Annex 3

Employment Sites & Premises in South Hampshire: Demand and Supply Analysis

Update Report to Joint Committee

PUSH

DTZ
125 Old Broad Street
London
EC2N 2BQ

www.dtz.com

August 2010

Contact:
Tim Johnson
tim.johnson@dtz.com
020 3296 3127

Stuart Hardisty
stuart.hardisty@dtz.com
029 2026 2211

Contents

1. Introduction

The Partnership for Urban South Hampshire (hereafter PUSH) was formed in 2003 and includes eleven local authorities and a number of other key delivery partners such as Hampshire Economic Partnership, SEEDA, GOSE, HCA, the Skills Funding Agency, Business Link and Job Centre Plus. PUSH also seeks to actively involve a range of wider stakeholders from the business community, third sector and other statutory bodies.

In January 2007 PUSH published a summary document[1] which set out the results of a substantial economic research and scenario development exercise undertaken over the period 2004-2006. This formed part of the evidence base which was central to the development of the South Hampshire sub-regional strategy within the SE Plan.

As the end of the first five year period approaches, following what is generally recognised as one of the most severe post WW2 recessions, and in a changing policy environment, it was deemed appropriate to update the economic development evidence base, refresh the growth targets and update the Economic Development Strategy (hereafter EDS) to ensure a robust basis for further activity and appropriate action to respond to the challenges brought about by the recession.

DTZ and Oxford Economics were commissioned in autumn 2009 to update and refresh the PUSH economic development evidence base and strategy, including an assessment of the impact of the recession on the sub-region. A further element of this commission was to consider the requirement for employment floorspace to facilitate the delivery of the EDS and assess the potential for identified key employment sites across the sub-region to meet this requirement. The aim for this work was to:

"Test whether the emerging EDS is deliverable in terms of the likely availability/supply of sites and premises and also to test whether the likely portfolio of employment development sites will have the capacity to deliver the employment floorspace requirements of the emerging EDS".

This report provides an update on the methodology employed and early stage findings of this research.

In undertaking this analysis DTZ has worked closely with the Steering Group overseeing the whole commission, with Jeff Channing (PUSH) and Alan Cole (Hampshire County Council), tasked with overseeing the details of this strand of research, and the PUSH Planning Officers Group (POG). There has also been substantial consultation with the members of POG individually in respect of sites within each Local Planning Authority Area.

[1] South Hampshire Economic Drivers and Growth: Combined Report, DTZ on behalf of Partnership for Urban South Hampshire, January 2007.

2. Future Employment Floorspace Requirements

This section of the report sets out a summary of the method employed to assess the future employment floorspace requirements to facilitate the ambitions for the South Hampshire sub-region as set out in the PUSH Economic Development Strategy and PUSH Preferred Scenario. Further details on technical aspects of the methodology are provided at Appendix 1 to this report.

2.1 Assessment Methodology

The method employed to assess future requirements has been developed to align with the guidance published in *Employment Land Reviews: Guidance Note, ODPM, December 2004* and to reflect the realities of the commercial property market and patterns of land use. The method has been developed by DTZ in partnership with PUSH to ensure it is appropriate for local application.

2.1.1 Health Warning

As with all forward looking assessments, it involves uncertainty. Uncertainty arises from the underlying economic projections as well as key assumptions within the methodology. However, as far as is possible all inputs and assumptions are based on good evidence, sound logic and are clearly and openly stated.

This assessment is not intended to be used as a prediction of exactly how much employment floorspace will be required in the PUSH area in the future, but as a guide to the likely scale and breakdown of requirements to aid decision making. This guide can then be used as a piece of evidence in formulating policy and targeting investment. In order to maintain the integrity of policy and decision making, there will be a need for regular ongoing monitoring of activity on the ground to ensure the assessment remains robust and relevant.

