





Final Report to Bath & North East Somerset Council

November 2018

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# **Executive Summary**

- i. Lambert Smith Hampton (LSH) and Hardisty Jones Associates (HJA) were appointed by Bath and North East Somerset Council (B&NES Council) to research issues relating to the economic implications of losing B Use Class employment sites to other uses, particularly to purpose-built student accommodation (PBSA). The purpose of the research was to provide B&NES Council with evidence to inform the Local Plan and the assessment of future change of use applications which may come forward. The research included two core tasks:
  - 1. An independent review of economic impact assessments of the University of Bath and Bath Spa University which are frequently used in support of change of use applications for PBSA; and
  - 2. Assessing the impact of the loss of employment sites on the B&NES and city of Bath economy.

#### **Review of University Economic Impact Studies**

- ii. The two reports subject to review were both prepared by Oxford Economics for the respective universities. Whilst there is insufficient detail published to undertake forensic assessment there is no basis on which to doubt the robustness of the assessments.
- iii. It is cited within the assessment for the University of Bath that the lack of commercial employment space within the city is a constraint on the wider beneficial impacts of the University. This would imply that the losses of such commercial space in the recent past have contributed to this situation and further losses of B Use Class floorspace will exacerbate the situation.
- iv. B&NES Council officers note that the assessments are frequently cited in support of change of use applications for PBSA. Whilst student expenditure is an important component of the overall economic impacts of the universities on the B&NES economy, it is essential that there is clear evidence to demonstrate any PBSA application is facilitating additional student growth that would not be possible in the absence of the development.

### Recent Losses of Employment Sites and Premises

- v. Monitoring records clearly show the scale of losses of B Use Class floorspace across B&NES as a whole and the city of Bath in particular. The rate of losses is far exceeding the levels anticipated within the B&NES Core Strategy. 93% of the anticipated losses of office floorspace and 77% of anticipated industrial and warehouse floorspace have taken place within the first 27% of the plan period. The development of new floorspace is well behind anticipated levels. This creates a significant risk to the sustainable economic development of the city of Bath in particular. This enforces the need to protect existing sites and ensure the delivery of the employment sites identified in the place making plan.
- vi. Seven schemes, either completed or committed, have been identified which lead to the change of use from B Use Class to PBSA. The four completed schemes account for more than a third of office floorspace losses and more than a quarter of industrial losses over the 2011-16 period. A further three committed schemes will lead to further net losses of industrial floorspace.
- vii. Whilst on a site by site basis the schemes can appear relatively insignificant in terms of the loss of commercial floorspace, when aggregated they comprise substantial capacity, particularly in terms of redevelopment potential, estimated at more than 4,000 full time equivalent jobs.



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#### Future 'At Risk' Sites

- viii. Twenty two (22) sites have been identified as 'at risk' by B&NES Council officers. These sites are primarily industrial and warehousing sites comprising approximately 45,000sqm of floorspace and accommodating more than 1,000 jobs. Losses of this scale would substantially exceed the total anticipated within the Core Strategy.
- ix. LSH's expert commercial market view is that the city of Bath has reached a tipping point where further losses risk the level of commercial stocks falling below the critical mass required to both attract new and retain existing occupiers. Whilst there are pipeline development schemes that will introduce new office stock to the city, there is no such pipeline for industrial and warehousing development, and no identified sites to accommodate such growth. There is therefore a need to strongly protect remaining stock as well as identifying sites to facilitate new industrial and warehousing development.



## 1 Introduction

1.1.1 Lambert Smith Hampton (LSH) and Hardisty Jones Associates (HJA) were appointed by Bath & North East Somerset Council (B&NES) in April 2018 to undertake research to support efforts to protect employment sites across the area and within the city of Bath in particular. This research was commissioned in response to recent losses of a number of employment sites to alternative uses, and known risks to other sites.

### 1.2 Context

- 1.2.1 The Council wants to enable a strong and sustainable economy across B&NES and for the city of Bath to fulfil its potential as an economic centre. The B&NES Local Plan 2016-36 is currently in preparation, this is targeting higher levels of employment growth than have been achieved in recent history (2011-16). The city of Bath has failed in recent times to deliver the scale of employment growth that will be required to underpin a strong and sustainable economy in the future plan period.
- 1.2.2 Whilst employment growth will come from a range of sources, and require a range of different types of physical accommodation, there is an ongoing need for B Use Class (i.e. business, industrial, storage and distribution) employment property to underpin a healthy and growing economy. This includes office, industrial, and warehousing premises. Employment forecasts indicate strong growth in office-based activities. Whilst some areas of manufacturing employment are shrinking there is an ongoing need for suitable industrial premises, often through the provision of newer, more modern premises to replace older dilapidated stocks. It is therefore important that the city of Bath and B&NES more generally has an appropriate supply of employment sites and premises to support the achievement of its economic ambitions.
- 1.2.3 Over recent years the city of Bath in particular has experienced losses of both office and industrial employment sites and premises. There have been a number of reasons for this, including Permitted Development Rights (PDRs) and change of use applications to facilitate the development of alternative uses, in particular Purpose Built Student Accommodation (PBSA). This is creating a challenging environment in terms of the supply of employment sites and premises.

## 1.3 Study Aim

- 1.3.1 In response to the developing situation, this research study was designed to provide evidence to help inform the B&NES Local Plan and to enable a robust economic case to be put forward when resisting change of use applications. In order to do so two core tasks were identified:
  - Firstly, to independently review the economic impact assessments prepared on behalf of the University of Bath and Bath Spa University. These documents are often cited by applicants seeking change of use for student residential development and B&NES Council wanted to understand their robustness.
  - 2. Secondly, to assess the impact of the loss of employment sites and premises in terms of direct and indirect impacts and any wider effects on the economy.



# 2 Review of University Economic Impact Studies

- 2.1.1 This chapter sets out the results of a review of the economic impact studies prepared on behalf of the University of Bath¹ and Bath Spa University². Both studies were prepared by Oxford Economics and employed a near identical methodology.
- 2.1.2 The headline results of the two studies are summarised in Table 2.1 below. In combination the two universities are identified as supporting some 4,000 direct jobs and a further 3,900 additional jobs as a result of supplier, student and visitor spend<sup>3</sup>. In aggregate the studies identify a B&NES GDP impact of £388m per annum.

