

Derby HMA Employment Land Review: Forecasts Update

Final Report

Derby City Council, Amber Valley Borough Council, South
Derbyshire District Council

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Limitations

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1 INTRODUCTION

- 1.1 This report provides updated forecasts of requirements for employment land over the 2008-28 plan period for each of the three local authorities areas which together constitute the Derby Housing Market Area (HMA): Derby City, South Derbyshire and Amber Valley.
- 1.2 The report updates demand forecasts set out in the Derby Housing Market Area Employment Land Review prepared by BE Group and published in March 2008. It is necessary to update the forecasting to take account of changes in economic circumstances and the economic outlook, and to take account of revised assumptions on expected population growth consistent with the Preferred Growth Strategy at the HMA level.
- 1.3 The report does not consider or assess the supply of employment land and floorspace within the HMA, nor does it consider the supply-demand balance. While this will be important in informing future employment land allocations (taking account of both quantitative and qualitative factors), the 2008 Employment Land Review included assessment of the supply of employment land across the HMA and the commissioning authorities consider that the supply-side position has not changed substantially over this period. This report thus should be read alongside the 2008 Employment Land Review and any sites lost since that document was published will be taken into account in determining the location and extent of land allocations in the respective local plans of the three HMA local authorities.
- 1.4 This report uses a scenarios based approach to consider future requirements for employment land. This reflects the varying factors which could influence future economic performance, including how quickly and in what way the economy recovers from the recent double-dip economic recession, how individual economic sectors perform over the first and second decade of the plan period to 2018 and the pace and impact of public spending cuts (in real terms) over the period to 2017 and potentially beyond.
- 1.5 The scenarios approach used seeks to set out parameters for how this might influence demand for employment land, taking account of economic performance and commercial factors. This is intended to provide a basis from which to make reasonable judgements regarding the level of employment land to plan for over the plan period to 2028.
- 1.6 In preparing the report, GL Hearn consulted on draft findings with a Project Steering Group comprising officers from the three authorities, as well as with wider public and private sector stakeholders through a workshop session held on 23rd November 2012. The workshop involved presentation and discussion of emerging findings to an audience encompassing representatives of

the three authorities, Derbyshire County Council, local property agents, and development interests and their representatives. The feedback from the stakeholder event has informed this report.

1.7 The remainder of the report is structured as follows:

- Section 2: Policy Context;
- Section 3: Overview of Property Market Dynamics;
- Section 4: Future Demand for Employment Land.

2 POLICY CONTEXT

2.1 This section reviews the policy context relevant to establishing employment land requirements. It also reviews the demand forecasts contained within the previous 2008 Employment Land Review for the Derby Housing Market Area (HMA).

National Planning Policy Framework

2.2 The Government published a new National Planning Policy Framework (the NPPF) in March 2012. This sets out that **planning should proactively drive and support sustainable economic development** to deliver the homes, business and industrial units, infrastructure and thriving places that the country needs. It sets out that every effort should be made objectively to identify and then meet the housing, business and other development needs of the area, and respond positively to wider opportunities for growth. Planning should take account of market signals ... and set out a clear strategy for allocating sufficient land which is suitable for development ... taking account of the needs of the residential and business communities¹.

2.3 In paragraph 19 the NPPF sets out that the Government is committed to ensuring that the planning system does everything it can to support sustainable economic growth. Planning should operate to encourage and not act as an impediment to sustainable growth. Therefore **significant weight should be attached to the need to support economic growth through the planning system.**

2.4 The NPPF sets out that to help achieve economic growth, local planning authorities should plan proactively to meet the development needs of business and support an economy fit for the 21st century. It outlines (in paragraph 21) that in drawing up Local Plans, local planning authorities should:

- Set out a clear economic vision and strategy for their area which positively and proactively encourages sustainable economic growth;
- Set criteria, or identify strategic sites, for local and inward investment to match the strategy and to meet anticipated needs over the plan period;
- Support existing business sectors, taking account of whether they are expanding or contracting, and where possible, identify and plan for new or emerging sectors likely to locate in [the] area. **Policies should be flexible enough to accommodate needs not anticipated in the plan and to allow a rapid response to changes in economic circumstances;**
- Plan positively for the location, promotion and expansion of clusters or networks of knowledge driven, create or high technology industries;
- Identify priority areas for economic regeneration, infrastructure provision and environmental enhancement;
- Facilitate flexible working practices such as the integration of residential and commercial uses within the same unit.