2.1.2 Method Outline

The diagram below outlines the process adopted to calculate future requirements. This includes three critical elements:

1. An allowance for net projected changes in employment to ensure a larger workforce and economy can be accommodated;
2. An allowance for replacement, recognising the need to update property to meet modern occupier requirements; and
3. An allowance for choice to ensure the market is able to work effectively and occupiers and developers can find suitable opportunities.

Further comment on the method and assumptions at each stage are contained within the remainder of this section and Appendix 1 to this report.

2.2 Accommodating Projected Employment Change

The PUSH Preferred Scenario has been developed based upon forecasts from Oxford Economics (OE). This sets out a target economic trajectory projecting an increase of around 52,000 jobs over the period 2006 to 2026.[2] Beneath this headline figure are employment forecasts by sector creating a picture of how the economic structure of the economy may change over time. The majority of employment growth over the 20 year period is forecast to come from the business services sector, representing an increase of 41,300 jobs. Retail & distribution, health, hotels & restaurants and transport & communications sectors are all expected to see employment growth of more than 5,000 workers. The manufacturing sector is expected to see a continued decline in overall employment with a decrease of – 18,600 workers by 2026 compared to 2006. Employment in the construction and public administration & defence sector are also expected to decline, although by much smaller amounts.

Table 2.1 Employment Projections by Sector: PUSH Preferred Scenario

Sector	Projected Change in Number of Jobs 2006 to 2026
Agriculture	50
Extraction	-150
Manufacturing	-18,600
Utilities	-500
Construction	-3,050
Retail & Distribution	10,100
Hotels & Restaurants	5,300
Transport & Communication	5,000
Financial Services	2,550
Business Services	41,300
Public Administration & Defence	-1,750
Education	1,300
Health	9,000
Other Personal Services	2,250
Total	**52,800**

Source: Oxford Economics

The SIC to Use Class matrix (presented in Appendix 1) estimates the proportion of employment in each sector related to each category of commercial space. This is based on an assessment of employment data from the Annual Business Inquiry (ABI) to separate out varying activities by sector. For example, it assumes 20% of the jobs in the retail and distribution sector require warehousing space (B8 - distribution) with 70% in A (retail) and 10% sui generis (motor trades).

Applying the SIC to Use Class matrix to the employment projections in Table 3.1 provides employment changes by Use Class which are shown in Table 2.2. The B1a office sector has the highest level of employment growth with an increase of over 36,000 jobs. This will be

[2] PUSH Preferred Scenario, DTZ and Oxford Economics, July 2010

driven by the large increase in businesses services as identified in Table 2.1. Employment in the B2 industrial sector is expected to decline by approximately 16,400 workers, mostly as a result of the declines in the manufacturing sector. It interesting to note that of the total increase in workers of 52,800, a large proportion of growth in employment will come from the Non B Use Classes (32,300 jobs, 60%) and therefore will fall outside of the scope of this employment floorspace assessment.

Table 2.2 Employment Forecasts by Use Class

Use Class	2006-2026
B1a	36,100
B2 (inc B1b/c)	-16,400
B8	800
Total B	**20,500**
A2	9,300
Rest of A	9,700
C	8,200
D	3,600
Sui Generis	1,700
Not Fixed to a Property	-200
Total Non B	**32,300**
Total	**52,800**

In order to calculate floorspace requirements by Use Class an employment density per worker is applied to the forecasts by Use Class. Details of the analysis behind the densities adopted are presented at Appendix 1.

2.3 Allowance for Replacement

In addition to the requirements outlined in the preceding section, to accommodate the expanding economy, there will also be a further requirement to accommodate the ongoing change within sectors and to ensure an up to date, modern property stock appropriate for modern occupiers. For the purposes of this analysis this allowance is termed 'replacement demand'.