Table 2.1: Headline University B&NES Impacts

	University of Bath	Bath Spa	Total
		University	
Direct Jobs	3,030	970	4,000
Additional Jobs	2,820	1,080	3,900
Total Jobs Supported	5,850	2,050	7,900
University related GDP	£188m pa	£52m pa	£240m pa
Student and Visitor related GDP	£106m pa	£42m pa	£148m pa
Total GDP	£294m pa	£94m pa	£388m pa

Source: Oxford Economics

- 2.1.3 The reports are written and presented to be clearly understood by the non-expert reader. This is achieved with simple charts and diagrams alongside short sections of written text. There is relatively limited detail in terms of modelling methodology, assumptions, and underlying source material.
- 2.1.4 The overall methodological approach, as set out in the early sections of the reports, is a standard economic impact approach and is appropriate.
- 2.1.5 The largest components of economic impact are the direct activities of the universities, and the subsistence spending of students.
- 2.1.6 Source information in respect of the direct activities of the universities is not always described in detail, but it is implicit that the authors have had access to relevant source information from the universities in terms of employment, wages and salaries, and supplier spending. There is no reason to doubt any of the analysis presented. It is clear that the assessment considers only supplier expenditure within the B&NES impact area.
- 2.1.7 Oxford Economics use a model to assess the indirect and induced impacts that flow from the direct activities of the universities. The detailed modelling approach is not presented for assessment, but overall multipliers in terms of both employment and GDP appear reasonable. There is insufficient detail in respect of the modelling of locally resident staff expenditure to assess the robustness of the approach. However, it is noted that expenditure by staff that live outside B&NES is entirely

<sup>&</sup>lt;sup>3</sup> The effects of student expenditure are the most significant contributor to additional jobs.



<sup>&</sup>lt;sup>1</sup> Oxford Economics Ltd (2016) The Economic Impact of the University of Bath

<sup>&</sup>lt;sup>2</sup> Oxford Economics Ltd (2015) The Economic Impact of Bath Spa University

- excluded from the assessment of local impact and it is therefore likely the stated figures underestimate the total impact.
- 2.1.8 The assessment of student subsistence expenditure is based on national level data from a robust source. It is not clear if assessment has been made of whether expenditure is made locally within B&NES or whether a proportion may leak outside the area. It is possible that some expenditure leaks, if this has not been accounted for there may be some overstatement of benefit. However, there is a lack of clarity in the reports to draw a firm conclusion. It is also uncertain how spending of different typologies has been modelled to assess the implications for local employment. Further detail would be required from the authors in order to fully validate the conclusions.
- 2.1.9 Both reports quote employment impacts throughout, but do not clarify whether such impacts are measured in terms of full time equivalents (FTE) or jobs. This lack of clarity is unhelpful.
- 2.1.10 Both reports claim that the universities' employees are "highly embedded in the local community". This is based on 43% of Bath Spa University and 53% of University of Bath employees being resident within B&NES. This compares with 2011 Census of Population data which indicates 60% of all those working in B&NES are also resident in B&NES (excluding homeworking and itinerant working). On this basis, the proportion of university workers resident in B&NES is actually lower than the overall average. A broader point that the universities themselves are well embedded in the locality and far less footloose than other employers is valid.
- 2.1.11 Overall the assessments appear robust, although there is a lack of detail presented which prevents deeper interrogation.
- 2.1.12 In addition to considering the assessments themselves, there should be consideration of interpreting their use in support of future development, particularly for PBSA or University related developments which lead to the loss of employment sites and premises. Two primary observations can be made in this regard:
- 2.1.13 Firstly, of particular note is the conclusion of the first appendix to the University of Bath report. This appendix, drafted by Dr Jon Hunt, Director of Research and Innovation Services at the University of Bath considers the university's contribution to the local economy through knowledge exchange. This includes a section entitled 'lack of commercial space' and concludes by stating that "many of the companies supported by University (sic) show that Bath is short of commercial space". This clearly suggests that the wider beneficial economic impacts of Universities are being constrained and will be put at further risk as a result of loss of commercial employment floorspace, including to PBSA.
- 2.1.14 Secondly, it is important that any analysis presented in support of PBSA provides clarity that the PBSA will deliver net additional student growth and therefore net additional student expenditure benefits to Bath and B&NES. This would require testing for whether in the absence of any further PBSA there would be a limitation on student population growth and/or whether growth in student population could be accommodated in other locations without resultant losses of employment floorspace.



# 3 Recent Losses of Employment Sites and Premises

3.1.1 This chapter considers the losses of B Use Class sites and premises in the recent past. This sets out the total scale of losses, the scale of losses to PBSA, and the nature of the impacts of these losses on the Bath and B&NES economies.

## 3.2 Summary of Losses

3.2.1 B&NES Council monitoring data allows analysis of the scale of B Use Class gains and losses in recent years. Data has been considered for the ten-year period 2006/07 – 2015/16 to provide a longer-term view, with the five-year period 2011/12 – 2015/16 providing a shorter-term view which aligns with the first five years of the adopted Core Strategy period. The data is summarised in Tables 3.1 and 3.2.

Table 3.1 B Use Class Completions 2006/7 - 2015/16 (all figures in square metres)

		B&NES		Bath		
	Office Industrial Total			Office	Industrial	Total
Gains	24,200	13,500	37,700	13,600	1,100	14,700
Losses	18,600	89,000	107,600	16,400	31,300	47,700
Net	+5,600	-75,400	-69,800	-2,800	-30,200	-33,000

Figures may not sum due to rounding.

Table 3.2 B Use Class Completions 2011/12 - 2015/16

		B&NES		Bath		
	Office Industrial Total			Office	Industrial	Total
Gains	11,400	4,100	15,500	5,100	100	5,100
Losses	13,000	74,500	87,500	11,100	30,900	42,000
Net	-1,600	-70,500	-72,000	-6,000	-30,900	-36,900

Figures may not sum due to rounding.

#### **B&NES**

- 3.2.2 Over the longer-term ten-year period a total of 37,700 sqm of B Use Class floorspace has been completed across B&NES. This comprises 24,200 sqm of B1 offices (64%) and 13,500 sqm of B1c/B2/B8 industrial and warehousing floorspace (36%). Total completions equate to an average annual rate of 3,800 sqm. Over the shorter-term five-year period total completions are 15,500 sqm, an annual average of 3,100 sqm indicating lower levels of completions than the preceding five-year period.
- 3.2.3 Losses of B Use Class floorspace over the same ten-year period are recorded at 107,600 sqm, equivalent to 10,800 sqm per annum. This comprises 18,600 sqm of office losses (17%) and 89,000 sqm of industrial and warehousing floorspace (83%). Losses have accelerated in the most recent five-year period with a total of 87,500 sqm, an annual average of 17,500 sqm.
- 3.2.4 In net terms, there has been a loss of 69,800 sqm of B Use Class floorspace over the ten-year period, equivalent to 7,000 sqm per annum. This includes a net gain of 5,600 sqm of office space and a substantial loss of 75,400 sqm of industrial and warehouse space. All of the net gains in offices were achieved in the first five-years, with the most recent five-year period indicating a loss of 1,600 sqm of office floorspace this includes office space lost via permitted development. The most recent period has also included the vast majority of net industrial and warehouse losses, with a net 70,500 sqm of floorspace lost.



