



# West of England JSP: Updated Employment Evidence

## Final Report (WED006)

Prepared on behalf Bath & North East Somerset Council, Bristol City Council, North Somerset Council and South Gloucestershire Council

## Table of Contents

Executive Summary.....	i
1 Introduction.....	1
2 Historic Completions Data.....	2
3 Future Employment Land Requirements .....	8
4 Employment Land Supply Update.....	12
5 Balance of Supply and Demand .....	17
Glossary .....	22
Appendix 1: Data Provided .....	23
Appendix 2: Estimating Replacement Requirements .....	24
Appendix 3: Supply Schedule .....	26
Appendix 4: Supply Data Conversion Tables.....	27
Appendix 5: EDNA Sector to Use Class Conversion Matrix.....	29
Appendix 6: Employment Uses at Strategic Development Locations.....	30

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# Executive Summary

## **Introduction (Chapter 1)**

- i. The four Unitary Authorities (UAs) of the West of England are working collaboratively to prepare a Joint Spatial Plan (JSP). As part of the JSP process a number of economic and employment evidence documents have been prepared including an Economic Development Needs Assessment (EDNA, 2016), a series of economic forecasts from Oxford Economics and topic papers drawing the available evidence together.
- ii. Following consultation on the pre-submission JSP which concluded in January 2018, Hardisty Jones Associates (HJA) and Lambert Smith Hampton (LSH) were appointed by Bath and North East Somerset Council, Bristol City Council, North Somerset Council and South Gloucestershire Council to independently review the policies, supporting evidence and consultation responses related to employment within the JSP.
- iii. This report sets out the outputs of this review, presented as additional and updated employment evidence.

## **Historic Completions (Chapter 2)**

- iv. This chapter sets out detailed analysis of historic development activity. This provides helpful insights into the workings of the commercial market.
- v. The analysis highlights the fact that data on net changes in floorspace can mask significantly larger levels of development activity (i.e. gains and losses). As a result, making sufficient provision for only net changes in the economy has a high risk of under provision to meet the full needs of the economy.
- vi. The historic completions analysis clearly identifies a regular flow of losses of employment space. Without appropriate re-provision the total stock of premises will be eroded. This will not only undermine attempts to enable growth in those parts of the economy which require B Use Class premises (i.e. business, industrial, storage and distribution uses), but also to accommodate the existing economy on an ongoing basis.
- vii. Historic data indicates a perpetual cycle of updating the existing stock of employment premises across the West of England. Whilst a proportion of existing stock is lost each year, the evidence indicates that this is generally re-provided through the development of new floorspace. This enables the provision of new premises which are attractive to the market and suited to modern occupier needs in terms of typology and location.
- viii. The relationship between losses and re-provision is not direct. The evidence highlights the lumpy nature of the commercial employment property development market, it also reflects the economic cycle to some extent. The critical implication is that there is a need to ensure provision to enable this replacement activity.

## **Future Employment Land Requirements (Chapter 3)**

- ix. This chapter considers the implications for future B Use Class employment sites and premises requirements across the West of England, resulting from including an allowance for replacement activity, as well as forecast net additional employment growth.

- x. The 2016 EDNA provided a robust quantitative analysis of the net changes required as a result of forecast economic and employment change. This assessed the B Use Class sites and premises needs associated with accommodating 81,600<sup>1</sup> additional jobs across the West of England. This was based on the Oxford Economics 'medium-high' scenario and therefore aligned to the West of England Strategic Economic Plan. However, it did not consider the need for replacement demand.
- xi. HJA estimates a requirement for 1-2% of stock to be replaced each year. This range provides a degree of flexibility but is shown to be appropriate in the context of historic activity levels in the West of England.
- xii. The result of including a replacement analysis is an increase in the total requirements for both office, and industrial and warehouse floorspace across the West of England within the JSP plan period. The lower end of the range should be viewed as a minimum target. Historic completions monitoring data provides a useful reference point within the range to guide policy making. The upper end of the range lies above historic levels of development activity and would be most relevant in conditions where there were significant concerns regarding the fitness for purpose of the existing stock, there is increasing pressure for change of use, or a weakening of policy protection, eroding the supply of employment premises, and where the commercial development market is strong and able to deliver above historic levels.

#### ***Employment Land Supply Update (Chapter 4)***

- xiii. This chapter has updated the analysis of supply set out within the EDNA (Appendix B), to provide an up-to-date assessment of the aggregate supply of potential B Use Class sites and premises across the West of England within the JSP plan period. This collates data supplied to HJA by the four UAs.
- xiv. The analysis has identified total supply is greater than stated within the EDNA.
- xv. Bristol is the primary location for office supply. The supply assessment has identified substantially increased capacity within Bristol City Centre in comparison to the EDNA.
- xvi. Avonmouth and Severnside is the primary location for industrial and warehouse land.
- xvii. When analysed by Unitary Authority area there is an uneven distribution with South Gloucestershire the predominant location for industrial, warehousing and mixed B Use Class capacity.
- xviii. The analysis has found that 62% of office supply, 59% of industrial and warehouse land, and 40% of mixed B Use Class land is categorised as short term. This indicates substantial capacity to meet short term needs and no threat to the health of the economy through a constrained supply position.

#### ***Comparing Supply and Demand (Chapter 5)***

- xix. This chapter considers whether the identified B Use Class sites and premises supply is sufficient to meet the identified requirements across the JSP plan period. This tests supply against the lower and upper ends of the requirements range and also at the 'historic completions comparator' reference point within the range. The historic completions comparator point is deemed an

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<sup>1</sup> Policy 4 of the JSP includes provision for 82,500 jobs. This was based on the Oxford Economics 'medium-high' scenario with an uplift of 1.1% applied. The EDNA did not apply this uplift. The EDNA estimates 63% of additional jobs will require B Use Class accommodation.

appropriate basis on which to plan when considering all the evidence in the round. This meets the full requirements of the Oxford Economics 'medium-high' scenario and a level of replacement activity within the proposed range.

- xx. Based on the quantitative assessment undertaken, the analysis identifies that there is more than sufficient supply to meet the estimated B Use Class requirements using the historic completions comparator point in the range. This will accommodate the JSP jobs growth target and provide for replacement requirements. In addition there is a c.4% surplus to deliver enhanced range and choice in the supply portfolio. This position will be improved if further redevelopment opportunities are identified or additional windfall development comes forward.
- xxi. Should a higher level of employment growth be forthcoming in line with projected workforce growth this could be accommodated at the lower end of the range. Supply remains insufficient to achieve the upper end of the range. The historic completions comparator is based on the 2006-16 period where an annual average of 5,150 additional jobs was achieved and therefore remains a reasonable basis for planning when considering 100,000 jobs.

# 1 Introduction

- 1.1.1 The four Unitary Authorities (UAs) of the West of England are working collaboratively to prepare a Joint Spatial Plan (JSP). As part of the JSP process a number of economic and employment evidence documents have been prepared including an Economic Development Needs Assessment (EDNA, 2016), a series of economic forecasts from Oxford Economics and topic papers drawing the available evidence together.
- 1.1.2 The EDNA analysed the B Use Class (i.e. business, industrial, storage and distribution uses) employment floorspace and land requirements associated with a range of scenarios. The preferred scenario is based on the Oxford Economics 2015 edition 'medium-high' forecast. This was adopted as it aligned with the West of England Strategic Economic Plan. It also set out analysis of employment land supply and compared the alignment of the supply and demand positions.
- 1.1.3 Following consultation on the pre-submission JSP which concluded in January 2018, Hardisty Jones Associates (HJA) and Lambert Smith Hampton (LSH) were appointed by Bath and North East Somerset Council, Bristol City Council, North Somerset Council and South Gloucestershire Council to independently review the policies, supporting evidence and consultation responses related to employment within the JSP.
- 1.1.4 The review process identified a number of areas where the available evidence could be strengthened and updated. This included more detailed consideration of historic development activity levels drawing on completions data collated by the four UAs; consequentially considering whether this had implications for the assessment of future employment land requirements in terms of gross levels of activity and the need to replace anticipated losses; updating of the employment land supply position as set out within Appendix B to the 2016 EDNA; and as a result, updating the analysis comparing the supply and demand position.
- 1.1.5 This report sets out the outputs of these tasks, presented as additional and updated employment evidence.
- Chapter 2 sets out the analysis of historic completions of employment property;
  - Chapter 3 sets out the results of relevant updates to the assessment of future requirements;
  - Chapter 4 sets out the findings of an updated supply assessment; and
  - Chapter 5 sets out an updated analysis comparing the supply and demand of employment sites and premises.
- 1.1.6 In setting out additional evidence, this report enables more informed consideration of employment issues raised by the Inspectors within their initial letter (ED01) and criticisms of both the robustness of the existing evidence base and the sufficiency of employment sites and premises provision made by consultation respondents as summarised in SD8A Engagement Report of Key Issues Raised at Regulation 19 Consultation (April 2018).
- 1.1.7 This report is specifically focused on the requirement for and provision of B Use Class sites and premises.

## 2 Historic Completions Data

### 2.1 Introduction

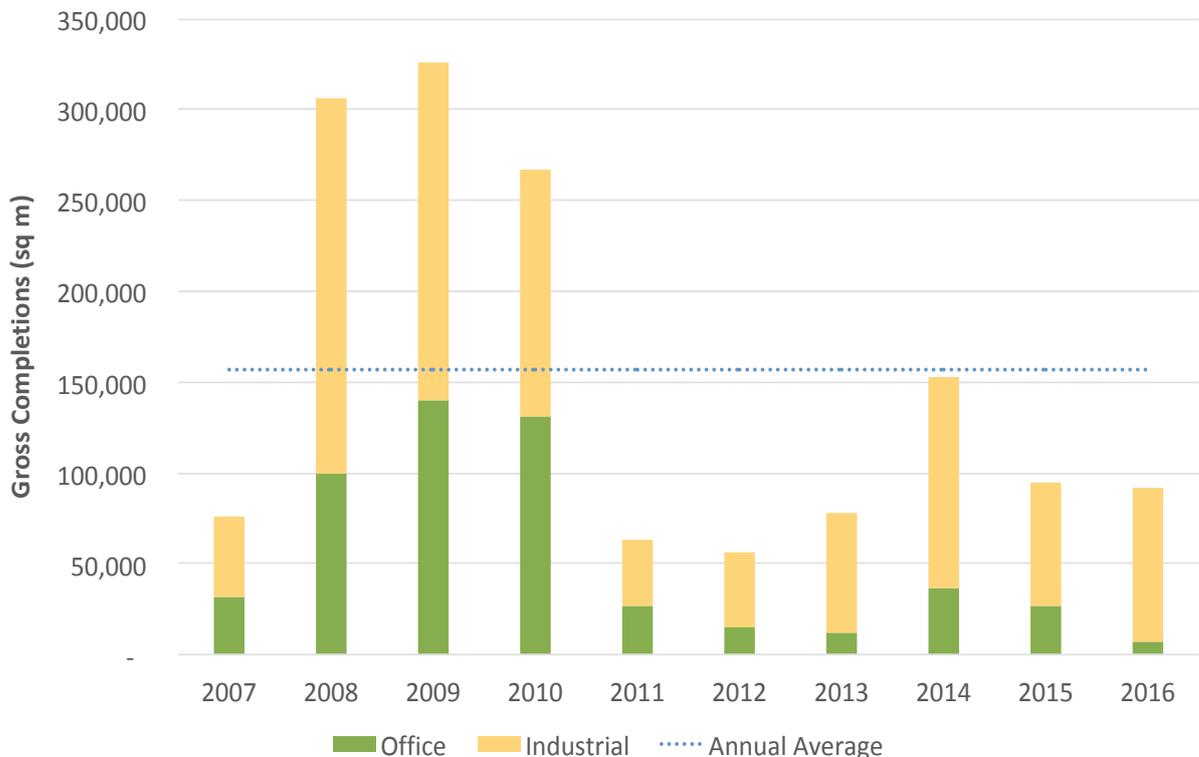
2.1.1 This chapter provides commentary on analysis of historic time series data for B Use Class completions (gains and losses) across the four Unitary Authority areas of the West of England (WoE). This is based on data provided by the four UAs. Data has been made available for a 10-year period 2006/7-2015/16 from all four UAs. For simplicity data is referenced to the end of the period e.g. 2015/16 is stated as 2016.