Our methodology for understanding the level of replacement demand is to assume that a proportion of the total existing stock of offices, industrial units and warehouses are replaced each year. Based on what can be observed in the data, and what is known of the property market it is assumed that a total of 1% -1.5% of commercial stock is replaced each year. This is equivalent to the entire stock of employment property being replaced over a 66 to 100 year period. Further details relating to this assumption is contained in Appendix 1 to this report.

The stock based assumption set out above indicates a total level of replacement activity one might expect to observe in the property market. However, it does not consider whether this replacement activity takes place on existing employment sites (replacing one building with another on the same plot of land) or whether currently unoccupied land needs to be made available. The evidence and market observation would lead us to assume there will be elements of both. Some existing sites will clearly be available for re-use within the analysis period, however, others will have constraints (e.g. remediation, infrastructure, ownership) and

others will not be attractive to the market for redevelopment or reoccupation as they are no longer fit for employment use. The evidence on which to develop a detailed assumption is limited, however, based on our understanding of the market, for the purposes of this analysis it is assumed that 50% of replacement demand will occur on existing sites and 50% will occur on new sites.

2.4 Allowance for Choice

Adding replacement demand to the floorspace required to accommodate forecast employment changes gives an overall picture of the scale of floorspace required to deliver PUSH's preferred scenario. We have also made a 10% uplift to the sub-total (net additional + replacement on unoccupied sites) to account for the need to allow occupiers a choice within the marketplace (location and site/property typology etc) and to ensure the market has the capacity to move and churn.

2.5 Results

The results of this analysis are still being verified with the project steering group and other stakeholders.

3. Supply Assessment

This section of the report describes the method and results of the assessment of supply. This has been undertaken to understand the availability of future land and floorspace supply that is likely to be available over the period 2006-2026 to support the forecasted requirements. In the context of the Economic Development Strategy, this understanding is essential for three reasons:

- To enable a comparison of the available supply of strategic sites against forecasted requirements in order that enough supply can be provided of the right type and quality at the right time
- To enable, and provide evidence for, the allocation of new sites in planning policy wherever necessary
- To establish a portfolio of strategic sites available for economic development and to identify priority sites where intervention by PUSH can help bring them forward for development and meet the strategic objectives of the strategy.

3.1 Definition of Strategic Sites

The focus of the Economic Development Strategy is to facilitate a step-change in the economy of South Hampshire. To do this, there will need to be a supply of sites that are capable of delivering sufficient floorspace at an appropriate quality to meet future floorspace need. This supply assessment therefore focuses on identifying and assessing the key or 'strategic sites' that can best enable this, rather than all potential employment sites across the districts. These strategic sites are those that are considered important in implementing the strategy and have the potential to make a direct contribution to its quantitative or qualitative targets. In addition to strategic sites, there will be a pool of non-strategic supply and the potential contribution to supply from windfall sites, particularly as a result of land release in some parts of the manufacturing sector.

3.2 Method

In identifying a portfolio of strategic sites, the assessment has focused on evaluating and assessing the deliverability of sites across South Hampshire over the period 2006-2026. An initial long list of sites was compiled from previous county level studies, individual employment land reviews and in consultation with PUSH. Sites with little prospect of being developed over the plan period have been excluded, along with those already built out or currently under construction. Likewise, the assessment concentrates on sites with substantial vacant land or redevelopment potential rather than existing employment hubs. Existing employment hubs with identified development plots have been included in the assessment.

Planning Officers from each local authority within PUSH have been consulted at each stage of the assessment process, with each authority providing comments on the initial long list of sites and on the draft assessment results for both deliverability components. Comments from each authority have been fully incorporated into the final assessment. Headline results of this assessment have also been presented to PUSH Planning Officer Group meetings.

The assessment of deliverability is divided into the following two components:

- Site Condition and Suitability – involving an assessment of the qualitative aspects of the sites, including market potential and interest, physical characteristics, and fit with planning policy
- Site Capacity and Phasing – comprising an examination of the floorspace capacity of each site by use class and how this is likely to be phased across five year periods to 2026.