- 3.2.5 Data from the Valuation Office Agency (VOA)<sup>4</sup> on total B Use Class floorspace has been used to contextualise the losses. Across the B&NES area, VOA data suggests an overall net loss of closer to 5,000 sqm of office stock from 215,000 sqm to 210,000 sqm over the five-year short-term period. This represents a 2% reduction. This compares to a 5% growth in Bristol and 3% increase across South Gloucestershire.
- 3.2.6 When considering the data for industrial and warehousing floorspace, the VOA data indicates a loss of c. 27,000 sqm 2011/12 2015/16. This represents a fall of 5% in comparison to a growth of 2% in Bristol and 2% loss in South Gloucestershire. In both cases the VOA data shows a worsening of the B&NES position relative to Bristol and South Gloucestershire. If the B&NES monitoring data paints a more accurate picture of industrial and warehousing losses the reduction in stock could be closer to an 11-12% loss.

#### **Bath**

- 3.2.7 The preceding analysis considers historic development activity across the whole of the B&NES area. Set out below is equivalent analysis for Bath.
- 3.2.8 Over the longer-term ten-year period, a total of 14,700 sqm of B Use Class floorspace has been completed in Bath. This comprises 13,600 sqm of B1 offices (56% of the B&NES total) and 1,100 sqm of B1c/B2/B8 industrial and warehousing floorspace (8% of the B&NES total). Total completions equate to an average annual rate of 1,500 sqm. Over the shorter-term five-year period, total completions are 5,100 sqm, an annual average of 1,000 sqm indicating lower levels of completions than the preceding five-year period; this represents a greater level of reduction in recent years than the B&NES total position.
- 3.2.9 Losses of B Use Class floorspace over the same ten-year period are recorded at 47,700 sqm (44% of the B&NES total), equivalent to 4,800 sqm per annum. This comprises 16,400 sqm of office losses (88% of the B&NES total) and 31,300 sqm of industrial and warehousing floorspace (35% of the B&NES total). Losses have accelerated in the most recent five-year period with a total of 42,000 sqm, an annual average of 8,400 sqm. This indicates that almost 90% of the ten-year total recorded losses in Bath have taken place in the last five years.
- 3.2.10 In net terms, there has been a loss of 33,000 sqm of B Use Class floorspace over the ten-year period, equivalent to 3,300 sqm per annum. This includes a net loss of 2,800 sqm of office space and a substantial loss of 30,200 sqm of industrial and warehouse space. However, this masks quite different performance when breaking the ten years into two five-year periods. Over the period 2006-11 there was a net gain of 3,900 sqm of B Use Class floorspace comprising 3,200 sqm of office and 700 sqm of industrial. This compares to a net loss of 36,900 sqm in the period 2011-16 comprising a loss of 6,000 sqm of office and 30,900 sqm of industrial and warehousing floorspace.
- 3.2.11 Official aggregate VOA data is not available below the UA level. HJA has analysed the detailed VOA database of all hereditaments as at 2017. This enables estimates of total office and industrial/warehouse stocks within Bath. The estimates have been used to provide context<sup>5</sup>. The

<sup>&</sup>lt;sup>5</sup> Comparing B&NES-wide analysis aggregating each relevant hereditament with the VOAs own aggregate data suggests the HJA analysis may slightly underestimate the total volume of floorspace. It is uncertain as to why this is as the approach adopted has been checked with the statistics team at the VOA.



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<sup>&</sup>lt;sup>4</sup> Valuation Office Agency (2016) Business Floorspace Statistics Tables FS3.3 and FS4.3. This is based on different source data to the analysis in previous paragraphs of this chapter which draws on B&NES Council monitoring records. As a result, figures do not perfectly align.

HJA analysis estimates c. 153,000 sqm of office floorspace and c. 147,000 sqm of industrial floorspace within the city of Bath itself. On this basis, the 2011-16 period included losses of c. 3% of office stock and c. 17% of industrial and warehouse stocks. Whilst these figures are indicative they suggest a weakening of Bath's position as an employment centre relative to both B&NES as a whole, as well as other parts of the West of England. LSH agents confirm this to be the case with substantial losses of office occupiers in Bath to Bristol in recent history.

- 3.2.12 The B&NES Core Strategy Policy B1 sets out expectation of gross gains in office floorspace of 50,000 sqm across the plan period, with 10,000 sqm of losses leading to a net position of +40,000 sqm over the 2011-29 plan period. The analysis set out above suggests that over the first five-years of the plan period (27% of the 18 years) only 10% of the gross office gain has been achieved but 93% of the gross office losses.
- 3.2.13 When considering industrial and warehousing the policy anticipates the controlled release of 40,000 sqm of floorspace. The analysis set out suggests that there has been virtually no new industrial and warehouse completions set against approximately 31,000 sqm of losses over the first five years of the plan period. This represents 77% of the anticipated managed losses over this initial period.

#### Losses to Purpose Built Student Accommodation

- 3.2.14 Seven development schemes which include PBSA on B Use Class employment sites have been consented in recent years.
- 3.2.15 The first four schemes summarised in Table 3.3 (highlighted in green) have been completed in the 2011-16 period. These have contributed to the loss of 3,100 sqm of office floorspace and 8,300 sqm of industrial and warehousing space. These figures are equivalent to 34% of the losses of office stock in Bath and 27% of industrial and warehouse floorspace losses in Bath over the 2011-16 period.
- 3.2.16 The remaining schemes have received planning consent and in some cases have been completed (since 2016). The three consented schemes would lead to gross losses of 5,600 sqm of office accommodation and 4,800 sqm of industrial and warehousing floorspace. However, the schemes as approved will also deliver 15,300 sqm of office floorspace, leading to a potential net gain in office floorspace of 9,800 sqm.