### 2.2 Gross Completions

2.2.1 Total B Use Class completions across the WoE were 1,598,700 sqm over the 10-year period. This is equivalent to 159,900 sqm per annum. However, the lumpy nature of commercial employment property development means there is a very uneven spread over time. Figure 2.1 illustrates total gross completions with the annual average line plotted for comparison. There was a very high level of recorded completions in the period 2008-10. This peak has not been repeated in recent times. The 2008-10 peak was fuelled by high levels of both office and industrial development.

- Average annual office completions are recorded at 52,600 sqm.
- Average annual industrial<sup>2</sup> completions are recorded at 98,600 sqm.
- A small amount of historic completions are recorded as 'mixed B', equivalent to 8,700 sqm per annum.

**Figure 2.1: Total Annual B Use Class Gross Completions, West of England, 2007-2016**



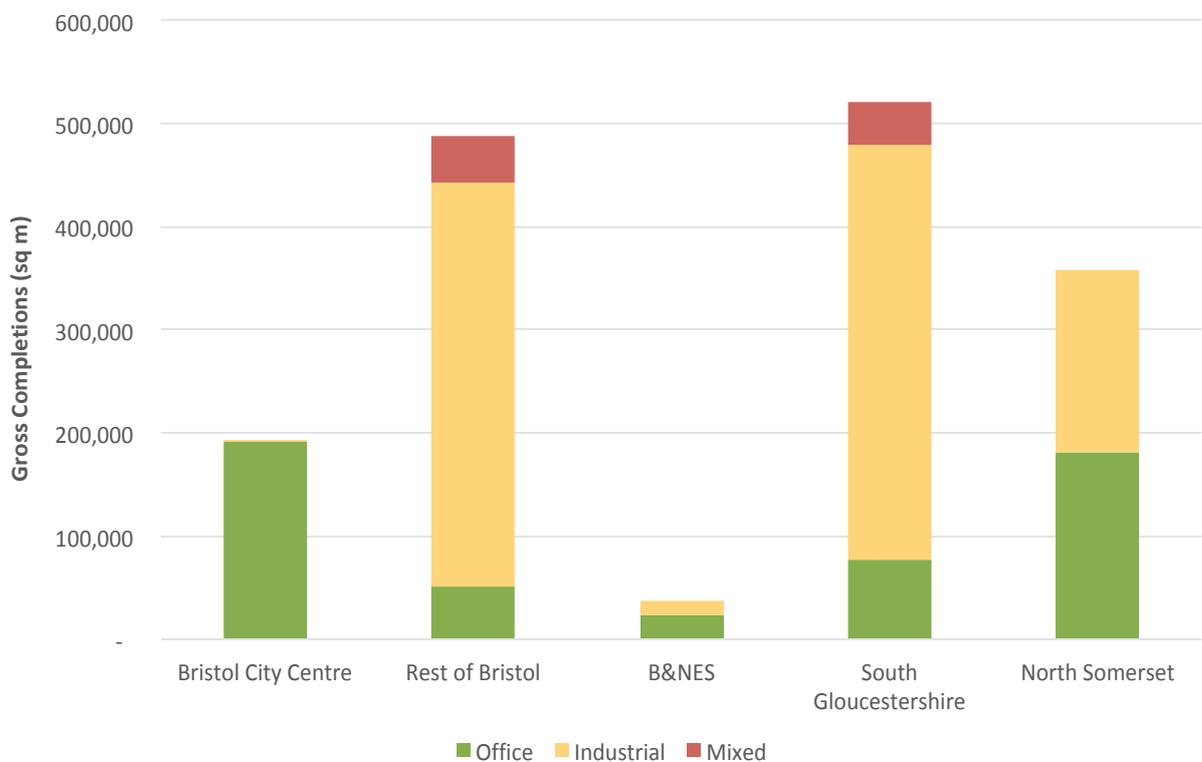
Source: HJA based on UA data

<sup>2</sup> 'Industrial' refers to all property within the B1c, B2 and B8 Use Classes, and excludes any Sui Generis uses that could be considered as industrial.

2.2.2 Gross completions were not evenly distributed across the four UAs. This is illustrated in Figure 2.2. The relatively low level of commercial employment development in B&NES throughout the analysis period is clearly evident<sup>3</sup>.

- Office development was concentrated in Bristol City Centre (36%) and North Somerset (35%). The remainder was distributed across South Gloucestershire (15%), rest of Bristol (10%) and B&NES (5%)<sup>4</sup>.
- More land hungry Industrial development was concentrated in South Gloucestershire (41%) and rest of Bristol (40%) with the remainder distributed across North Somerset (18%) and B&NES (1%). Less than 1% was delivered in Bristol City Centre.
- There was a small amount of development recorded as mixed B Use that could not be apportioned.

**Figure 2.2: Gross Completions by Area, 2006/7-2015/16**



Source: HJA based on UA data

### Gross Losses

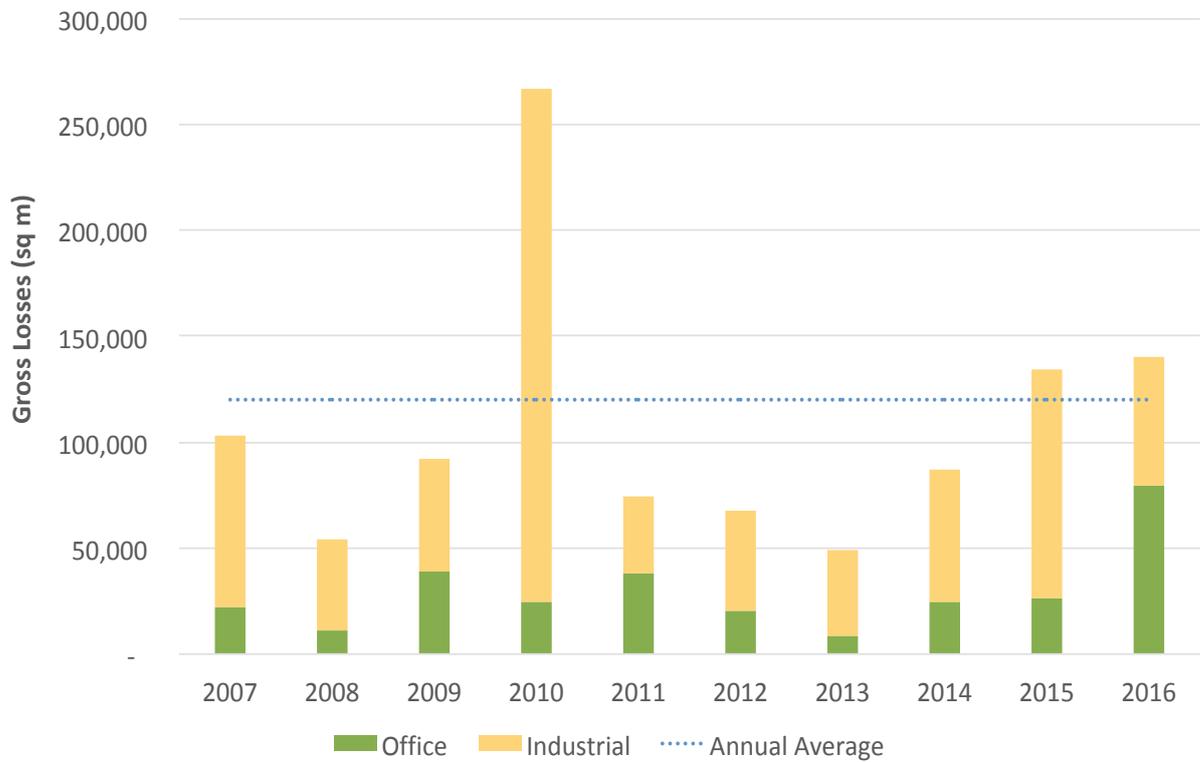
2.2.3 Total B Use Class losses across the WoE were 1,174,100 sqm over the 10-year period. This is equivalent to 117,400 sqm per annum. However, the lumpy nature of commercial employment property activity means there is no linear pattern in keeping with completions data. Figure 2.3 illustrates total gross losses with the annual average line plotted for comparison. There was a very high level of recorded losses in 2010. Losses of office space were notably higher in 2016 than previous years which is partially caused by Permitted Development Rights taking effect.

<sup>3</sup> 2% of total gross completions were recorded in B&NES compared to c7% of total stocks [EDNA Table 5-1]. Both South Gloucestershire (+5% points) and North Somerset (+1% point) achieved higher levels of completions than their aggregate stock position would suggest.

<sup>4</sup> Figures sum to more than 100% due to rounding.

- Average annual office losses are recorded at 29,400 sqm.
- Average annual industrial losses are recorded at 77,500 sqm.
- 'Mixed B' losses are recorded at an average of 10,500 sqm per annum.

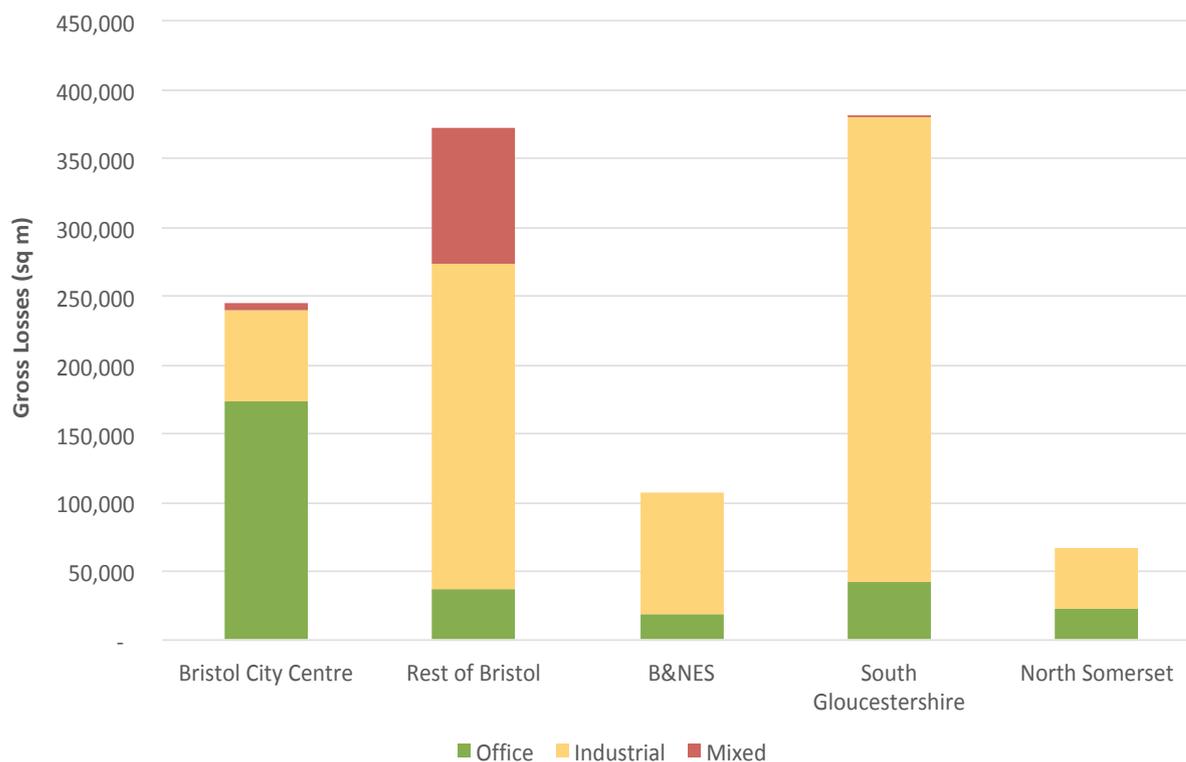
**Figure 2.3: Total Annual B Use Class Gross Losses, West of England, 2007-16**



Source: HJA based on UA data

2.2.4 Figure 2.4 shows the gross losses by area. The most significant losses of office space were in Bristol City Centre, reflecting the nature of stock in the area. Elsewhere industrial losses dominated.