¹ CLG (2012) *National Planning Policy Framework. Core Planning Principles (Para 17)*

2.5 In paragraph 22 the NPPF sets out that **planning policies should avoid the long-term protection of sites allocated for employment use where there is no reasonable prospect of a site being used for that purpose**. It promotes regular review of land allocations. The preparation of the ELR Update addresses this.

2.6 For this purposes of this exercise, we consider that the NPPF promotes meeting identified development needs as well as the inclusion of an allowance for flexibility to respond to changing (and particularly an improved set of) economic circumstances within the plan period and/or potential strategic sites to support inward investment. However there must be a realistic prospect of take-up of the land within the plan period and the sites allocated should be deliverable.

The Plan for Growth

2.7 The Plan for Growth was published by HM Treasury and the Department for Business, Innovation and Skills (BIS) in March 2011. This sets out the Coalition Government's overarching goals for economic development against the context of the recent economic recession and substantial fiscal deficit – to achieve strong, sustainable and balanced growth that is more evenly shared across the country and between industries.

2.8 The Plan for Growth sets out the Government's view that over the last decade the UK economy became seriously unbalanced and heavily indebted, resulting in a decline in underlying economic competitiveness. Growth was concentrated in a few sectors of the economy, and in a few regions of the country; with others becoming increasingly reliant on the public sector. The plan sets out four key ambitions:

1. To create the most competitive tax system in the G20;
2. To make the UK one of the best places in Europe to start, finance and grow a business;
3. To encourage investment and exports as a route to a more balanced economy; and
4. To create a more educated workforce that is the most flexible in Europe.

2.9 These are supported by action on a number of fronts including reductions in regulation and targeted investment. The Government intends to reduce the costs of doing business through a reduction in Corporation Tax, simplification of the tax system and the review/ roll-back of regulations. It intends to make Britain more business friendly, encouraging investment and business start-ups through a range of measures including tax reliefs and planning reforms. It also wants to encourage investment and exports and is implementing a number of measures to achieve this, including allowances for new capital investment, setting up a number of new Enterprise Zones and a Green Enterprise Bank, establishing a network of Technology & Innovation Centres and reforming inward investment activity. To improve skills it supports additional work experience, apprenticeship places and the establishment of new University Technical Colleges. Additional measures are outlined to support

the housing market (and thus the construction sector). These have been since supplemented by further announcements through the 2011 Housing Strategy.

- 2.10 The Plan also identifies a number of key sectors that the Government wishes to support, which so far include: healthcare and life sciences; advanced manufacturing; construction; digital and creative industries; retail; professional and business services; the space industry and tourism. The ambition is clearly for private sector-led growth and across a greater spread of sectors relative to the last decade.
- 2.11 One of the Derby's clear strengths is its advanced manufacturing sector – particularly in planes, trains, automobiles, defence and nuclear. It has, in relative terms, a strong private sector economy which is not overly reliant on financial services or public spending. The realignment of the national economic strategy can thus be expected to benefit the Derby HMA, at least in terms of implicit Government support to growth sectors in the local economy.
- 2.12 In more specific terms, Government's commitment to deliver new rail infrastructure, including Crossrail in London and HS2, and to deliver the next generation of nuclear power stations should have some role in supporting jobs in advanced manufacturing/ engineering and R&D activities in the Derby area.