Table 3.3: Completed and Committed Employment Losses to PBSA

Scheme	Details				
Green Park House & Ernest	Erection of a 461-bed purpose-built student accommodation (sui generis) and Cafe				
Ireland House, Green Park	(use class A3) together with associated common facilities and on-site				
Road, Bath, BA1 1BQ	management facilities, vehicle parking spaces, covered cycle spaces, enclosed				
	refuse/recycling store, and associated plant; and associated soft and hard				
	landscaping following demolition of Green Park House and Ernest Ireland House.				
1 - 3 Westgate Buildings, City	Change of use from commercial offices (B1) to cluster flats for students (C4) with				
Centre, Bath, BA1 2AE	associated basement refuse and cycle storage (excluding ground floor).				
The Johnsons Group Ltd,	Erection of student accommodation (sui generis) comprising 169 student				
James Street West, Bath,	bedrooms in studio/cluster flats; together with 2 no. disabled parking spaces; 56				
BA1 2BU	covered cycle spaces; 2 no. covered refuse/recycling stores; covered plant rooms;				
	vehicular access from James Street West; new hard/soft landscaping treatment,				
	following demolition of existing industrial/office buildings.				
Twerton Mill, Lower Bristol	Erection of student accommodation (sui generis) comprising 266 student				
Road, Westmoreland, Bath,	bedrooms in studio/cluster flats and 61 bedrooms in 10 No. town houses				
Bath And North East	comprising 1, 2, 3, 4, and 5 storeys in height				
Somerset, BA2 1EW					
Pinesgate, Lower Bristol	Erection of an office building (Use Class B1) totalling 15,348sqm GIA, and a				
Road, Westmoreland, Bath,	purpose-built educational campus, comprising academic accommodation (Use				
	Class D1) and integral student accommodation (Use Class C2) of 16,491sqm,				
	together with basement parking, associated infrastructure and landscaping.				
Transport Depot, Brougham	Redevelopment of the former transport depot site and the erection of 104 bed				
Hayes, Westmoreland, Bath	spaces of purpose built student accommodation (sui generis) and associated				
	communal and ancillary facilities, following demolition of existing building.				
	Completed and operational since 2017.				
34 - 35 Lower Bristol Road,	Erection of two buildings to provide residential accommodation for students (up to				
Westmoreland, Bath, Bath	204 bedrooms) with ancillary accommodation and facilities and external				
and North East Somerset,	courtyards, alterations to existing pedestrian and vehicular access, and associated				
BA2 3AZ	infrastructure following demolition of existing building. Currently under				
	construction				

## 3.3 Commercial Agent Analysis

- 3.3.1 LSH has considered each of the schemes set out within Table 3.3 above. The original planning application documentation submitted at the time of the application for change of use, and relevant planning history for each site has also been briefly reviewed. This provides a headline assessment of whether there were realistic possibilities for the continued use of the site in B Use Class employment uses. This is set out in Tables 3.4 and 3.5.
- 3.3.2 The overarching comment in respect of the office market is that recent redevelopment and marketing of Grade A offices at Manvers Street in Bath has proven that sufficiently high headline rental levels can be achieved to fund refurbishment. Occupiers can be secured if the appropriate products with suitable floorplates are made available. In part, increased rental levels have been driven by losses of office stock through PDRs and other change of use applications. This may not have been evident at the time of some of the recorded losses.



Table 3.4: Completed Losses – Commercial Agent Commentary

Scheme	Details				
Green Park House & Ernest	There were clearly challenges facing the site and a need for comprehensive				
Ireland House, Green Park	redevelopment to be suitable for ongoing office use. The site is well located within				
Road, Bath, BA1 1BQ	walking distance of Bath city centre. The scale of the site with potential for				
	significant B1a office floorspace could potentially have been a viab				
	redevelopment given current Grade A rental levels. Recent developments have				
	shown Grade A offices with adequate floorplates to be attractive in the market.				
1 - 3 Westgate Buildings, City	Rental levels would justify a refurbishment in this city centre location. Whilst				
Centre, Bath, BA1 2AE	alternative uses could deliver higher returns, a viable proposal could potentially				
	have been developed that would attract occupiers,				
The Johnsons Group Ltd,	This site could have continued as an office location following refurbishment or				
James Street West, Bath,	redevelopment.				
BA1 2BU					
Twerton Mill, Lower Bristol	The Twerton Mill buildings would need to have been demolished and replaced with				
Road, Westmoreland, Bath,	brand new industrial units, as the design of the two buildings were most likely to				
Bath And North East	be functionally obsolete. The Avalon Tyres MOT Centre, however, appeared to				
Somerset, BA2 1EW	function well as a car garage and although the eaves height was relatively low, it				
	could have been suitable for other industrial uses such as				
	manufacturing/production.				

Table 3.5: Committed Losses – Commercial Agent Commentary

Scheme	Details
Pinesgate, Lower Bristol	The permitted scheme includes 15,348 sqm of B1a floorspace, representing a net
Road, Westmoreland, Bath,	gain of 9,774 sqm.
	The quality of current offices is not attractive in the current market. Following the
	development of North and South Quays the location may become more attractive.
Transport Depot, Brougham	Whilst the site had an extant permission for offices, this is not deemed a core office
Hayes, Westmoreland, Bath	location for Bath and as such would be unlikely to be attractive to the market. This
	is a good industrial location.
	LSH is aware that shortly before demolishment the Transport Depot building was
	in very poor condition and would have required a significant overhaul. If this had
	taken place, it would have generated good interest. It is however disadvantaged
	by being within very close proximity to one of the main traffic light controlled
	intersections on Lower Bristol Road, potentially compromising access and egress
	to and from the site.
34 - 35 Lower Bristol Road,	The existing building functions well in its current use in the context of the
Westmoreland, Bath, Bath	surrounding uses but if the site was put to a more industrial, manufacturing, or
And North East Somerset,	production uses, it is unlikely to be well received by the surrounding offices
BA2 3AZ	occupiers. With this in mind, this site is only really suitable for the current use or
	perhaps a trade counter scheme - which would involve re-configuring the building.

# 3.4 Impact of Losses

3.4.1 HJA has undertaken indicative economic impact analysis of the sites lost to PBSA. The analysis provided by each applicant generally considers each site in isolation. As such it is often possible to demonstrate that its direct contribution is relatively insignificant, particularly where sites are vacant and in need of refurbishment or redevelopment. The more significant issues arise when the cumulative effects are considered and in turn their implications on the wider Bath economy.