**Figure 2.4: Gross Losses by Area, 2007-16**



Source: HJA based on UA data

### Net Completions

2.2.5 The net change in B Use Class across the WoE was +424,600 sqm over the 10-year period. This is equivalent to +42,500 sqm per annum.

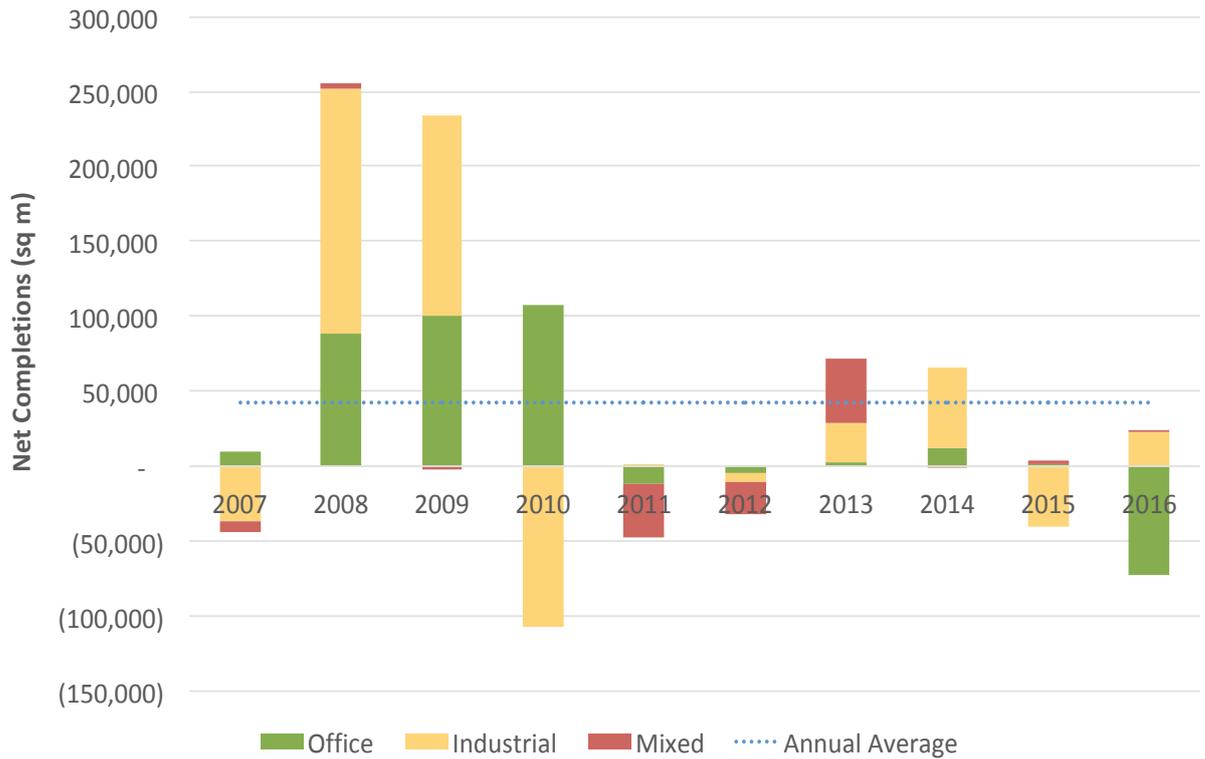
- Average annual office net changes are recorded at +23,200 sqm.
- Average annual industrial net changes are recorded at +21,000 sqm.
- Average annual mixed B Use Class net changes are recorded at -1,800 sqm

2.2.6 Overall this shows the significant masking of gross levels of activity when considering only net changes in the data. Total 'gross' completions are approximately 377% higher than net completions across the WoE.

2.2.7 The lumpy nature of the commercial development market is also evidenced when looking at the time series of total net completions, with substantial swings between positive and negative. This is illustrated in Figure 2.5.

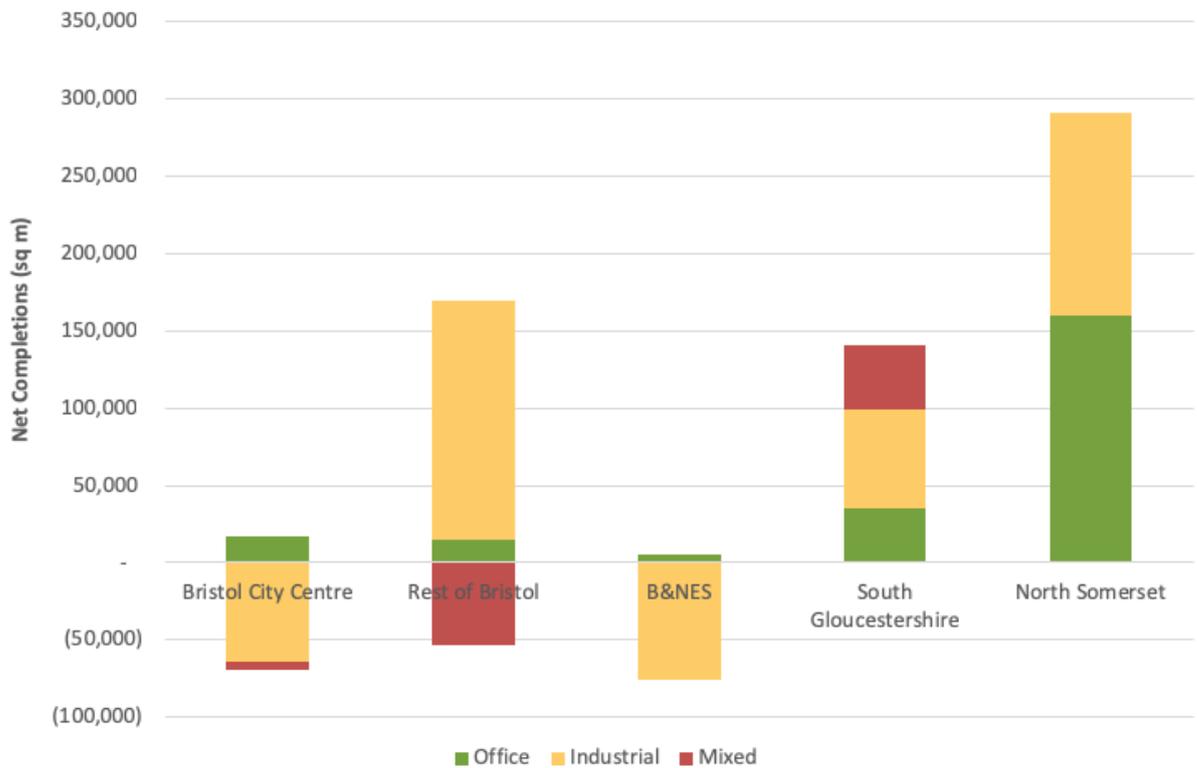
2.2.8 Figure 2.6 shows net completions by area. This shows overall net losses in Bristol City Centre and B&NES over the 10-year analysis period. There were net gains in the Rest of Bristol, South Gloucestershire and North Somerset.

**Figure 2.5: Annual B Use Class Net Completions, West of England, 2007-16**



Source: HJA based on UA data

**Figure 2.6: Net Completions by Area 2007-16**



Source: HJA based on UA data

## **B for B Replacement**

- 2.2.9 Data from three<sup>5</sup> of the UAs allows more detailed consideration of whether new B Use Class completions were delivered on sites that previously included B Use Class floorspace. This is an important dataset, as it provides an indication of whether new employment floorspace requires new sites to be made available or whether there is on-site replacement activity.
- 2.2.10 Across the three areas for which there is data a total of 248,400 sqm of B Use Class floorspace was delivered on sites that previously accommodated B Use Class floorspace. This represents 21% of the total gross completions across the three areas for which there is data.
- 2.2.11 On an area by area basis there is substantial variation, with Bristol (both City Centre and Rest of) achieving 29% on-site replacement compared to 11% in South Gloucestershire and 9% in B&NES. This reflects the constraints on land availability within the Bristol City administrative boundary and within the more urbanised setting which makes the re-use of employment sites both necessary and attractive.

## **2.3 Summary**

- 2.3.1 This chapter sets out detailed analysis of historic development activity. This provides helpful insights into the workings of the commercial market.
- 2.3.2 The analysis highlights the fact that data on net changes in floorspace can mask significantly larger levels of development activity (i.e. gains and losses). As a result, making sufficient provision for only net changes in the economy has a high risk of leading to under provision.
- 2.3.3 The historic completions analysis clearly identifies a regular flow of losses of employment space. Without appropriate re-provision the total stock of premises will be eroded. This will not only undermine attempts to enable growth in those parts of the economy which require B Use Class premises, but also to accommodate the existing economy on an ongoing basis.
- 2.3.4 Historic data indicates a perpetual cycle of updating the existing stock of employment premises across the WoE. Whilst a proportion of existing stock is lost each year, the evidence indicates that this is generally re-provided through the development of new floorspace. This enables the provision of new premises which are attractive to the market and suited to modern occupier needs in terms of typology and location.
- 2.3.5 The relationship between losses and re-provision is not direct. The evidence highlights the lumpy nature of the commercial employment property development market, it also reflects the economic cycle to some extent. The critical implication is that there is a need to ensure provision to deliver this replacement activity.

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<sup>5</sup> No data was available for North Somerset on B for B replacement activity

## 3 Future Employment Land Requirements

### 3.1 Introduction

3.1.1 This chapter considers the implications of the analysis of historic completions on the assessment of future employment sites and premises requirements.

### 3.2 Background

3.2.1 It was raised through the Pre-submission (Regulation 19) JSP consultation that there were concerns relating to the failure to consider gross levels of development activity and also the need to consider replacement of stocks as employment sites and premises are lost to other uses.

3.2.2 Table 3 of the EDNA (SD15B) sets out total Functional Economic Market Area (FEMA) level employment sites and premises requirements. The analysis is based on 63% of the 81,600 net additional jobs<sup>6</sup> within the Oxford Economics 'medium-high' scenario requiring accommodation within the B Use Class. This indicates a requirement of 45,250 sqm per annum. This comprises 28,950 sqm of office floorspace and 16,300 sqm of industrial and warehousing (combining the two categories).