The following paragraphs discuss the assessment of each deliverability component in more detail.

3.2.1 Site Condition and Suitability

The assessment of Site Condition and Suitability is centred on three main categories of issues likely to influence the suitability of the sites to contribute to the PUSH economic development strategy. These key categories of issues are:

- Market Issues
- Physical Issues
- Policy Issues

Each key issue contains a set of related factors, and each site has been assessed against these to build up a picture of its condition and suitability. This has been achieved by assigning a score of between 1 and 3 for each factor, with higher scores reflecting better performance. While this scoring has enabled a more objective and structured assessment of suitability, it is important to note that sites have not been assessed or ranked against a cumulative score. Instead, broad scores have been used to aid a judgement on suitability and site potential, with sites being categorised into the categories of 'good', 'medium' and 'poor'. An important element of this has involved identifying specific issues that are constraining development on certain sites and sites where PUSH intervention can yield the greatest strategic benefit.

Figure 3.1 below sets out each of the issues and factors forming the assessment, together with the scoring criteria used.

Figure 3.1: PUSH Strategic Site Scoring Criteria

Issue	Scoring Criteria
Market Issues	
A) Has the market shown firm interest in the site?	1 = No evidence of firm market interest 2 = Promoter held initial discussions with LPA 3 = Promoter taking forward site through planning process (allocation or permission)
B) How do existing prevailing property rental values in the area surrounding the site compare to those in other locations across the sub-region?	1 = Low rents for office, industrial and distribution accommodation (below average compared to the rest of the sub-region) 2 = Medium rents for office, industrial and distribution accommodation (average compared to the rest of the sub-region) 3 = High rents for office, industrial and distribution accommodation (above average compared to the rest of the sub-region)
Physical Issues and Constraints	
C) What level of physical constraints affects the site? (including contamination, site assembly	1 = Multiple and significant identified constraints (flood risk, contamination, etc) 3 = No identified constraints

Issue	Scoring Criteria
(complexity of land ownerships), flood risk, transport accessibility, servicing, ecology, historic buildings etc)	
D) What is the area available for employment generating uses? (net figures to be provided if available, even if estimates)	1 = Net developable area of less than 5ha (taking into account current net area available for (re)development and expansion opportunities over the next 3 years) 2 = Net developable area of 5ha+ (taking into account current net area available for (re)development and expansion opportunities over the next 3 years) 3 = Net developable area of more than 10ha+ (taking into account current net area available for (re)development and expansion opportunities over the next 3 years)
E) How accessible is the location?	1 = No direct access to strategic road or railway network or water or airport access , and no future direct access in pipeline 2 = No direct access to strategic road or railway network or water and airport access, but future improvements in pipeline 3 = Direct access to strategic road and railway network, and proximity to water and airport access
F) How does the site rate in terms of servicing provision (including both utilities and broadband infrastructure)?	1 = Area of known servicing constraints and no investment currently planned over next 3 years 2 = Area where utilities capacity is known to be good (at present or in terms of planned provision over next 3 years) 3 = Already serviced site
Policy Issues	
G) Is the location of the site suited to the needs of at least one identified growth sector?	1 = Poorly suited to any growth sector 2 = Well suited to one particular growth sector 3 = Well suited to a range of growth sectors
H) How sustainable is the location in sequential terms?	1 = Out of town 2 = Edge of town 3 = Town Centre
I) Is there any synergy to local socio-economic regeneration policy and priorities?	1 = Development of site unlikely to directly benefit socially deprived areas 3 = Close proximity and likely high synergy with socially deprived areas
J) Is the site greenfield or brownfield?	1 = Greenfield site 3 = Brownfield site
K) What relationship does the site have with future planned residential developments?	1 = No direct relationship with future planned residential development 3 = High potential synergies with future planned residential development
L) What relationship does the site have with existing or future planned employment sites / areas?	1 = No relationship 2 = Indirect relationship e.g. providing space for businesses related to those already in the vicinity 3 = Direct relationship e.g. extension to existing employment area

3.2.2 Site Capacity and Phasing

The Site Capacity and Phasing examination encompasses a number of stages that together have enabled predicted floorspace supply figures by use class, location type and by phasing period to be produced.