D2N2 Local Enterprise Partnership

- 2.13 The D2N2 LEP covers Derby, Derbyshire, Nottingham and Nottinghamshire. Its vision is to make the D2N2 area one of the strongest and most resilient economic regions in the UK. Its activities are guided by a select number of strategic priorities – improving business skills and skills development, encouraging innovation, research and development, addressing issues around finance for businesses and access to finance, and encouraging investment in infrastructure (including transport, business premises, broadband etc).
- 2.14 The LEP has defined a number of areas of economic focus representing particular sectors and clusters of activity with growth potential within the area. These are:
- Transport equipment manufacturing – concentrated specifically around Derby/South Derbyshire;
 - Medical/bioscience – including capitalising on the medical cluster around Nottingham;
 - Food & drink manufacturing – for which a driver is access to motorway networks and markets;
 - Construction – recognising within this the relationship to public spending;
 - Visitor Economy – with opportunities for development in urban and rural areas;
 - Low Carbon Goods and Services – a wide sector with opportunities in a number of areas.

2008 Employment Land Review

- 2.15 The Derby Housing Market Area Employment Land Review (ELR) was prepared by BE Group. It was published in March 2008. The ELR provides an overview of economic dynamics and the business base.
- 2.16 The report includes forecasts for employment land based primarily on past trends in employment land take-up (in terms of gross hectares of land developed for employment) using monitoring data from Derbyshire County Council. Gross take-up between 1992 – 2006 was projected forward on a linear basis for the 2006-26 period, resulting in estimated demand for employment land of:

Figure 2.1: Reproduction of Gross Demand Forecasts from 2008 ELR

Ha Gross	Av. Annual Take-Up, 1992-2006	Forecast Take-Up, 2006-26	25% Buffer	Total Requirement
Amber Valley	3.38	67.6	16.9	84.5
Derby	5.78	115.6	28.9	144.5
South Derbyshire	5.48	109.6	27.4	137
Derby HMA	14.64	292.8	73.2	366

Source: GLH based on BE Group Study

- 2.17 As Figure 2.1 indicates, BE Group considered it appropriate to include a 25% buffer (i.e. 5 year supply) over and above assessed demand to offer a range and choice of sites. We consider this a reasonable assumption.
- 2.18 The ELR did also review econometric forecasts. BE Group reviewed forecasts in the *East Midlands Land Provision Study (2006)* prepared by Roger Tym and Partners for the East Midlands Regional Assembly. From what we can see these are based on Experian economic forecasts for full-time equivalent (FTE) jobs calibrated to align with the level of housing provision proposed in the emerging regional plan.
- 2.19 Forecasts for floorspace and land requirements were then derived from this, using the standard approach of relating employment by sector to use classes; applying standard employment densities to this to derive floorspace forecasts; and using a 40% plot ratio to convert this to *net* requirements for additional land. The employment densities used in this Study were 18 sq.m per FTE jobs for office-based employment, 31 sq.m for industrial and 88 sq.m for warehousing.
- 2.20 The Experian forecasts used covered the period from 2003-16. BE Group translated these to cover the 2006-26 period on a linear basis to provide estimates of employment land requirements over the plan period then being considered to 2026.

2.21 It should also be noted that the forecasts are for *net* requirements for employment floorspace and thus not directly comparable with the completions data which is based on *gross* completions. We have for comparative purposes calculated figures for a 20 year period from 2006-26 using the consistent linear approach to that adopted by BE Group. This allows comparison with the gross forecasts set out above (and the forecasts presented later in this report which again look at a 20 year plan period).

Figure 2.2: Reproduction of Net Floorspace Demand Forecasts from 2008 ELR

Sq.m GEA Net	2003-16	Per Annum	2006-26 Equivalent
Office	139852	10758	215160
Industrial	-243750	-18750	-375000
Warehouse	80354	6181	123620
Total B-Class	-23544	-1811	-36220

Source: GLH based on BE Group Study

2.22 BE Group used a standard plot ratio of 40%. The plot ratio describes the typical ratio of commercial floorspace to total site areas. If we apply this to the net floorspace demand forecasts, we can calculate the equivalent land requirement. On this basis there is a requirement for around 54 hectares of land for offices and 31 hectares for industrial, but this is offset against a declining requirement for land for industrial of 94 hectares resulting in a net reduction in the level of land needed by 9 hectares over the 20 year period.