3.2.3 The EDNA figures compare with 10-year annual average net completions levels of 42,500 sqm across the WoE (see paragraph 2.2.5), comprising 23,200 sqm of office floorspace, 21,000 sqm of industrial and warehouse floorspace and a net loss of 1,800sqm of mixed B Use Class floorspace. On a pure net basis, one might conclude that there is a reasonable read across between the historic trend data and the EDNA forecast requirement. In fact, there is additional provision within the EDNA on a net basis over and above historic trend. However, as was demonstrated in the previous chapter of this report, the net position masks substantial gross levels of activity in terms of both gains and losses of commercial employment property.

3.2.4 HJA has reviewed the demand assessment within the EDNA and concluded that it is robust in terms of its assessment of the net changes in overall B Use Class sites and premises requirements which will be necessary to facilitate the changes in the economy as forecast by the Oxford Economics medium-high (preferred) scenario<sup>7</sup>. However, it does not address the need for replacement activity and has not effectively addressed the significant gross levels of gains and losses evident in development market activity. Replacement of lost stocks is vital to ensure an adequate supply of employment property to meet the needs of the economy at its existing scale.

3.2.5 The HJA analysis of historic development activity found that approximately 20% of historic completions have been achieved through B Use Class redevelopment (i.e. the reuse of B Use Class employment sites). However, the remainder has required new sites. This indicates there will likely be a requirement for a high proportion of replacement activity to take place on new sites to deliver new B Use Class supply to meet modern occupier needs.

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<sup>6</sup> The EDNA is based on full time equivalent (FTE) analysis of 69,400 FTE jobs. This aligns to the 81,600 jobs within the Oxford Economics analysis. There is a slight discrepancy with the 82,500 jobs stated at Policy 4 of the JSP. The EDNA analysis did not apply the 1.1% uplift in keeping with the West of England Strategic Economic Plan.

<sup>7</sup> The EDNA estimates approximately 63% (c.51,950 jobs) of the 81,600 additional jobs under the medium-high scenario as falling within the B Use Class (based on tables 6-37 and 6-38). The EDNA demand assessment fully considers the requirements for B Use Class floorspace to accommodate these jobs. HJA analysis as summarised in chapter 5 of this report notes that the allocation of jobs to the B Use Class is assessed as an upper estimate. The remainder fall within the A, C, and D Use Classes, Sui Generis or do not require a specific property (e.g. homeworking or peripatetic working).

- 3.2.6 HJA estimates<sup>8</sup> a level of replacement activity required in the future in the region of 1-2% of total stocks per annum (based on Valuation Office Agency data). On this basis a replacement requirement of c.20,000 – 40,000 sqm per annum of office floorspace and c.55,000 – 110,000 sqm per annum of industrial and warehousing floorspace would be anticipated in the WoE. This would be required in addition to the net adjustments to the overall economy as modelled through economic forecasts (i.e. the analysis set out in the EDNA).
- 3.2.7 The estimated replacement requirement is expressed as a range. This reflects uncertainty in the level of replacement activity that will take place. The underpinning rationale for this range is set out at Appendix 2. The lower end of the range is more likely to be appropriate where the commercial development market is weak, and the existing stock of B Use Class premises is in good condition and well suited to modern occupiers. The upper end of the range is more likely to be appropriate in strong commercial development market conditions and where the existing stock of B Use Class sites and premises is in a poor state of repair, poorly located for the purposes of modern occupiers, or at substantial threat to change of use to other forms of development.
- 3.2.8 Figure 3.1 sets out the revised estimate of future requirements, considering both replacement activity and need arising from the net changes in the economy indicated by economic forecasts. This uses the net additional requirements as set out in the EDNA (Table 6-39 based on the Oxford Economics medium-high 2015 employment forecasts) as the starting point. The indicative range of potential replacement requirements is then added to provide an estimate of gross levels of B Use Class development activity anticipated over the 20-year JSP period.
- 3.2.9 To provide a reference point within the range, the historic 10-year level of gross (total) completions is then provided for comparison<sup>9,10</sup>. As can be seen, the historic level of activity sits within the estimated range for gross completions.
- 3.2.10 Whilst the assessment of total requirements is formed of component parts, in the real world it is not possible to determine whether demand in the market is ‘net additional’ or ‘replacement’. The market is characterised simply in terms of ‘demand’ and ‘supply’.
- 3.2.11 Figures for office development are stated in square metres only. This is due to the range of development densities which can be achieved in differing locations. For example, a city centre office development within a high-rise setting will achieve a far higher site development density than a low rise out of town business park office scheme. The floorspace figure in square metres is therefore deemed more useful for planning purposes. Industrial and warehousing requirements are converted to land use on the basis of a development density of 4,000 sqm per hectare.

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<sup>8</sup> The underpinning rationale for this assumption is set out at Appendix 2.

<sup>9</sup> The historic completions comparator is based on B Use Class floorspace completions over the period Apr 2006 – Apr 2016. During this period total WoE employment was estimated to have increased by approximately 51,500 jobs (source: Oxford Economics medium-high forecast). This equates to 5,150 jobs per annum, which is a greater level of jobs growth than forecast 2016-36, at approximately 4,100 jobs per annum.

<sup>10</sup> The small amount of development recorded as Mixed B Use Class has been added to the industrial and warehousing category.

**Figure 3.1: HJA Estimate of Future West of England B Use Class Requirements 2016-36 (all figs in sq m unless otherwise stated)**

	Office	Industrial & Warehousing
<b>Estimated Total Development Activity</b>		
Net additional (A)	579,000	326,000
Replacement (B)	393,000-786,000	1,093,000 – 2,186,000
Sub Total (Estimated Gross Completions) (C=A+B)	972,000 – 1,365,000	1,419,000 – 2,512,000
Hectares (@40% <sup>11</sup> )		354 ha – 628 ha
<i>Historic Gross Completions Comparator</i>	<i>1,052,300</i>	<i>2,145,100<sup>12</sup></i> <i>(536 ha)</i>

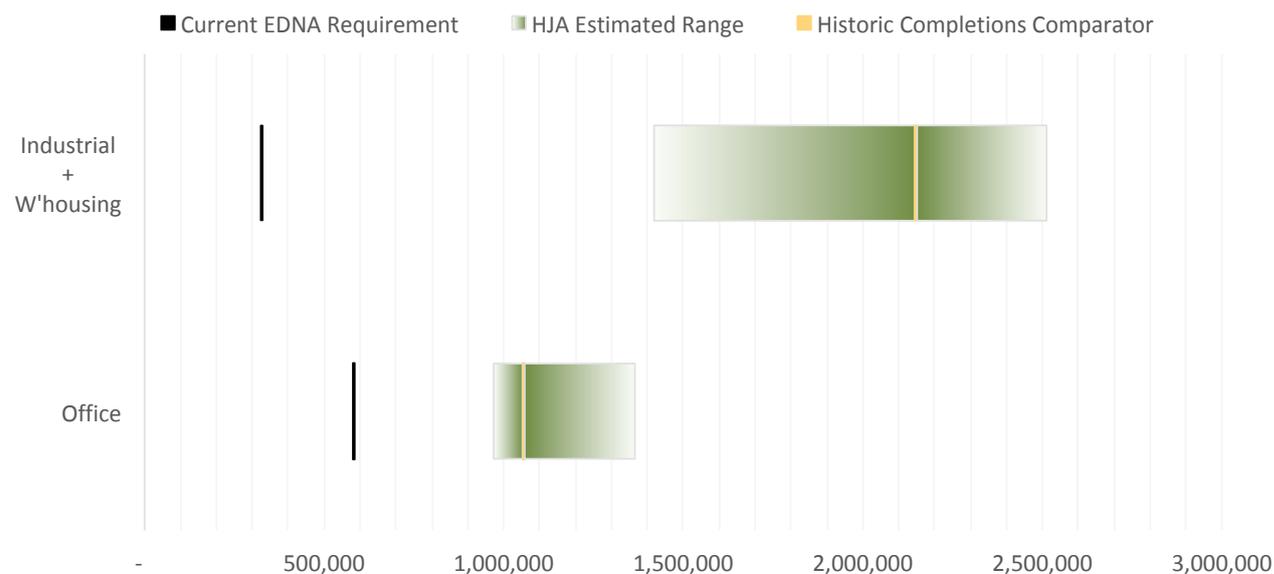
*Source: HJA based on UA Completions Data, EDNA (Atkins) and own analysis*

- 3.2.12 Figure 3.2 illustrates the Total Development Activity data from Figure 3.1 in a more visual form. The black bar shows the net additional only estimate arising from the EDNA. The green shaded sections show the HJA revised estimate – capturing both net additional requirements and the estimated range of replacement activity. The yellow bar indicates the reference point based on the 10-year historic completions data. For offices, the historic indicator sits towards the lower end of the range, suggesting a lower level of replacement activity may be appropriate in the offices sector. For industrial (including warehousing) property the historic indicator is above the midpoint, suggesting a higher level of replacement activity may be appropriate.
- 3.2.13 It should be noted that this is a forecast estimate and is clearly subject to variability, but is designed to bring together available evidence in order to describe the workings of the commercial property market. It includes both historic data and economic forecasts.
- 3.2.14 The conclusion of this assessment is a higher estimate of total B Use Class sites and premises requirements for the plan period when compared to the 2016 EDNA. The level of replacement activity which will be required is estimated in terms of a range reflecting the multiple factors that can influence the commercial development market.
- The lower end of the range should be viewed as a minimum level of anticipated activity and supply should be identified to meet this.
  - Historic levels of activity provide a useful reference point for planning purposes.
  - The upper end of the range is most relevant where a substantial proportion of the existing stock of commercial sites and premises is recognised as unfit for purpose, there are higher than usual risks of losses of existing stock to other uses, and where there is a strong commercial market which is able to deliver a higher level of employment development than has been achieved over the 10-year historic analysis period.

<sup>11</sup> EDNA uses 40% for B1c/B2 and 50% for B8. Estimated hectareage should therefore be considered an upside estimate on the basis of a 40% assumption.

<sup>12</sup> This includes both industrial and warehousing and the small amount of mixed B Use Class completions.

**Figure 3.2: Indicative Forecast Future Supply Requirement 2016-36, West of England**



Source: HJA based on UA Completions Data, EDNA (Atkins) and own analysis

### 3.3 Summary

- 3.3.1 This chapter considers the implications on the future B Use Class employment sites and premises requirements across the WoE resulting from including an allowance for replacement activity as well as net additional requirements.
- 3.3.2 Historic completions data indicates a clear need to provide capacity for replacement so as not to erode the aggregate stock of sites and premises.
- 3.3.3 The 2016 EDNA provided a robust quantitative analysis of the net changes required as a result of forecast economic and employment change. This fully accommodates the 63% of forecast jobs estimated to require accommodation within the B Use Class. However, it did not consider the need for replacement demand to maintain a competitive and modern stock of premises to accommodate the existing levels of economic activity.
- 3.3.4 HJA estimates a requirement for 1-2% of stock to be replaced each year. This range provides a degree of flexibility but is shown to be appropriate in the context of historic activity levels in the WoE.
- 3.3.5 The result of including a replacement analysis is an increase in the total requirements for both office and industrial and warehouse floorspace across the WoE within the JSP plan period. As a minimum the lower end of the range should be met in terms of supply and the historic completions reference point provides a helpful guide as to where in the range to target.