The first of these involved researching the future capacity of sites in terms of indicative net developable floorspace. This has been achieved through a review of local development plans and planning documents where available, and from an indicative site capacity analysis where not. The second stage broke these capacity figures down into the likely B1, B2 and B8 use class mix by site in order to provide a picture of the type of supply coming forward in different locations across the different time periods.

The third stage involved an analysis of the location typology of each site (categorised as; urban, urban extension, out of town or SDA) to add further detail to this picture. Finally, an assessment of phasing was undertaken to predict when floorspace on each site was likely to come forward (based on the five year phasing periods from 2006 to 2026.

3.3 Longer Term Strategic Sites

Within the analysis, a number of additional sites have been identified but not included within the floorspace figures discussed above. This is due to Local Planning Authorities not currently expecting these sites to come forward within the analysis period. However, it is important that these sites are not totally omitted from the analysis as they could play an important future role if intervention measures were initiated to help bring forward their delivery into the analysis period.

3.4 Non Strategic Supply

A review of Employment Land Reviews across the sub-region has identified a further supply of floorspace which has been classified as 'non-strategic supply'. Whilst the sites that contribute to this figure are not considered in detail, the capacity of this element needs to be considered in addition to those sites considered as 'strategic'.

3.5 Windfall Supply

Declining employment in the industrial sector could create a release of sites and premises to the market that can make a contribution to the future supply of employment sites across South Hampshire. However, there is uncertainty as to when and where this space may become available, and whether it will be suitable or deliverable for reuse or redevelopment within the analysis period. As such, it needs to be considered a windfall supply. This also ensures the need for modern industrial development is not masked by any release of poor quality sites and premises that are not suitable for modern industrial occupiers.

The analysis of decline in manufacturing employment suggested a potential release of industrial floorspace. This was based on a simple multiplication of the fall in employment by a static employment density. However, whilst there is evidence to suggest some net decline

in industrial stocks, the evidence suggests this method of analysis produced far too great a figure.

Over the period 1998-2008 there is evidence (ABI and VOA data) that a reduction in industrial employment of 16,000 jobs (broadly aligned with the projected reduction in the PUSH Preferred Scenario 2006-26) coincided with a net reduction in industrial stocks of around 200,000 sq m. This is far less than would be expected on the basis of pure employment decline. What can be observed is a 30% reduction in employment densities as labour is replaced with capital or other constraints hamper the release of space. This aligns with expected patterns of activity in the market. For example, whilst a firm may reduce its workforce by 10%, it may not release 10% of its occupied floorspace. In fact, due to the nature of industrial property, this may not be possible even where desired, due to lease structures, inability to partition off any unwanted space to be sub-let, freehold ownership, and/or the expense of relocating to smaller premises which may require substantial fit out and the relocation of complex equipment.

Future patterns in industrial employment densities are uncertain. This analysis therefore picks up on the observed data. A range is adopted to reflect that:

- Over the ten year period 1998-2008 a 16,000 reduction in industrial employment led to a 200,000 sq m reduction in industrial floorspace. One may expect a similar pattern in the future given the similar scale of projected industrial employment decline; or
- Over a 20 year period one may expect a 400,000 sq m reduction in industrial floorspace based on historic rates.

The higher end of this range provides some allowance for the fact that the trend in densities may not continue at the same rate. For the purposes of this analysis we assume a potential release of 200,000 – 400,000 sq m of industrial floorspace over the period 2006-26.