#### **Headline Impacts**

- 3.4.2 Tables 3.6 and 3.7 set out the results of headline economic impact analysis for both completed losses and committed losses as summarised in Table 3.3. For each category five scenarios are considered:
  - 'Time of Loss' is an estimate of the B Use Class contribution of the sites at the time of loss.
     Many of the sites were reported as largely vacant at the time of the application for change of use/redevelopment.
  - 'Sites at Full Occupation' is an estimate of the contribution of the sites if all B Use Class floorspace at the site was occupied.
  - 'Proposed Redevelopment' is an estimate of B Use Class capacity proposed within the currently permitted PBSA schemes, some of which include the reprovision of B Uses. Where there is no B Use Class provision within the redevelopment proposals for the sites they are recorded as zero.
  - 'Market Assumption' provides an estimate of the capacity of the site if sites were developed solely for B Use Class activities in line with the market commentary.
  - 'Maximum B Use' provides an estimate of the realistic maximum potential B Use Class capacity
    of the sites.
- 3.4.3 Appendix 1 to this report sets out full details of the assumptions made within the modelling process.
- 3.4.4 At the time of loss the completed sites are estimated to have accommodated only 25 jobs (all jobs figures stated as FTEs). This results from the majority of sites reporting high levels of vacancy. However, the potential capacity of the sites (on the basis of full occupation of the on-site floorspace at the time of loss) is estimated at in excess of 340 jobs. Net local job capacity accruing to residents of B&NES, taking account of leakage deadweight, displacement, and multipliers are estimated at 15 jobs at the time of loss and approximately 230 with full occupation. The potential of the sites is estimated to deliver gross GVA in excess of £15 million and gross wages in excess of £13 million to the B&NES economy.
- 3.4.5 If the sites had been fully retained in B Use and redeveloped, the potential of the sites was far greater, with up to approximately 1,400 gross direct jobs and 900 net local jobs. This would support gross GVA and wages of approximately £60 million per annum.

Table 3.6: Combined Contribution of Sites with Completed Losses (sites listed at Table 3.4)

		-			•
	Time of Loss	Sites at Full	Proposed	Market	Maximum B
		Occupation	Redevelopment	Assumption	Use
Gross Direct Jobs	25	340	-	1,340	1,410
Net Local Jobs	15	230	-	890	930
Gross Direct GVA	£995,000	£15,461,000	£-	£58,837,000	£62,045,000
Net Local GVA	£660,000	£10,250,000	£-	£39,009,000	£41,136,000
Gross Direct Wages	£1,000,000	£13,081,000	£-	£58,206,000	£59,873,000
Net Local Wages	£663,000	£8,673,000	£-	£38,590,000	£39,696,000

<sup>\*</sup>GVA calculations do not include suppressed Financial Services figures

3.4.6 The sites recorded as committed are estimated to accommodate 210 gross direct jobs at the time of the relevant applications. Again there is a substantial level of reported vacancy, with the full



- potential of the sites existing capacity estimated at close to 490 gross direct jobs. This would support more than £21 million in gross GVA and £20 million in gross wages.
- 3.4.7 Part of the redevelopment within the committed schemes includes the re-provision of up to 15,350 sqm of new office space. The proposed redevelopment scenario as set out in Table 3.7 below estimates the potential contribution at full occupancy of this office space. Given the substantial capacity for densely occupied high value activities, these sites are estimated to have capacity to accommodate more than 1,160 jobs, generating more than £50 million in gross GVA per annum.
- 3.4.8 If the sites were retained and redeveloped fully for B Use Class activities there is estimated potential for almost 3,000 jobs generating £128 million in GVA annually.

Table 3.7: Combined Contribution of Sites with Committed Losses (sites listed at Table 3.5)

	Time of Loss	Sites at Full	Proposed	Market	Maximum B
		Occupation	Redevelopment	Assumption	Use
Gross Direct Jobs	210	490	1,160	2,750	2,930
Net Local Jobs	140	330	770	1,830	1,940
Gross Direct GVA	£9,237,000	£21,848,000	£50,920,000	£120,608,000	£128,396,000
Net Local GVA	£6,124,000	£14,485,000	£33,760,000	£79,963,000	£85,126,000
Gross Direct Wages	£8,819,000	£20,315,000	£51,135,000	£120,871,000	£128,937,000
Net Local Wages	£5,847,000	£13,469,000	£33,903,000	£80,138,000	£85,485,000

<sup>\*</sup>GVA calculations do not include suppressed Financial Services figures

3.4.9 Table 3.8 sets out the aggregated impacts of both completed schemes and committed losses. These sites are estimated to have capacity to accommodate more than 4,000 FTE jobs equivalent to the direct employment of both the University of Bath and Bath Spa University (see Table 2.1 for comparison)<sup>6</sup>.

Table 3.8: Combined Contribution of Sites with Completed and Committed Losses (sites listed at Tables 3.4 and 3.5)

	Time of Loss Sites at		Proposed	Market	Maximum B
		Occupation	Redevelopment	Assumption	Use
Gross Direct Jobs	230	830	1,160	4,090	4,340
Net Local Jobs	160	560	770	2,720	2,870
Gross Direct GVA	£10,232,000	£37,309,000	£50,920,000	£179,445,000	190,441,000
Net Local GVA	£6,784,000	£24,735,000	£33,760,000	£118,972,000	£126,262,000
Gross Direct Wages	£9,819,000	£33,396,000	£51,135,000	£179,077,000	£188,810,000
Net Local Wages	£6,510,000	£22,142,000	£33,903,000	£118,728,000	£125,181,000

<sup>\*</sup>GVA calculations do not include suppressed Financial Services figures

#### **Market Commentary**

#### Offices

3.4.10 Bath has a standing stock of c. 157,900 sqm, which is c. 18,600 sqm lower then 2/3 years ago due to the market seeing a number of conversions to residential using PDRs and other losses. This has had a dramatic effect on the market, which is not all bad for the local market. PDRs did take

<sup>&</sup>lt;sup>6</sup> The total estimated jobs in B&NES supported by the two universities is estimated at 7,900 (see Table 2.1). To provide some form of comparison HJA has applied a Type II multiplier to capture indirect and induced effects arising from the estimated gross on-site employment capacity of the completed and committed sites. This leads to an estimate of gross employment within B&NES of 5,640 FTEs. This illustrates the significant capacity of the sites.

- some obsolete office product out of the market which allowed the market rents to increase due to lack of supply and this in turn made redevelopment/refurbishment viable.
- 3.4.11 However, Bath has reached a tipping point and cannot afford to lose any more suitable office accommodation as it needs to retain a level of critical mass, otherwise it will not be seen as a viable office location and will become a dormant city or a purely tourist city rather than a commercial centre.
- 3.4.12 On top of the losses to residential conversion, Bath has lost c. 16,400 sqm of occupiers to Bristol over the last circa 5 years. The lack of suitable office accommodation has been a major contributing factor for the moves. Bath has identified development sites for Grade A product, such as Bath Quays North and South, and these will help maintain the location as an office centre. However, a balanced market needs a range of space to allow occupiers to grow and move. Thought needs to be given about allowing buildings to be comprehensively refurbished/redeveloped to allow for grade B space to be provided. Also it is important to acknowledge that occupiers locate, or are already in Bath, to be in the city centre; offering/protecting sites on the city fringe or out of town locations which are not accessible to the centre, will not attract or retain occupiers.
- 3.4.13 The office rents have moved up to a level such that the right office buildings in the centre are viable for refurbishment or to be retained as offices, but they need to able to suit modern occupiers and be flexible enough to change with the modern occupiers demands.