## 4 Employment Land Supply Update

### 4.1 Introduction

- 4.1.1 This chapter summarises the outputs of a process to update the previous assessment of employment land supply.
- 4.1.2 The purpose of the supply assessment is to inform decision making appropriate to a Joint Strategic Plan. In particular, to ascertain whether at a strategic level there is sufficient supply to meet the identified requirements for B Use Class employment sites and premises as summarised in the previous chapter.

### 4.2 Update Process

- 4.2.1 Each of the UAs provided an update to the information contained within Appendix B of the EDNA. This included the addition and deletion of sites as appropriate, the adjustment of land/floorspace quanta where appropriate, confirmation of completions including both gains and losses since the start of the JSP period, and categorisation of supply into broad short-, medium- and long-term categories.
- 4.2.2 Through the updating process it became apparent that the original schedule of sites within Appendix B of the EDNA did not contain all sites which could contribute to the employment land supply for the West of England. There were also concerns as to whether the data as collated was on a consistent basis of measurement and assessment.
- 4.2.3 HJA has worked with officers of the four UAs to develop as consistent and robust assessment of supply as possible. This included final sign off by relevant UA officers to the portfolio of sites to be included for that UA. Appendix 3 to this report sets out the final agreed schedule.

### 4.3 Definitions, Categories and Measurement Approaches

- 4.3.1 The total supply of employment sites and premises comprises:
- Completions from the start of the plan period to date; and
  - Sites with permission, existing allocations and emerging proposed allocations<sup>13</sup>.
- 4.3.2 The four UAs do not all update monitoring records over the same time period. As a result, the presented data should not be relied upon as an accurate assessment of completions. However, where sites are known to have been completed these have been recorded. The primary purpose is to measure as accurately as possible the total potential supply of B Use Class sites and premises within the plan period.
- 4.3.3 Capacity has been measured based on total new development potential. This does not net-off losses of B Use Class floorspace. This provides the most accurate measure possible of total potential completions<sup>14</sup> based on currently known information. This is likely to remain an underestimate of total potential, given opportunities for further redevelopment of existing employment areas within the JSP period that, as yet, have not been recorded within the planning system.

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<sup>13</sup> For example, proposed employment land supply at Strategic Development Locations.

<sup>14</sup> This therefore aligns to the estimates of total development activity set out within Chapter 3.

4.3.4 Future supply has been categorised into three main Use Class groupings:

- Office (B1a/b)
- Industrial and Warehouse (B1c/B2/B8)
- Mixed B (including B1, B2 and B8)

4.3.5 The mixed category includes sites which are identified or allocated for B1, B2 and B8 uses. These could therefore deliver office or industrial floorspace. All allocations within North Somerset are given this more flexible designation.

4.3.6 For some sites the developable area is stated in hectares. For others, floorspace figures measured in square metres have been provided. To aid consistency with the assessment of future requirements:

- All office sites have been converted into floorspace figures on the basis of 4,000 sqm per hectare. All those office sites measured in hectares are located in out of town locations and are unlikely to deliver high density office development as might be expected in city centres.
- All industrial and warehousing sites, as well as mixed B use class sites that have development potential stated in square metres have been converted to land areas in hectares. This conversion has been undertaken on the basis of 4,000 sqm per hectare.

4.3.7 Tables setting out the initial data and conversions are set out in Appendix 4.

4.3.8 Sites have been broadly categorised by UA officers into three timing categories:

- Short Term: sites that are readily available and have no constraints that would undermine the reasonable prospect of delivery within 5-years, subject to demand.
- Medium Term: sites that may face minor constraints but could reasonably be expected to come forward within 10-years, subject to demand.
- Longer Term: sites that may face more substantial constraints and are reasonably expected to come forward beyond 10-years from the current time.

4.3.9 The purpose of this timing analysis was to understand whether there was sufficient supply available to meet needs in the short to medium term. The assessment was undertaken at a high level by UA officers.

## 4.4 Total Supply

4.4.1 Figure 4.1 sets out summary data based on the schedules and tables set out in Appendix 3 and 4. This indicates a total of 588,900sqm of office floorspace, 403.9ha of industrial and warehouse land, with a further 282.9ha of mixed B Use Class land.

4.4.2 With 260,000sqm of office floorspace within the Temple Quarter Enterprise Zone and a further 79,100sqm across the rest of Bristol City Centre, there is a total identified capacity for 339,100sqm of office development within the city centre. This represents approximately 60% of total office supply excluding mixed sites. Other locations with more than 10% of supply include Bath and Emersons Green.

4.4.3 Industrial and warehouse supply is heavily concentrated at Avonmouth and Severnside. This accounts for more than 80% of industrial and warehouse supply excluding mixed B Use Class land.

4.4.4 91.4ha of mixed B Use Class land is identified within the proposed SDLs. Further detail relating to this figure is set out at Appendix 6 to this report.

**Figure 4.1: Summary of Total Supply by Area**

	Office (sqm)	Industrial & Warehouse (ha)	Mixed (ha)
Temple Quarter Enterprise Zone	260,000	0.1	0.3
South Bristol	11,200	11.1	-
Avonmouth & Severnside	3,300	327.1	35.4
Filton Enterprise Area	26,200	0.8	55.3
Emersons Green	72,200	5.5	12.7
Bath	79,200	0.0	-
North Somerset	5,000	24.2	81.7
North and East Fringe	31,200	2.5	0.1
Strategic Development Locations	-	-	91.4
Other Bristol City Centre	79,100	-	-
Other Bristol	3,900	6.4	2.0
Other BANES	16,600	14.5	-
Other South Gloucestershire	1,100	11.7	4.0
<b>Total</b>	<b>588,900</b>	<b>403.9</b>	<b>282.9</b>

Source: HJA based on UA. Figures may not sum due to rounding.

4.4.5 Figure 4.2 sets out the same data aggregated by UA rather than sub-area. This highlights the important role of Bristol for office provision and South Gloucestershire for industrial and warehouse provision.

**Figure 4.2: Summary of Total Supply by UA**

	Office (sqm)	Industrial & Warehouse (ha)	Mixed (ha)
Bristol	357,400	88.6	5.8
BANES	95,800	14.6	12.5
South Gloucestershire	130,700	276.5	160.0
North Somerset	5,000	24.2	104.6
<b>Total</b>	<b>588,900</b>	<b>403.9</b>	<b>282.9</b>

Source: HJA based on UA. Figures may not sum due to rounding.

### Timing

4.4.6 Figure 4.3 details the spread of supply across broad timing categories. This is also shown visually in Figure 4.4.

4.4.7 A total of 363,000sqm of potential office floorspace is recorded as available in the short term. In addition 236.6ha of industrial and warehouse land and a further 113.0ha of mixed B Use Class land falls within this category.

4.4.8 A total of 187,500sqm of office floorspace, 99.7ha of industrial and warehouse land, and a further 50.9ha of mixed B Use Class land is recorded as available in the medium term.

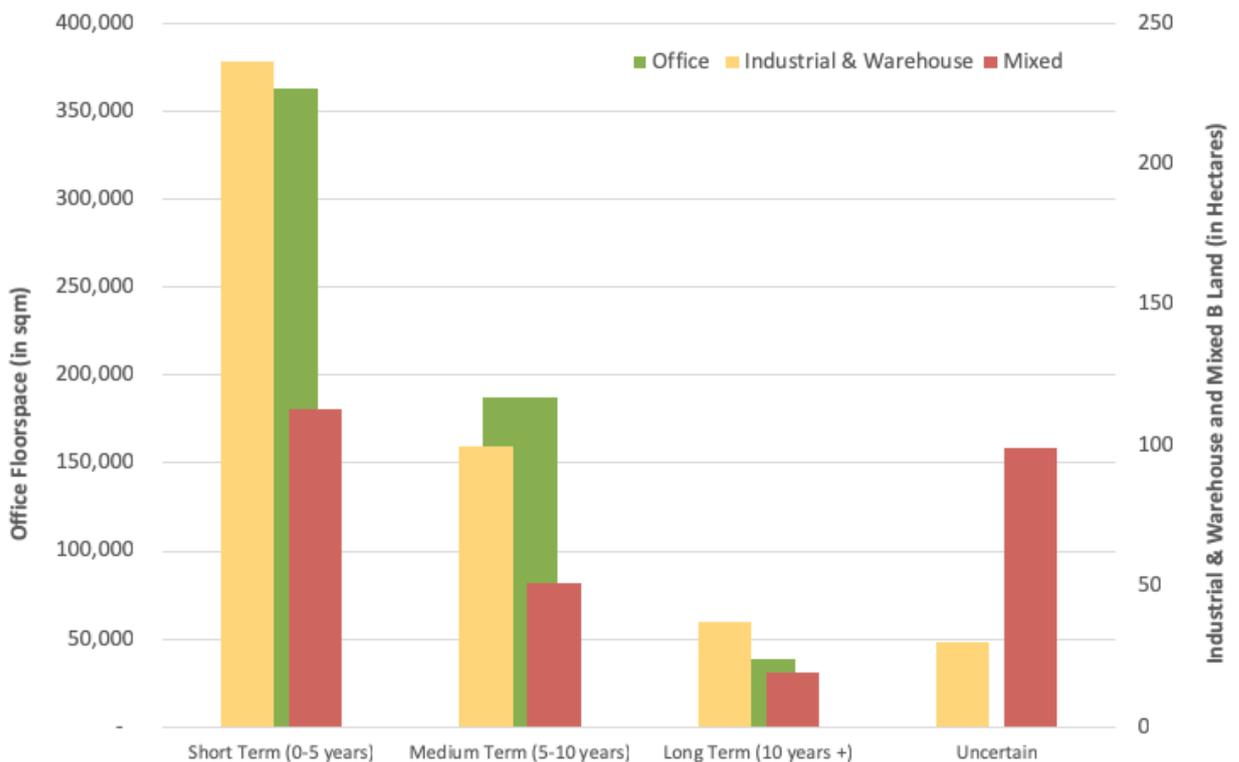
- 4.4.9 A total of 38,400 sqm of office floorspace, 37.5ha of industrial and warehouse land, and 19.6ha of mixed B Use Class land is recorded as available in the longer term.
- 4.4.10 A total of 129.4ha of B Use Class land is recorded as uncertain timing. This largely comprises the proposed SDLs and 30ha of additional land at Avonmouth.
- 4.4.11 On the basis of the data provided to HJA there is a substantial proportion of supply in terms of both office and industrial & warehouse, and mixed B available in the short term. The data does not, therefore, suggest any major concerns around a potential lack of available supply in the short term.

**Figure 4.3: Summary of Total Supply by Timing**

	Office (sqm)	Industrial & Warehouse (ha)	Mixed (ha)
Short	363,000	236.6	113.0
Medium	187,500	99.7	50.9
Long	38,400	37.5	19.6
Uncertain	-	30.00	99.4
<b>Total</b>	<b>588,900</b>	<b>403.9</b>	<b>282.9</b>

Source: HJA based on UA. Figures may not sum due to rounding.

**Figure 4.4: Total Supply by Timing**



## 4.5 Comparison to EDNA Appendix B

- 4.5.1 The final position as presented in the EDNA included 265,160sqm of floorspace and 631.5ha of B Use Class land. The analysis within the EDNA did not translate office sites to floorspace or industrial floorspace to land areas. It is therefore not possible to provide a perfect comparison between the EDNA and this latest update.

