
A3-5	0%	0%	0%	0%	0%	0%	0%	0%	60%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	3%
B1a	0%	0%	0%	0%	0%	3%	0%	9%	0%	71%	68%	74%	78%	15%	89%	0%	11%	0%	17%	21%
B1b	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
B1c	0%	0%	2%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
B2	0%	0%	88%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	0%	0%	0%	11%
B8	0%	0%	0%	0%	0%	0%	31%	40%	0%	1%	0%	0%	0%	4%	0%	0%	0%	0%	0%	8%
C1	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	1%
C2	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	1%	0%	36%	0%	0%	3%
C3	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%
D1	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	6%	7%	94%	48%	5%	7%	12%
D2	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	71%	0%	1%
SG	0%	0%	0%	78%	78%	0%	10%	1%	0%	0%	0%	0%	2%	11%	0%	0%	0%	9%	8%	4%
None	100%	100%	10%	22%	22%	97%	8%	50%	15%	25%	7%	15%	17%	43%	4%	6%	6%	15%	27%	21%