Of this potential release, only part is likely to come forward for redevelopment within the analysis period. That is not to say sites will be lost from employment use (although in some instances this may be the case), but rather, that market and physical constraints will prevent the redevelopment or reoccupation of sites in the required time frames. For example, high remediation costs coupled with insufficient development returns. For the purposes of this analysis we have assumed that 50% of this release will not come forward or will not be suitable for re-occupation or redevelopment within the plan period. This aligns with the assumption used in the analysis of replacement demand. This leads to an estimated windfall supply of 100,000 – 200,000 sq m over the period 2006-26.

4. Headline Findings

4.1 Future Requirements

Future requirements to meet the needs of the EDS are likely to be lower than the total requirements for employment floorspace as set out previously in the SE Plan for the South Hampshire Area. The final results are currently being verified by relevant officers.

4.2 Supply Analysis

Following assessment of the strategic sites, supply will be reviewed against future requirements to provide analysis of:

- Total supply (strategic, non strategic and windfall)
- Supply by five year period
- Quality and deliverability of supply
- Typology

The results of this analysis will be used to inform recommendations for PUSH response.

Appendix 1: Assessing Future Employment Floorpsace Requirements – Further Details

This appendix sets out further details of the approach to assessing future employment floorspace requirements in South Hampshire as set out in section 3 of this report.

The methodology has been evidenced from a variety of sources including national statistics, employment land guidance and previous experience/market knowledge. Where assumptions have been adopted an explanation of the reasoning and evidence lying beneath is presented. Note that as this is an employment floorspace assessment the majority of the focus is on the B Use Classes.

Employment Projections

The employment projections used within the assessment were developed by Oxford Economics as part of work to refresh the PUSH Economic Development Strategy. Further details on the projections and their implications for the PUSH area can be found in the document *PUSH Preferred Scenarion, DTZ and Oxford Economics for PUSH, July 2010*.

Employment by Use Class

Table A1.1 sets out the SIC (Sector) to Use Class matrix employed in this analysis. This Use Class matrix has been designed to take into account not only the B Use Classes but also the A, C and D Use Classes. This is in line with recommendations made in PPS4[3]. However, it should be noted that the traditional approach to forecasting retail floorspace (for example) relate to expenditure patterns, rather than employment projections.

The proportion of employment in each category in this matrix is based upon the share of reported employment as recorded by the Annual Business Inquiry (ABI) in different activities. For example, the split between retail, motor trades and distribution activities within the 'Retail and Distribution' sector. This approach was applied to each of the sub-sectors in turn and with analysis going down to 4 digit SIC codes where required.

The result of this interrogation of the ABI dataset in many cases has reconfirmed assumptions that have been developed elsewhere and used during the previous PUSH work. One sector where a notable change has occurred from the previous PUSH assessment is the 'Public Admin & Defence' sector. Based on detailed assessment of current data the current analysis assumes a slightly larger proportion of employment within B1 Use Class than previously.

We have included B1b/c activities (i.e. light industry) with B2 uses as this better relates to the Valuation Office data on commercial floorspace categories which are used elsewhere in this analysis.

[3] Planning Policy Statement 4, Communities and Local Government, Dec 2009.

Table A1.1: Sector to Use Class Conversion Matrix

Sector	B1a	B2 (inc B1b/c)	B8	A2	Rest of A	C	D	Sui Generis	Not Fixed to a Property
Agriculture	0%	10%	10%	0%	0%	0%	0%	0%	80%
Extraction	0%	0%	0%	0%	0%	0%	0%	0%	100%
Manufacturing	0%	90%	10%	0%	0%	0%	0%	0%	0%
Utilities	5%	5%	15%	0%	0%	0%	0%	0%	75%
Construction	5%	5%	10%	0%	0%	0%	0%	0%	80%
Retail & Distribution	0%	0%	20%	0%	70%	0%	0%	10%	0%
Hotels & Restaurants	0%	0%	0%	0%	40%	60%	0%	0%	0%
Transport & Comms	5%	10%	10%	0%	10%	0%	0%	10%	55%
Financial Services	60%	0%	0%	40%	0%	0%	0%	0%	0%
Business Ser	80%	0%	0%	20%	0%	0%	0%	0%	0%
Public Admin & Defence	50%	0%	0%	0%	0%	0%	0%	0%	50%
Education	10%	0%	0%	0%	0%	40%	50%	0%	0%
Health	20%	0%	0%	0%	0%	50%	30%	0%	0%
Other Personal Services	20%	0%	0%	0%	0%	0%	10%	10%	60%