- 4.5.2 However, in broad terms, the current assessment (as set out in Figures 4.1 – 4.4) has identified capacity for approximately 588,900sqm of office floorspace and 686.8ha of additional B Use Class land (industrial & warehouse plus mixed land). This represents a substantial uplift in potential supply across the JSP period. Further, this follows the removal of two large power station sites within South Gloucestershire, totalling 67ha, which are not pure B Use Class.
- 4.5.3 The updated position increases the supply figures substantially, this arises from greater clarity of potential development opportunities, as well as the inclusion of additional sites with a view to ensuring a more comprehensive schedule of supply.
- 4.5.4 The analysis undertaken has primarily focused on assessing aggregate supply and demand across the West of England. However, given the importance of Bristol City Centre office supply to the objections of Business West it should be noted that potential floorspace within the Temple Quarter Enterprise Zone has increased to c.260,000sqm. This compares to a figure of 186,250sqm in the original EDNA. A further 79,100sqm of office capacity within the city centre but outside the EZ is also identified in comparison to less than 31,000sqm in the original EDNA schedule. In aggregate this shows an increase of c.122,000 sqm of identified office capacity within Bristol City Centre.

## 4.6 Summary

- 4.6.1 This chapter has updated the analysis of supply set out within the EDNA (Appendix B) to provide an up to date position of the aggregate supply of potential B Use Class sites and premises across the WoE within the JSP plan period. This collates data supplied to HJA by the four UAs.
- 4.6.2 The analysis has identified total supply is greater than previously stated within the EDNA.
- 4.6.3 Bristol is the primary location for office supply. The supply assessment has identified substantially increased capacity within Bristol City Centre in comparison to the EDNA.
- 4.6.4 Avonmouth and Severnside is the primary location for industrial and warehouse land.
- 4.6.5 The analysis has found that 62% of office supply, 59% of industrial and warehouse land, and 40% of mixed B Use Class land is categorised as short term. This indicates substantial capacity to meet short term needs and no threat to the health of the economy through a constrained supply position.

## 5 Balance of Supply and Demand

### 5.1 Introduction

5.1.1 This chapter compares the updated supply analysis with the revised assessment of future requirements. The purpose of this comparison is to identify whether supply is sufficient to meet estimated requirements.

### 5.2 Headline Comparison

5.2.1 Figure 5.1 brings together the demand and supply analysis.

5.2.2 Two figures are brought forward from the demand analysis set out at Figure 3.1. Firstly the estimate of total gross completion levels. Secondly, the comparators from historic completions data. The historic development levels indicate activity towards the lower end of the range for offices, and for industrial, a figure just above the middle of the range.

5.2.3 The supply data, is as per the totals set out in Figures 4.1 – 4.3.

**Figure 5.1: Comparison of Supply and Demand.**

	Office	Industrial & Warehouse	Mixed
<b>Demand/Future Requirements</b>			
Estimated Gross Completions	972,000 – 1,365,000 sqm	354 – 628 ha	
<i>Historic Completions Comparator</i>	<i>1,052,300</i>	<i>536 ha</i>	
<b>Supply Position</b>			
Total Supply	588,900sqm	403.9ha	282.9ha

5.2.4 The following analysis, summarised in Figure 5.2, considers whether supply is sufficient to meet identified requirements, and uses the flexibly allocated Mixed B Use Class land as a balancing tool<sup>15</sup>.

#### **Office**

5.2.5 Total office supply, excluding mixed B, is estimated at 588,900 sqm. This is below the minimum estimate from the demand assessment. Assuming a minimum of 4,000 sqm of development per hectare, 95.8ha of the mixed land supply would be required to achieve the minimum threshold (lower end of the range), unless additional office supply is identified. To reach the level indicated by the historic completions comparator 115.9ha of mixed land would be required. To reach the upper end of the range 194.0ha would be required.

5.2.6 High level review of the sites comprising the mixed land by LSH commercial agents indicates that sites could have potential suitability to deliver up to 180ha of office development. This would be more than sufficient to meet the level required to meet the historic comparator reference point, but insufficient to reach the upper end estimate of 194ha. It should be noted that where higher development densities can be achieved the overall land requirement would fall.

<sup>15</sup> It should not be presumed that the sites identified for office and industrial & warehouse would be used ahead of those identified as mixed. The analysis as presented is indicative to understand whether total supply capacity is sufficient.

## Industrial

5.2.7 Total industrial and warehouse supply is estimated at 403.9ha. This suggests that there is sufficient supply to meet the minimum threshold (lower end of the range) with a surplus of 49.9ha. To meet the level indicated by the historic completions comparator, 132.1ha of mixed B Use Class land would be required. To meet the upper end of the requirement range a total of 224.1ha of mixed B Use Class land would be required. High level review of the sites comprising the mixed land by LSH commercial agents indicates that the portfolio of sites could have potential suitability to deliver up to 250ha of industrial development<sup>16</sup>.

## Overall Position

5.2.8 Figure 5.2 redistributes the mixed B Use Class supply, in line with the commentary at paragraphs 5.2.5 – 5.2.7 above, to assess whether, at a headline level, there is sufficient supply to meet the assessed requirements. This indicates that:

- There is more than sufficient supply to meet the minimum levels (lower end of the range). At this level there is potential spare capacity of more than 237ha (49.9ha industrial and warehouse plus 187.1ha mixed B Use Class).
- There is more than sufficient supply to meet the historic completions comparator levels. This would leave estimated spare capacity of around 34.9ha.
- There is insufficient capacity to meet the upper end of the requirement range, with a deficit of 135.1ha. There would be a particular requirement to identify additional office capacity to meet the upper end of the range.

**Figure 5.2: Balancing Supply and Demand**

	Office	Industrial & Warehouse	Residual
Low	972,000sqm = 588,900 sqm + 95.8ha (383,100 sqm) mixed	354ha = 354ha (+ 49.9ha surplus)	237ha surplus = 187.1ha mixed +49.9ha industrial & warehouse
Historic Completions Comparator	1,052,300sqm = 588,900 sqm + 115.9ha (463,400 sqm) mixed	536ha = 403.9ha + 132.1ha mixed	34.9ha surplus = 34.9ha mixed
High	1,365,000sqm = 588,900 sqm + 194.0ha (776,100 sqm) mixed	628ha = 391ha + 224.1ha mixed	-135.1ha shortfall

5.2.9 The historic completions comparator provides a helpful guide for identifying where in the range to target and plan. This would fully meet the requirements associated with the Oxford Economics medium-high forecast plus a level of replacement activity within the identified range. The evidence indicates that there is sufficient supply across the West of England to meet this

<sup>16</sup> This assumes the same sites are not used for office development.

estimate. This would leave a residual of 34.9ha (approximately 4%<sup>17</sup>). As stated previously, additional opportunities for on-site B Use Class redevelopment are anticipated and this would further boost supply, as would other windfall. A c.4% surplus would provide some additional capacity in terms of further growth, range and choice.

- 5.2.10 The historic completions comparator scenario brings together the available evidence, ensuring sufficient capacity to meet the forecast net additional expansion of the economy under the medium-high scenario and providing for replacement of dilapidated and lost stocks. It also triangulates with monitoring records for gross levels of development activity.
- 5.2.11 If proceeding on the basis of the historic completions comparator as a guide to positioning within the range, there is an appropriate level of headroom, but no evidence of a glut of supply. On this basis it will be requisite on each of the UAs to deliver the supply identified within Figure 4.2.
- 5.2.12 Should there be a desire to meet the upper end of the estimated range, which is well above levels of development recorded in the 2007-16 period, additional supply would need to be identified, particularly in terms of sites suitable for office development or higher development densities would need to be achieved.
- 5.2.13 The analysis set out above is quantitative in nature. The focus has been on assessing whether at a headline level there is sufficient supply to meet the identified requirements. This has focused on the core market segments of office and industrial & warehouse. However, it should be recognised that within the supply portfolio as set out at Appendix 3 there are a range of typologies:
- Major city centre office capacity at Bristol, including the Enterprise Zone as well as further city centre office capacity at Bath;
  - Science park related supply at Emersons Green;
  - Large scale strategic capacity for industrial and warehouse uses at Severnside and Avonmouth;
  - A range of potential out of town office and industrial locations particularly at the Enterprise Areas; and
  - A range of smaller scale local industrial and office locations throughout the FEMA.

### 5.3 Accommodating Higher Levels of Growth

- 5.3.1 The SHMA Update (April 2018)<sup>18</sup> paragraphs 17-23 note the prospects for additional workforce that would provide the capacity to support a higher level of employment growth across the West of England than forecast under the medium-high scenario. As described, the projected workforce growth could support employment growth of around 100,000 jobs, broadly midway between the levels forecast within the medium-high and high growth scenarios prepared by Oxford Economics (OE) and considered within the EDNA.
- 5.3.2 There are endless potential permutations for the mix of future employment growth. For the purposes of this analysis the available Oxford Economics scenarios are used.
- 5.3.3 The additional workforce capacity identified in the SHMA equates to approximately 55% of the additional jobs forecast in the Oxford Economics high scenario, relative to the medium-high

<sup>17</sup> This is a crude estimate based on 4,000 sqm per hectare for all office development.

<sup>18</sup> ORS (2018) West of England Housing Target Update: The basis for the housing Requirement in the Joint Spatial Plan

scenario. The EDNA identifies a requirement for an additional 186,000sqm of B1a/b office floorspace and 83ha of industrial and warehouse (B1c/B2/B8) land to meet the high growth scenario, over and above the medium-high scenario. On a pro rata basis one might reasonably conclude a further 102,000sqm (up to 23ha)<sup>19</sup> of B1a/b offices and 46ha of industrial and warehouse land would be required to accommodate this higher level of growth.

5.3.4 On the basis of the EDNA analysis as published, the maximum requirement for additional B Use Class land is estimated at approximately 69ha. When considered across the three points in the range as set out at Figure 5.2:

- There would continue to be sufficient capacity to meet the additional employment growth at the low end of the range.
- The historic comparator does not change as it is based on monitoring data, however, under this higher growth option the comparator point falls just below the low end of the range for office development, and just below the mid-point of the range for industrial and warehouse development. As cited at footnote 9 in this report, the historic completions comparator is based on an historic period where total jobs growth of c.5,150 jobs per annum was achieved which is slightly higher than would be required under a 100,000 jobs scenario and therefore it remains a reasonable basis on which to plan.
- There would continue to be insufficient capacity to meet the upper end of the range.

5.3.5 Further, the EDNA estimates 63%-65% of net additional FTE employment as requiring B Use Class premises of some form. This is based on a conversion matrix (attached as Appendix 5 to this report) which translates employment by sector to employment by Use Class. There is no 'official' best practice guidance sector to Use Class conversion matrix and therefore it is a matter of professional judgment. HJA's assessment of the matrix used to inform the EDNA is that it allocates what might reasonably be viewed as an upper estimate of employment relevant to the B Use Class. HJA's own modelling estimates a lower 36%-41% of net additional FTE employment within the B Use Class. This includes lower proportions of forecast employment growth requiring both office and industrial/warehousing premises, and higher proportions not requiring commercial sites and premises due to homeworking and peripatetic activities in comparison to that used in the EDNA. Whilst this is in part a professional judgment<sup>20</sup>, it serves to highlight that the EDNA estimates of land requirements to meet net additional employment growth are potentially upper end estimates. Should lower proportions of future employment growth require B Use Class sites and premises there will be additional capacity within the WoE supply portfolio to accommodate higher levels of employment growth than forecast under the medium-high scenario. This additional capacity could be of sufficient scale to meet the B Use Class requirements arising from a total jobs growth of 100,000 as opposed to the Policy 4 figure of 82,500 in its entirety.