#### Industrial

- 3.4.14 For quite some time, the Bath industrial market has suffered from an acute lack of availability across all size ranges. With demand continuing to outpace supply, rents have surged by as much as 50% in the last five years which is likely to have put a significant amount of strain on their financial stability. By comparison, in a market where there is a healthy amount of industrial space available, rental increases by this extent are much more uncommon and more crucially, there would be opportunities for those companies to contract or expand.
- 3.4.15 An increasing amount of industrial space is being lost to higher value uses, particularly PBSA or residential accommodation through PDRs, which is naturally fuelling rents. With rents at record highs and demand showing no signs of slowing, the market conditions are ripe for new industrial development but the constrained land supply and industrial allocations in and around Bath, currently bear few opportunities for such.
- 3.4.16 A key location where speculatively building industrial accommodation could occur is in close proximity to the already 'tried and tested' and successful industrial areas that wrap around the city centre. LSH recognises that from a viability perspective, it could be challenging to persuade the private sector to deliver a relatively low value use on a potentially high value site, but if sites could be identified which do not lend themselves to re-development for higher value (such as PBSA and residential) industrial development could be an attractive proposition. A solution such as a financial incentive(s) could also be considered to encourage developers to build industrial.
- 3.4.17 Unless new stock is delivered, there is the risk that Bath will continue to lose its industrial population to other locations, which will invariably weaken the vitality of the city. As noted above, this will require suitable policy responses to be put in place to encourage delivery and to protect remaining industrial sites.



## 4 Future 'At Risk' Sites

- 4.1.1 This chapter considers the potential implications of further losses of employment floorspace in Bath.
- 4.1.2 B&NES Council has identified 22 sites 'at risk' of loss from employment use. These sites currently comprise approximately 45,000 sqm of employment floorspace, and accommodate more than 1,000 jobs.
- 4.1.3 These 'at risk' sites primarily comprise industrial and warehousing floorspace. Measures are being put in place via an Article 4 Direction to limit PDRs in respect of office conversions to support the retention of existing stock within the central core of Bath alongside development proposals to deliver substantial new office floorspace at Bath Quays.
- 4.1.4 As noted in the previous chapter, 33,000 sqm of industrial and warehouse floorspace has been lost in Bath since 2011. This equates to 77% of the Core Strategy figure for managed release of floorspace across the full plan period to 2029. The loss of up to 45,000 sqm of industrial floorspace in addition would substantially exceed the Core Strategy policy figure.
- 4.1.5 There are currently no site allocations to accommodate new industrial floorspace at Bath. As a result there is no simple route to delivering new industrial and warehousing premises. The implications of this are the need to identify suitable sites and to ensure existing sites are protected. Suitable and deliverable sites will be considered through the process of preparing the Local Plan. This will take account of the Economic Strategy (review), sectoral growth prospects, and the Employment Land Review. Key criteria for prospective industrial sites would include:
  - Developable and free of major constraints;
  - Good connectivity to the road network and accessible to local catchment markets;
  - Serviced to meet the needs of industrial occupiers e.g. access to three phase power; and
  - Good visibility from the road network will improve site attractiveness.

## 4.2 Potential Impacts

- 4.2.1 Table 4.1 sets out estimates of the combined economic contribution of the 'at risk' sites. This has been calculated under two scenarios.
  - 'Current Time' based on existing levels of on-site employment provided to HJA by B&NES Council
  - 'Standard Full Occupation' based on an estimate of all on-site floorspace using standard employment densities.
- 4.2.2 Full details of the method used to construct the scenarios are set out at Appendix 1 to this report.
- 4.2.3 Under both scenarios the estimates of gross direct employment are around 1,050 jobs. These are anticipated to support in excess of £120 million of gross direct GVA and more than £30 million in gross direct wages.



Table 4.1: Combined Contribution of 'At Risk' Sites

	Current Time	Standard Full Occupation
Gross Direct Jobs	1,050	1,080
Net Additional Jobs	690	720
Gross Direct GVA	£121,017,000	£121,468,000
Net Additional Local GVA	£80,235,000	£80,533,000
Gross Direct Wages	£30,307,000	£31,124,000
Net Additional Local Wages	£20,093,000	£20,635,000

<sup>\*</sup>GVA calculations do not include suppressed Financial Services figures

### 4.3 Market Comment

- 4.3.1 As mentioned above, Bath has reached a tipping point and cannot afford to lose any more suitable office accommodation. Whilst Bath has identified development sites for Grade A office stock, it needs to retain a level of critical mass, averaging c. 111,500 sqm of office stock; otherwise it will not be seen as a viable office location. The city is at risk of losing its reputation and becoming a dormant city or a purely tourist city rather than the vibrant commercial centre it currently is.
- 4.3.2 Take up over the next 18/24 months will be low due to the lack of supply as Bath waits for the new raft of developments to come forward. The risk is that the low level of supply in the short term will lead to companies relocating out of Bath and the city will miss out on footloose enquiries. It will also have an impact on investment and development confidence in the market, risking losses of more accommodation that could be refurbished, which would bring forward supply in advance of the major developments.
- 4.3.3 Bath also needs to maintain a strong representation of industrial occupiers to ensure the city grows sustainably, whilst balancing other sectors, both commercial and domestic. There is a common misconception that the role of the industrial market can be satisfied entirely by encouraging industrial development outside Bath in areas such as Keynsham and the Somer Valley.
- 4.3.4 However, it must be recognised that the real value in retaining key industrial sites around the city centre is in providing opportunities for businesses that need to be in close proximity to their city centre customers and/or for their labour force to easily access their place of work. For example, the industrial sector supports retail and tourist businesses in Bath. Without capacity to accommodate a local supply chain the retail market especially will have to source supplies from further afield. It is also vital to provide a mix of jobs for local residents. For both reasons it is important that a supply of industrial sites is maintained to serve Bath through both the protection of existing sites and the identification of further expansion space.