Source: DTZ

Employment Densities

Employment densities by Use Class are required in order to develop floorspace estimates. The adopted employment densities per worker were based on a number of sources and cross checks. In summary they were:

- Employment density studies such as RTP, Arup and English Partnerships other guidance: The starting point for assumptions was published evidence based on surveys. In particular those quoted in guidance produced by English Partnerships and ODPM[4]. The employment densities suggested by these documents are shown in Table A1.2. However, much of this data is now dated.
- Employment densities based upon past experience: These densities were checked against employment densities used in employment land studies conducted by DTZ elsewhere across the UK. Where there were differences between responses we assessed the reasons for adopting the specified densities (e.g. local data) and compared these factors with the conditions in PUSH to test whether they are applicable.
- Implied employment densities based upon observed data: DTZ calculated estimated employment densities based upon floorspace data gathered from VOA data at a GB, SE and PUSH level and sectoral employment data (ABI) which had been converted to employment by Use Class using the matrix at table A1.1. This information was used as a sense check of our earlier assumptions against real data.

[4] Employment Land Reviews: Guidance Note, ODPM, 2004.

Table A1.2: Standard Job Density Benchmarks

	RTP/SERPLAN[5]	DTZ / SEERA 2004[6]	English Partnership guidance 2001
Office	General: 17.9 sq m	General: 18.3 sq m HQ's: 20.7 sq m High Tech, R&D: 27.2 sq m	General: 19 sq m HQ's: 22 sq m Business park: 16 sq m
Industrial	31.8 sq m	30-38 sq m	29-34 sq m
Warehousing	General: 40.1 sq m	(with loading bays) 78 sq m	General: 50 sq m Large scale, high bay: 80 sq m

After completing the cross analysis of the available evidence as detailed above a range of employment densities for each of the Use Classes were considered to take into account the variation and uncertainty (Table A1.3). The triangulation process suggests that densities in the B2 Use Classes have more substantial differences to the guidance than for other Use Classes. Therefore on this basis we have adopted higher floorspace per worker assumptions for B2 premises in line with our findings from the VOA and ABI datasets. This would align with anecdotal evidence of companies downsizing in terms of staff but not shedding space, leading to a lowering of densities (increasing quantum of space per worker).

Employment densities in C, D and Sui Generis sectors are indicative as there is such a wide range of possible densities within those Use Classes. As noted above, there are often other approaches used to develop future floorspace requirements for these activities which are beyond the scope of this report.

Table A1.3: Floorspace per Worker Assumptions

Assumption	B1a	B2 (inc B1b/c)	B8	A2	Rest of A	C	D	Sui Generis	Not Fixed to a Property
High Density	12	35	50	12	15	25	25	25	N/A
Medium Density	15	42.5	65	15	20	30	30	30	N/A
Low Density	18	50	80	18	25	35	35	35	N/A

For the purposes of the analysis the 'medium' densities were adopted. These were considered to be the most appropriate for the analysis:

- For offices this represented a higher level of density than 'general' office densities within the guidance and aligned with modern office occupation as reported by DTZ building consultants. Since the various research reports were published there was considered to have been further moves toward more efficient occupancy of office stocks.
- For B2 this figure aligned with the results of analysis of current employment and floorspace[7] as well as evidence to suggest lowering of densities since the research based guidance was published.