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<sup>19</sup> The EDNA makes provision for office development at a plot ratio of 50% in Bristol and B&NES and 40% at North Somerset and South Gloucestershire. These assumptions are set out at Table 6-1 of the EDNA and are informed by the ODPM (204) Employment Land Reviews: Guidance Note. Whilst these assumptions have a clear basis, there is potential for city centre developments to achieve much higher densities. Should higher densities be achieved through additional city centre redevelopment the additional land requirement would fall below 23ha)

<sup>20</sup> Also drawing on data from Census of Population for homeworking by sector to demonstrate scale of activity in each sector that does not require commercial property.

## 5.4 Summary

- 5.4.1 The assessment of requirements, as set out in Chapter 3 ensures that not only are the net changes required to accommodate forecast future employment growth under the medium-high scenario considered, but also sufficient replacement capacity is provided to maintain an appropriate stock of modern employment sites and premises for the existing economy of the West of England.
- 5.4.2 This chapter has considered whether the identified B Use Class sites and premises supply, identified in Chapter 4, is sufficient to meet the identified requirements across the JSP plan period.
- 5.4.3 Based on the quantitative assessment undertaken, the analysis identifies that there is more than sufficient supply to meet the lower end of the estimated range of B Use Class requirements. The analysis also identifies that there is sufficient supply to meet the 'historic completions comparator' point within the range. This would also leave a c.4% surplus to deliver further range and choice in the supply portfolio. The analysis has found that there is insufficient capacity to meet the upper end of the range, however, this would significantly exceed the levels of development achieved over the 10-year period leading up to the start of the JSP plan period.
- 5.4.4 The historic completions comparator point provides a useful triangulation when considering all the evidence in the round and is therefore deemed a reasonable basis on which to plan. The analysis has shown there is sufficient supply to meet this level of requirement with a 4% surplus.
- 5.4.5 Should a higher level of employment growth be forthcoming in line with projected workforce growth this could be accommodated at the lower end of the range. Supply remains insufficient to achieve the upper end of the range. The historic completions comparator is based on the 2006-16 period where an annual average of 5,150 additional jobs was achieved and therefore remains a reasonable basis for planning when considering 100,000 jobs.

## Glossary

B&NES	Bath & North East Somerset
EDNA	Economic Development Needs Assessment
FEMA	Functional Economic Market Area
FTE	Full Time Equivalent
Ha	Hectare
HJA	Hardisty Jones Associates
JSP	Joint Spatial Plan
LSH	Lambert Smith Hampton
ODPM	Office of the Deputy Prime Minister
OE	Oxford Economics
ORS	Opinion Research Services
SHMA	Strategic Housing Market Assessment
Sqm	Square Metres
UA	Unitary Authority
WoE	West of England

# Appendix 1: Data Provided

## Historic Completions

### **B&NES**

Data was subject to detailed internal checking and validation before being provided to HJA. Submitted data was provided on an application by application basis and includes gross completions and gross losses. It is possible to identify whether new B Use Class completions had taken place on sites previously occupied by alternate B Use Class premises\*. Data was available for sub-areas within B&NES.

### **Bristol**

Submitted data was provided on an application by application basis and includes gross completions and gross losses. It is possible to identify whether new B Use Class completions had taken place on sites previously occupied by alternate B Use Class premises\*. Data was available for sub-areas within Bristol, including the city centre.

### **North Somerset**

Submitted data was provided on an aggregated basis by sub-area. This includes gross gains and gross losses. It is not possible to identify whether new B Use Class completions had taken place on sites previously occupied by alternate B Use Class premises.

### **South Gloucestershire**

Submitted data was provided on an application by application basis and includes gross completions and gross losses. It is possible to identify whether new B Use Class completions had taken place on sites previously occupied by alternate B Use Class premises\*. Data was available for sub-areas within South Gloucestershire. Some data was coded as Mixed B-use & Non B-use. For analysis purposes HJA assumed 50% of any floorspace in this category was B Use Class.

\* this applies where a loss of B Use Class premises was recorded as part of the relevant planning application. This may understate B for B replacement if there had been an earlier loss of B Use Class premises on the site (i.e. previous demolition). Any figures quoted relating to B for B replacement should therefore be viewed as a minimum level.

## Appendix 2: Estimating Replacement Requirements

An allowance for replacement has been included within the methodology to encapsulate the wider changes in the economy not picked up in the employment projections. Working practices change, new technologies are adopted, and the sites and premises used by firms need to adapt to these new ways of working. The buildings vacated by some businesses may not be suitable for re-occupation by new occupiers. There will also be instances where existing buildings are so dilapidated that they require complete reconstruction and replacement. The introduction of Energy Performance Certification for industrial premises may speed the need for this replacement over the plan period. There are also losses to other uses either through sales and lettings or redevelopment. The introduction of Permitted Development Rights (PDRs) has already impacted on the losses of stocks. Overall, there are a range of factors that underpin the need for some existing employment stocks to be replaced.

Developing a methodology to estimate the scale of replacement activity is not straightforward. As a result, the team at Hardisty Jones Associates, drawing on its experience of working with clients over many years, has developed a methodology which is robust in terms of its underpinning logic and the evidence used to derive assumptions.

Typically within the property sector, development appraisals on new buildings consider a 25-35 year time horizon. As a result, one might expect that after this period, a building would be ripe for replacement through dilapidation. However, data on the age of commercial employment buildings indicates a very different picture.

Data from 2004 (no more recent data has been published) for the West of England (shown in the table below) indicates that a notable proportion of the existing<sup>21</sup> stocks were built pre 1940 and around 50% pre 1970. This implies that the useful lifespan of some stocks is considerable and beyond the 35 year development appraisal period.

**Figure A2.1 Age of Commercial Stocks in West of England (2004)**

	% built Pre 1940	% built 1940 - 1970	Total Pre 1970
Retail	39%	21%	59%
Office	25%	15%	40%
Factory	31%	33%	64%
Warehouse	10%	20%	30%
<b>Total</b>	<b>24%</b>	<b>23%</b>	<b>47%</b>

Source: Department for Communities and Local Government (CLG) archive. Total floorspace by LAD and age. 2004.

If buildings were replaced every 30 years, one would expect around 3.3% of all commercial employment property stocks to be replaced each year in order to maintain the stock. Due to the existence of a substantial stock of property aged pre 1970 this assumption is not supported by the evidence and is too strong.

At the other extreme, if one assumes buildings last 200 years before being replaced, that equates to a 0.5% replacement rate each year. However, this appears to be too low, with numerous examples of

<sup>21</sup> This data is indicative given it is now 14 years out of date, but is used to illustrate the point that much of the data has a longer economic life than may be imagined at time of construction.

buildings requiring replacement through dilapidation or loss to other activities well before they reach 200 years of age. The reality is therefore likely to lie somewhere in between these two extremes, in the region of 1-2%. A figure of 1% equates to the replacement of the total supply of employment premises every 100 years, although in reality that could include some premises being replaced more often and some premises not being replaced at all. It has been noted to HJA in various locations that whilst Victorian premises were constructed to last for the long term, many more modern construction methods do not last as well. 2% equates to the replacement of the total supply of employment premises every 50 years. The use of a range acknowledges the uncertainty but provides a guide to policy makers. The condition of stock, pressure for change of use, nature of changing working practices and other commercial development and occupier market drivers will influence the level of activity within this range.

Figure A2.2 sets out the estimated range of replacement requirements based on the total level of office and industrial stocks at 2016 as measured by the Valuation Office Agency. This is set against the historic levels of losses as identified from the 10-year time series completions data provided to HJA by the four West of England UAs. This shows historic levels of activity well within the 1%-2% range over recent times.

**Figure A2.2 Age of Commercial Stocks in West of England (2004)**

	Low (1%)	High (2%)	10-year Historic
Office	19,700	39,300	29,800
Industrial & Warehousing	54,600	109,300	79,200
Other	-	-	10,800
<b>Total</b>	<b>74,300</b>	<b>148,600</b>	<b>119,800</b>

*Source: HJA based on VOA and UA data*

## Appendix 3: Supply Schedule

See separate MS Excel spreadsheet.

## Appendix 4: Supply Data Conversion Tables

To simplify the analysis of supply and demand it was necessary to calculate supply on a consistent floorspace (sqm) or land (ha) basis. Original data as provided by the UAs included office sites and premises in both floorspace and land. The same was true of industrial and warehouse sites and premises. The tables in this appendix show the original aggregated data taken from the schedule set out in Appendix 3 as well as the simplified tables which mirror those set out within Chapter 4 of the report. Where an office site was recorded in hectares this was converted to floorspace using a multiplier of 4,000sqm per hectare. Where industrial and warehouse or mixed B Use Class figures were originally quoted in square metres, these were converted to land areas on the basis of 4,000sqm per hectare.

**Table A: Total Supply by Sub Area – Raw Data**

	Office (sqm)	Industrial & Warehouse (sqm)	Mixed (sqm)	Office (ha)	Industrial & Warehouse (ha)	Mixed (ha)
Temple Quarter Enterprise Zone	260,000	500	1,200	-	-	-
South Bristol	11,200	37,400	-	-	1.7	-
Avonmouth & Severnside	3,300	112,900	13,900	-	298.8	32.0
Filton Enterprise Area	-	-	-	6.6	0.8	55.3
Emersons Green	-	-	-	18.1	5.5	12.7
Bath	79,200	100	-	-	-	-
North Somerset	2,100	96,700	64,400	0.7	-	65.6
North and East Fringe	-	-	-	7.8	2.5	0.1
Strategic Development Locations	-	-	-	-	-	91.4
Other Bristol City Centre	79,100	-	-	-	-	-
Other Bristol	3,900	25,600	8,000	-	-	-
Other BANES	16,600	58,200	-	-	-	-
Other South Gloucestershire	-	-	-	0.3	11.7	4.0
<b>Total</b>	<b>455,300</b>	<b>331,400</b>	<b>87,600</b>	<b>33.4</b>	<b>321.0</b>	<b>261.0</b>

**Table B: Total Supply by Sub Area - Simplified**

	Office (sqm)	Industrial & Warehouse (ha)	Mixed (ha)
Temple Quarter Enterprise Zone	260,000	0.1	0.3
South Bristol	11,200	11.1	-
Avonmouth & Severnside	3,300	327.1	35.4
Filton Enterprise Area	26,200	0.8	55.3
Emersons Green	72,200	5.5	12.7
Bath	79,200	0.0	-
North Somerset	5,000	24.2	81.7
North and East Fringe	31,200	2.5	0.1
Strategic Development Locations	-	-	91.4
Other Bristol City Centre	79,100	-	-
Other Bristol	3,900	6.4	2.0
Other BANES	16,600	14.5	-
Other South Gloucestershire	1,100	11.7	4.0
<b>Total</b>	<b>588,900</b>	<b>403.9</b>	<b>282.9</b>

**Table C: Total Supply by UA – Raw Data**

	Office (sqm)	Industrial & Warehouse (sqm)	Mixed (sqm)	Office (ha)	Industrial & Warehouse (ha)	Mixed (ha)
Bristol Total	357,400	176,400	23,200	-	44.5	-
B&NES Total	95,800	58,300	-	-	-	12.5
S Glos Total	-	-	-	32.7	276.5	160.0
N Somerset Total	2,100	96,700	64,400	0.7	-	88.5
<b>Total</b>	<b>455,300</b>	<b>331,400</b>	<b>87,600</b>	<b>33.4</b>	<b>321.0</b>	<b>261.0</b>