# 5 Conclusions

- 5.1.1 This research has been undertaken to provide evidence to help B&NES Council prepare its Local Plan and assess the economic development implications of change of use planning applications, particularly for purpose built student accommodation (PBSA).
- 5.1.2 The first stage included an independent review of the economic impact assessments of the University of Bath and Bath Spa University, both of which were prepared by Oxford Economics. The review found that results were set out clearly and the overall description of the method employed suggests robust analysis. However, there was a lack of detailed information in respect of some of the assumptions used in the modelling to undertake a forensic assessment.
- 5.1.3 The review of the assessments also highlighted the University of Bath's own evidence that there was a lack of commercial space that was constraining the wider beneficial economic impacts of the institution. This accords with the concerns of the Council that there is a detrimental effect on the Bath economy as a result of losing employment sites to PBSA. By implication any further losses of commercial employment floorspace will serve to exacerbate this situation, further hindering the wider economic impacts of the universities.
- 5.1.4 B&NES Council indicated that the two economic impact assessments are frequently cited in support of change of use applications, often for PBSA. It is vital that where this is the case there is clear evidence that any student population that such developments facilitate is net additional and, in the absence of the development would be lost to the local area.
- 5.1.5 The second stage of the research considered the impact of the loss of employment sites and premises to PBSA on the local economy. This would enable some comparison between the value of the sites for B Use Class employment uses as opposed to PBSA.
- 5.1.6 Analysis of employment floorspace monitoring records found clear evidence of losses across B&NES as a whole and the city of Bath in particular. Whilst there is anticipation of some losses within the existing Core Strategy policies, the rate of losses is far exceeding policy provision and the delivery of new replacement floorspace is not taking place at the required rate. This poses significant economic development risks.
- 5.1.7 LSH's expert commercial market view is that the city of Bath is at a tipping point whereby any further losses risk reducing the level of stock below the critical mass that will enable it to compete for new investment and retain existing occupiers. Whilst there are pipeline schemes to deliver new office stock in the city there are currently no identified sites to accommodate new industrial and warehousing floorspace. In response there is a need to heighten the protection of remaining stock and if possible to identify new sites.
- 5.1.8 Seven sites have been identified which have either been lost from employment use to PBSA, or have planning permissions in place. Whilst on a site by site basis each may appear insignificant, when considered cumulatively they comprise substantial capacity. At the time of each respective planning application many of the sites included large areas of vacancy and were generally in need of redevelopment or refurbishment. With such refurbishment or redevelopment significant capacity could have been delivered, estimated in excess of 4,000 FTE jobs.
- 5.1.9 B&NES Council has identified 22 sites 'at risk' of loss from employment use. These 22 primarily industrial and warehouse sites are estimated to accommodate approximately 1,000 FTE jobs at



the current time. Given the lack of future supply, particularly for industrial development it is vital that these sites are retained and opportunities for B Use Class redevelopment and refurbishment are encouraged where possible.



# Appendix 1: Modelling Assumptions

This appendix provides further detail on the approach to modelling the economic impact scenarios for the shortlisted sites.

### Scenarios

Five scenarios are described at Chapter 3 of the main report. These are:

- 'Time of Loss' is an estimate of the B Use Class contribution of the sites at the time of loss. Many of the sites were reported as largely vacant at the time of the application for change of use/redevelopment.
- 'Sites at Full Occupation' is an estimate of the contribution of the sites if all B Use Class floorspace at the site was occupied.
- 'Proposed Redevelopment' is an estimate of B Use Class capacity under the currently permitted PBSA schemes, some of which include the reprovision of B Uses.
- 'Market Assumption' provides an estimate of the capacity of the site if sites were developed solely for B Use Class activities in line with the market commentary.
- 'Maximum B Use' provides an estimate of the realistic maximum potential B Use Class capacity of the sites.

The table overleaf sets out the basis for assumed B Use Class floorspace for each of these scenarios for the sites subject to testing at Chapter 3.

Chapter 4 assesses a shortlist of 'at risk' sites which are not named individually. B&NES officers provided data on floorspace for each site which informed the assessment.



Site	Time of Loss	Sites at Full	Proposed	Market Assumption	Maximum B Use
		Occupation	Redevelopment		
Green Park House & Ernest Ireland House	Application documentation identified loss of 1,416 sqm of B1a office space at Ernest Ireland House. However, site was vacant.  O sqm office	Occupation Application documentation identified 1,416 sqm of B1a office space at Ernest Ireland House.  1,416sqm office	Redevelopment  The proposed redevelopment of the site did not include any B Use Class floorspace.  O sqm	With appropriate modern floorplates this location would have potential as an office location.  Entire site, comprising Ernest Ireland House and Green Park House is substantial.  The proposed PBSA development comprised 13,496 sqm which provides an illustration of overall capacity with high density development. This achieves an overall development density of 270% on the 0.5ha site.  Other previous proposals on the Green Park House site comprised a hotel (7,197 - 7,607 sqm depending on source) and offices (2,751sqm). This would achieve a development density of c.250% on a 0.41ha site.  On this basis a total density of 250% across the site is not unreasonable. This would deliver c.12,500sqm of offices if used solely for employment purposes.	This scenario assumes the same as the market assumption.  12,500sqm office
				purposes.  12500sqm office	



Site Time of Loss		Sites at Full Proposed		Market Assumption	Maximum B Use	
		Occupation	Redevelopment			
1-3 Westgate Buildings	The application sought change of use on a 537sqm B1a office building located above a restaurant. Application documentation listed the offices at vacant at the time of application.  O sqm office	The application documentation identified 537 sqm B1a office. 537sqm office	The proposed redevelopment of the site did not include any B Use Class floorspace.  O sqm	Refurbishment could be justified given current rental levels. As this is an existing building there is no scope for a change in overall capacity.  537sqm office	This scenario assumes the same as the market assumption.  537sqm office	
Johnsons Group	The application documentation identifies a total loss of 1,186sqm B1a offices across two buildings. It was reported that c.300sqm was occupied at the time of application.	On the basis of total capacity as reported within application documentation.  1,186sqm office	The proposed redevelopment of the site did not include any B Use Class floorspace.  O sqm	With refurbishment or redevelopment there was potential for continued office use in this location.  There were previous proposals for 4,157sqm on a site of 0.25ha which increased the density of the development. This provides a clear indication of potential capacity.  4,150sqm office	This scenario assumes the same as the market assumption. 4,150sqm office	
Twerton Mill	Application documentation identified loss of 8,338sqm of B8 warehouse floorspace. This was reported as vacant at the time of application.  0 sqm warehouse	On the basis of total reported capacity within application documentation.  8,338 sqm warehouse	The proposed redevelopment of the site did not include any B Use Class floorspace.  O sqm	With comprehensive redevelopment it could be used for modern industrial. Assumed at up to 60% site density on a 0.5ha site would achieve 3,000sqm.  3,000 sqm industrial	The site currently accommodates 8,300 sqm of industrial/warehouse capacity and this is adopted as a maximum capacity.  8,300 sqm industrial	