[5] The use of business space: employment densities and working practices in SE England, RTP / SERPLAN, 1997
[6] Employment densities: report for English Partnership and the Regional Development Agencies, 2001
[7] Analysis by DTZ of ABI and VOA data over the period 1998-2008 indicated a 30% reduction in employment densities in the PUSH area.

- For B8 this represents a hybrid of high bay warehousing and more local storage type activity.

Allowing for Replacement

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. Within sectors there is constant churn of businesses and employees. Working practices change, new technologies are adopted and the sites and premises used by firms need to adapt to these new ways of working. As a result, there will be a need for some existing employment stocks to be replaced. There will also be instances where existing buildings are so dilapidated that they require complete reconstruction.

Developing a methodology to estimate the scale of replacement activity is not straightforward. As a result, DTZ has worked closely with Hampshire County Council and PUSH to develop 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 25-30 year time horizon. As a result, one may expect that after this period, a building would be ripe for replacement. However, data on the age of commercial employment buildings indicates a very different picture. Data for the six local authority areas wholly within PUSH indicates that a large proportion of the current stock was built between 1940 and 1970, with approximately 15% of stock being built pre 1940 (Table A1.4). This implies that the useful lifespan of some stocks is considerable.

A previous study on the warehousing sector for PUSH[8] suggested that for warehousing activities the replacement cycle would be every 30 years. Whilst this may be true for new buildings, the evidence on existing stocks points to a longer life cycle for buildings. Within the analysis period considered for this study the main focus is on existing property, not newly built stocks (which will have a useful life throughout the period).

If buildings were replaced every 30 years, one would expect around 3% of all commercial employment property stocks to be replaced each year. Due to the existence of a substantial stock of property aged pre 1970 DTZ believes this to be an assumption that is too strong. As a result, for this analysis an assumption that 1% - 1.5% of existing stock is replaced each year. This effectively equates to a replacement of the entire commercial employment stock every 66-100 years (clearly there will be some property which is not replaced and other buildings which could be replaced more than once).

Table A1.4: Commercial Stocks by Age, PUSH Core Authorities

	% built Pre 1940	% built 1940 - 1970	Total Pre 1970
Office	17%	27%	44%
Industrial	11%	44%	55%
Warehousing	15%	26%	41%

Source: VOA and DCLG

Applying this percentage to the total stock gives an indication of the average annual replacement requirement. However, not all of this replacement will require the provision of available sites at the beginning of the period. One would expect some replacement activity to take place on the site of the building being replaced. However, one would also expect this not to happen in all circumstances.

[8] Property Requirements for Distribution and Logistics, Roger Tym & Partners, Lambert Smith Hampton and MDS Transmodal, September 2008

For example, some sites are not in locations favourable for new employment development, others will be constrained as a result of infrastructure issues, unwilling landowners or unviable development costs/values. That is not to say these sites will not come forward for employment use in the future, it may be that the constraints take time to resolve before the site can be development ready, or it may be that a mix of uses is adopted for the site which reduces the total employment component. As such, there needs to be provision for part of the replacement allowance on sites which are currently unoccupied.

The exact balance between occupied and unoccupied sites is unknown, with no local or regional evidence to provide any firm guidance. In order to progress the analysis an assumption that 50% of replacement demand will occur on currently unoccupied sites and 50% will occur on currently occupied sites is adopted. These assumptions have been tested by Hampshire County Council officers and accepted as reasonable and justified. This same method has also been adopted in other studies by DTZ and found sound by Planning Inspectors.

Choice

An allowance of 10% to the sub-total (net additional + replacement) is included to account for the need to provide occupiers with choice in the marketplace, as different businesses will have different needs and requirements. This choice and flexibility may include choice of location or typology. It also ensures some flexibility to accommodate the frictional movement in the property market (allowing the market to move as one occupier vacates a property and another moves in behind with some delay for fit out etc).