**Table D: Total Supply by UA – Simplified Data**

	Office (sqm)	Industrial & Warehouse (sqm)	Mixed (sqm)
Bristol Total	357,400	88.6	5.8
B&NES Total	95,800	14.6	12.5
S Glos Total	130,700	276.5	160.0
N Somerset Total	5,000	24.2	104.6
<b>Total</b>	<b>588,900</b>	<b>403.9</b>	<b>282.9</b>

**Table E: Total Supply by Timing – Raw Data**

	Office (sqm)	Industrial & Warehouse (sqm)	Mixed (sqm)	Office (ha)	Industrial & Warehouse (ha)	Mixed (ha)
Short	291,100	305,400	87,400	18.0	160.3	91.2
Medium	125,900	26,000	200	15.4	93.2	50.8
Long	38,400	-	-	-	37.5	19.6
Uncertain	-	-	-	-	30.00	99.4
<b>Total</b>	<b>455,400</b>	<b>331,400</b>	<b>87,600</b>	<b>33.4</b>	<b>321.0</b>	<b>261.0</b>

**Table F: Total Supply by Timing – Simplified Data**

	Office (sqm)	Industrial & Warehouse (sqm)	Mixed (sqm)
Short	363,000	236.6	113.0
Medium	187,500	99.7	50.9
Long	38,400	37.5	19.6
Uncertain	-	30.00	99.4
<b>Total</b>	<b>588,900</b>	<b>403.8</b>	<b>282.9</b>

## Appendix 5: EDNA Sector to Use Class Conversion Matrix

Sector	B1a/b	B1c/B2	B8	NON-B
Agriculture, forestry and fishing				100%
Mining and quarrying				100%
Manufacturing	10%	80%	10%	
Electricity, gas, steam and air conditioning supply	20%	20%		60%
Water supply; sewerage, waste management and remediation activities	10%	20%	20%	50%
Construction	10%	10%	20%	60%
Wholesale and retail trade; repair of motor vehicles and motorcycles			40%	60%
Transportation and storage	10%		70%	20%
Accommodation and food service activities				100%
Information and communication	70%			30%
Financial and insurance activities	100%			
Real estate activities	100%			
Professional, scientific and technical activities	100%			
Administrative and support service activities	100%			
Public administration and defence; compulsory social security	70%			30%
Education	10%			90%
Human health and social work activities	10%			90%
Arts, entertainment and recreation	20%			80%
Other service activities	50%			50%

6

## Appendix 6: Employment Uses at Strategic Development Locations

This appendix provides high level information on the B Use Class provision at the proposed Strategic Development Locations (SDLs) across the West of England.

### Bath & North East Somerset

#### North Keynsham SDL

**Policy criterion:** Include around 50,000sqm of employment floorspace.

**Justification:** The North Keynsham Strategic Planning Framework (Arup, June 2017) demonstrates how the residential led development (as detailed above) could also physically accommodate up to 55,000sqm of employment floorspace primarily located at the western end of the site where land is less appropriate for residential development due to proximity to the sewage treatment works and the flood zones. Further employment development is shown at World's End Lane. The JSP rounds this figure to 50,000sqm.

Keynsham is well placed sub-regionally between Bath & Bristol, and the strategy in the B&NES Development Plan places great emphasis on Keynsham becoming a more significant location for business, with the priority being the provision of additional Higher Value Added jobs which will help to reduce the current pattern of out-commuting by better aligning job types with the characteristics of the resident workforce, facilitating increased opportunities to live and work in the town.

Initial work on employment forecasts to support the B&NES Local Plan identify Keynsham as being able to provide approximately 2000 net new jobs over the JSP plan period, with a substantive amount of this growth being accommodated on the proposed Keynsham SDL. The site is capable of accommodating a range of employment related uses including office and industrial. The 2015 B&NES Industrial Market review identifies Keynsham as a strategically significant area for industrial development, capable of accommodating the short falls in industrial accommodation in the City of Bath. The area is already one of the key locations in the District for industrial uses (including Warehouse, storage and distribution) and has an average 5 year take up of 1,802sqm. Keynsham is also now proving to be a viable office location and the near full occupation of around 10,000sqm of new office space at the nearby Chocolate Factory (in just over 18 months) on the Somerdale development is proof of the popularity of the area to the market. The attractiveness of Keynsham to office occupiers is due to the strategic location between Bristol and Bath and the ability of the area to provide competitive rental levels, lower than those in central Bristol and Bath.

### Bristol

#### Bath Road Brislington SDL

The site is not considered to be a strategic employment location because it is proposed as a new community within Bristol and as such will benefit from proximity and good connectivity to existing and new employment opportunities in Bristol, including at the strategic employment locations identified in Policy 4 of the JSP, in the City Centre and at Temple Quarter Enterprise Zone. Some local service level employment provision will be likely to arise within the SDL at a local centre.

## North Somerset

### Banwell SDL

**Policy criteria:** Identification of around 5ha of employment land primarily for B8 use class with good access to the M5 and new strategic transport infrastructure.

**Justification:** The Strategic Development Location Methodology Paper (Nov 2017) (**SD11B**) explains the approach to considering employment potential at the SDLs: “For some SDLs where appropriate a standard approach was used for consistency to generate employment hectarages and floor space assumptions. These assumptions will be further tested through the local planning process including through Employment Land Reviews to support local plans.”

Page 54 of Document **SD11A** – Strategic Development Location Templates states that “potential for distribution type businesses well connected to the M5 and the new Banwell Bypass. Initial scenario to test for around 5ha of B Class land that could translate to around 15,000sqm.”

At an early stage the potential for distribution/ storage type business use was identified given the proximity to the M5 motorway and the new J21a close to the Banwell Garden Village. The Economic Development Needs Assessment identified the M5 Corridor as performing as a sub-market area within the Functional Economic Market Area with the significance of the M5 to business growth.

The specific quantum identified in the policy is therefore not intended to necessarily be fixed and it is expected that the Local Planning process may alter it in light of further evidence. Further investigation of SDL self-containment, target sectors and other related issues such as access to employment outside of the SDL will be undertaken and this may alter the scale of land required.

### Churchill SDL:

**Policy criteria:** Identification of around 7.4ha of employment land. Employment land to be located in close proximity to new highway link and will provide business opportunities in the B Use Class.

**Justification:** The Strategic Development Location Methodology Paper (Nov 2017) (**SD11B**) explains the approach to considering employment potential at the SDLs. It reads, “For some SDLs where appropriate a standard approach was used for consistency to generate employment hectarages and floor space assumptions. These assumptions will be further tested through the local planning process including through Employment Land Reviews to support local plans.”

Page 45 of Document **SD11A** – Strategic Development Location Templates reads, “Potential for mixed B class employment well connected to new strategic transport routes. Initial scenarios to test are for around 7.4ha of B Class land that could translate to around 40800sqm.”

At an early stage the potential for business development facilitated by new strategic transport infrastructure was identified. There is an existing business area that could be explored for expansion to accommodate additional business land.

The specific quantum identified in the policy is therefore not intended to necessarily be fixed and it is expected that the Local Planning process may alter it in light of further evidence. Further investigation of SDL self-containment, target sectors and other related issues such as access to employment outside of the SDL will be undertaken and this may alter the scale of land required.

#### **Nailsea SDL:**

**Policy criteria:** Identification of around 10.5 ha of employment land well-connected to the railway station, local centre and Metrobus route. Investigate the potential for a new office park close to the railway with optimum travel links.

**Justification:** The Strategic Development Location Methodology Paper (Nov 2017) (**SD11B**) explains the approach to considering employment potential at the SDLs. It reads, “For some SDLs [including Nailsea] where appropriate a standard approach was used for consistency to generate employment hectarages and floor space assumptions. These assumptions will be further tested through the local planning process including through Employment Land Reviews to support local plans.”

Page 35 of Document **SD11A** – Strategic Development Location Templates reads, “Potential for new B1 office park well connected to enhanced Nailsea/ Backwell station with MetroBus connectivity. Along with the Backwell SDL, initial scenarios to test are for around 10.5ha of B Class land, comprising 6.3ha B1a, 4.2ha B1b and B1c, that could translate to around 55,125sqm and 22,050sqm respectively.”

At an early stage the potential for business development in the B1 uses, particularly office uses were identified. With upgrades to strategic transport infrastructure along this corridor as proposed and given the potential proximity to Nailsea and Backwell rail station, the location is likely to be attractive to such businesses.

The specific quantum identified in the policy is therefore not intended to necessarily be fixed and it is expected that the Local Planning process may alter it in light of further evidence. Further investigation of SDL self-containment, target sectors and other related issues such as access to employment outside of the SDL will be undertaken and this may alter the scale of land required.’

## **South Gloucestershire**

### **Charfield SDL**

**Policy Criterion:** A minimum of 5ha of B Use Class employment land

**Justification:** Initial estimates are set out within Policy 7.9 of the JSP, the Strategic Development Location Templates (SD11A) with further methodological detail set out within the Strategic Development Location Assessment Methodology Paper (SD11B). The initial estimate was informed by Barton Willmore’s *Be a Pioneer* analysis linked to proposed levels of housing at the SDL.

Additional locally specific evidence is being prepared at the current time. Whilst this has not been finalised, emerging conclusions support the initial estimates as set out within Policy 7.9.

## Thornbury SDL

**Policy Criterion:** Around 5ha of B Use Class employment land

**Justification:** Initial estimates are set out within Policy 7.11 of the JSP, the Strategic Development Location Templates (SD11A) with further methodological detail set out within the Strategic Development Location Assessment Methodology Paper (SD11B). The initial estimate was informed by Barton Willmore's *Be a Pioneer* analysis linked to proposed levels of housing at the SDL.

Additional locally specific evidence is being prepared at the current time. Whilst this has not been finalised, emerging conclusions support the initial estimates as set out within Policy 7.11.

## Buckover Garden Village SDL

**Policy Criterion:** Around 11ha of B Use Class employment land

**Justification:** Initial estimates are set out within Policy 7.8 of the JSP, the Strategic Development Location Templates (SD11A) with further methodological detail set out within the Strategic Development Location Assessment Methodology Paper (SD11B). The initial estimate was informed by Barton Willmore's *Be a Pioneer* analysis linked to proposed levels of housing at the SDL and to establish a sustainable new settlement.

Additional locally specific evidence is being prepared at the current time. Whilst this has not been finalised, emerging conclusions support the initial estimates as set out within Policy 7.8.

## North West & West Yate SDL

**Policy Criterion:** Around 30ha of B Use Class employment land

**Justification:** Initial estimates are set out within Policy 7.12 of the JSP, the Strategic Development Location Templates (SD11A) with further methodological detail set out within the Strategic Development Location Assessment Methodology Paper (SD11B). In addition to delivering a sustainable SDL the role of North West and West Yate was identified to deliver a significant new employment land allocation which would consolidate the role of Yate as a key market town and employment location within the sub-region, and to facilitate wider regeneration of the town.

Additional locally specific evidence is being prepared at the current time. Whilst this has not been finalised, emerging conclusions support the initial estimates as set out within Policy 7.12.

## Coalpit Heath SDL

**Policy Criterion:** Around 5ha of employment land

**Justification:** Initial estimates are set out within Policy 7.10 of the JSP, the Strategic Development Location Templates (SD11A) with further methodological detail set out within the Strategic Development Location Assessment Methodology Paper (SD11B). The initial estimate was informed by Barton Willmore's *Be a Pioneer* analysis linked to proposed levels of housing at the SDL.

Additional locally specific evidence is being prepared at the current time. Whilst this has not been finalised, emerging conclusions support the initial estimates as set out within Policy 7.10.