Site	Time of Loss	Sites at Full	Proposed	Market Assumption	Maximum B Use	
		Occupation	Redevelopment			
Pinesgate	Application includes the	On the basis of the	The proposed	The site is identified as having good	This scenario assumes	
	loss of 5,574sqm of	available information	redevelopment includes	office potential which is expected to	the same as the market	
	office development.	the site contained a	15,348sqm of B1a	further improve with the North and	assumption.	
	There was substantial	total of 5,574sqm of	office floorspace as well	South Quays developments.		
	vacancy at the time of	office floorspace.	as other uses.		30,700sqm office	
	the application.			The development proposals for the site		
		5,574 sqm office	15,348sqm office	include two buildings, one for office		
	2,500sqm office			and one for PBSA and educational use.		
				The proposals increase the density of		
				development on the site. Total		
				proposed floorspace is 31,839sqm on		
				a 0.9ha site. On the basis of two office		
				buildings of similar design to the one		
				proposed the site could achieve		
				30,700sgm office.		
				30,700sqm office		



	ime of Loss	Sites at Full	Proposed	Market Assumption	Maximum B Use
		Occupation	Redevelopment		
do id 83 wa	pplication ocumentation lentifies loss of 37sqm of B8 rarehouse. 37 sqm warehouse	Application documentation identifies 837sqm of B8 warehouse.  837 sqm warehouse	The proposed redevelopment has no B Use Class floorspace included.  Osqm B Use Class	Not a core office location despite a previous permission for office use. Would be a good industrial location.  Assume redevelopment for industrial use at similar scale to existing.  837sqm industrial	Proposals include 3,365sqm of PBSA on a 0.14ha site. This will increase current density from 60% to 240%. The site has had previous permission for modern office.  Review of historic documentation found no stated floorspace, but on visual review of plans indicates lower site coverage and one fewer storeys of development. On this basis it is estimated a scheme of c.2000- 2500sqm. Given the level of densification achieved with the PBSA scheme the upper end of this range is adopted for assessment.



Site	Time of Loss	Sites at Full	Proposed	Market Assumption	Maximum B Use	
		Occupation	Redevelopment			
34-35 Lower	The application	The application	The proposed	The presence of neighbouring office	This scenario assumes	
Bristol Rd	documentation	documentation	development does not	occupiers would make redevelopment	the same as the market	
	identifies a loss of	identifies a loss of	include any B Uses.	for industrial development challenging.	assumption.	
	4,707sqm of B8 storage	4,707sqm of B8		However, it could have potential for		
	uses.	storage uses.	Osqm B Use Class	office development in keeping with	5,500sqm office	
				adjacent sites.		
		4,707sqm warehouse				
	4,707sqm warehouse			Proposed development comprises		
				5854sqm of PBSA. This would		
				increase the density but deliver a		
				building in keeping with adjacent		
				offices. A similar level of office		
				floorspace is therefore assumed.		
				5,500sqm office		



## **Economic Impact Analysis**

Using the site definitions, the economic impact of each site on jobs, GVA, and wages was modelled for each scenario. The process of modelling each of these impacts is described below.

#### **Jobs**

To calculate the jobs delivered under each scenario, the floorspace figures were multiplied by indicative employment densities for each Use Class. The densities used are shown below:

B1a	B1b	B1c	B2	B8
13.2 sq m	60 sq m	56.4 sq m	37.8 sq m	80 sq m

Source: HJA based on HCA (2015) Employment Density Guide, 3rd Edition

### **GVA**

Annual Business Survey (ABS) 2016 Revised Results figures were used to calculate an indicative GVA per worker for each Use Class. Given that data by Use Class is not provided in ABS releases, it was necessary to develop a method to deliver this level of granularity.

Firstly, using Business Register and Employment Survey (BRES) 4 Digit SIC data, a BANES-specific Use Class matrix was calculated in order to establish the distribution of employment by Use Class in the district.

	A1	B1a	B1b	B1c	B2	B8
Primary Industry	0%	0%	0%	0%	0%	0%
Manufacturing	0%	0%	0%	1%	88%	0%
Utilities	0%	0%	0%	0%	0%	0%
Construction	0%	6%	0%	0%	0%	0%
Wholesale & Retail	65%	1%	0%	0%	0%	17%
Transport & Storage	0%	4%	0%	0%	0%	10%
Accommodation & Food Services	8%	0%	0%	1%	0%	0%
Information & Communications	0%	66%	6%	0%	0%	2%
Finance & Insurance	0%	67%	0%	0%	0%	0%
Professional Services	0%	63%	4%	0%	0%	0%
Business Services	4%	26%	0%	1%	2%	2%
Public Admin	0%	49%	0%	0%	0%	0%
Education	0%	0%	0%	0%	0%	0%
Health	0%	6%	0%	0%	0%	0%
Other Services	18%	6%	0%	0%	0%	0%

Source: HJA analysis

The 2016 GVA figure for each Sector in ABS was multiplied by the relevant percentage in the Use Class matrix above to produce an approximate GVA matrix based on Sector and Use Class.

This process was repeated using the total employment (average during the year) figures in the ABS to produce a similar matrix for workers.

The sum of the approximate GVA for each Use Class was then divided by the sum of total workers for the same Use Class to calculate a GVA per worker figure for each Use Class.



The number of jobs (calculated as described above) was then multiplied by the GVA per worker figures for each Use Class in order to calculate the GVA delivered on each site under every scenario.

#### Wages

Annual Survey of Hours and Earnings (ASHE) 2017 figures were used to calculate indicative wages per worker for each Use Class. Given that data by Use Class is not provided in the ASHE releases, it was necessary to develop a method similar to that described for GVA per worker in order to deliver this level of granularity.

The 2017 number of jobs figure for each sector in ASHE was multiplied by the relevant percentage in the Use Class matrix (see above) to produce an approximate jobs matrix based on sector and Use Class.

The Median wage for each sector was then multiplied by the jobs matrix to produce a total wages matrix for each based on sector and Use Class.

The sum of the total wages for each Use Class was then divided by the sum of total jobs for the same Use Class to calculate a median wage per worker estimate for each Use Class.

The number of jobs estimated for each scenario was then multiplied by the wage per worker figures for each Use Class in order to calculate the wages delivered on each site under every scenario.

## Additionality

The HCA Additionality Guide (Fourth Edition, 2014) provides a methodology for assessing scheme impacts On that basis:

- A Leakage figure of 32% has been applied. This is based on 2011 Census data (allowing for adjustment), which indicates that leakage in BANES is 32%, considering every industry together.
- A Displacement figure of 25% has been applied, assuming a low level of displacement.
- A Multiplier figure of 1.3 has been applied, assuming average linkages. This assumes medium linkages
  across the wide range of sectors under consideration. BANES district is between Neighbourhood and
  Regional level, so a ready reckoner of 1.3 is reasonable.