Figure 2.3: Derivation of Net Land Forecasts from 2008 ELR for 2006-26 Period

	Net Floorspace Requirement, 2006-26	Plot Ratio	Net Land Requirement, 2006-26
Office	215160	0.4	53.8
Industrial	-375000	0.4	-93.8
Warehouse	123620	0.4	30.9
Total B-Class	-36220	0.4	-9.1

Source: GLH based on BE Group Study

2.23 The BE Group Study concluded that no additional allowance over and above the forecasts outlined should be included for growth of East Midlands Airport.

2.24 In regard to the supply-demand balance, the report concluded that Amber Valley suffered from a poor quality land resource; that Derby is somewhat oversupplied in quantitative terms but the land resource is good quality and fit for purpose and that there was no need to de-allocate any land as the City is the economic driver for the sub-region; and that there was a slight under-supply of employment land in South Derbyshire.

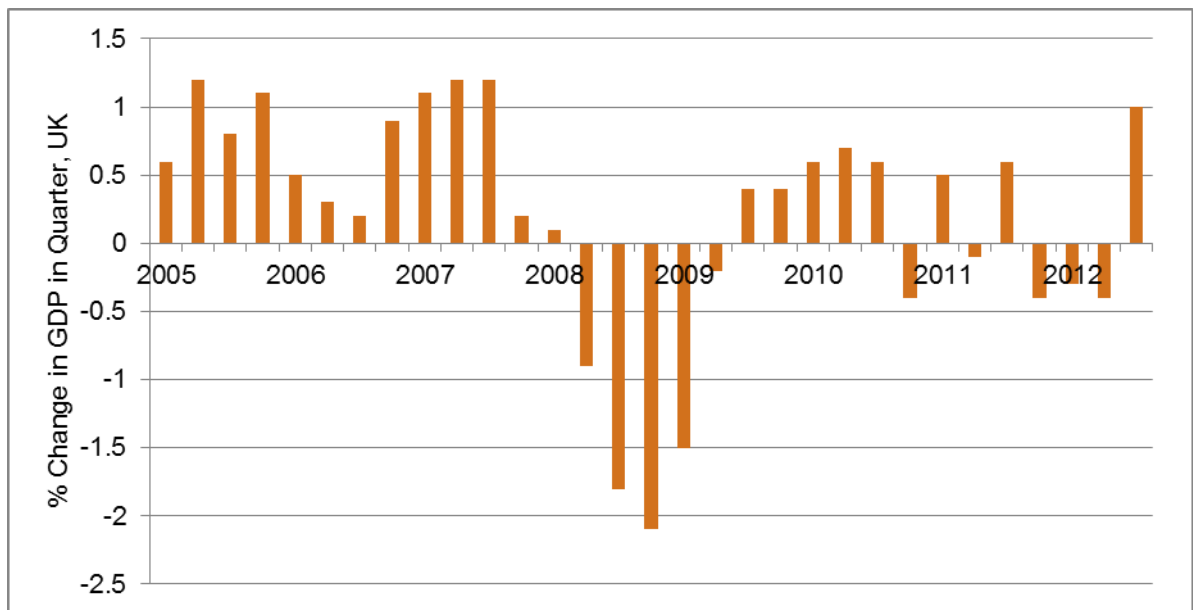
2.25 There are some important comments within the Study regarding the interaction of supply and demand which are relevant to this exercise:

- The Study suggests that historically low take-up in Amber Valley could be linked to the poor quality of the land supply and a somewhat insular market, and there could be latent demand suggesting that take-up could improve moving forward with the allocation of better sites. It also points to increasing demand for distribution floorspace spreading west from the M1, with much of this being focused on Alfreton because of its good accessibility to this key strategic route. It points to a shortage of developable land in attractive locations;
- In Derby the Study points to a need to stimulate the city centre office market, with delivery of office floorspace including both small suites of < 500 sq.m and larger units of over 2500 sq.m. It suggests indicatively limited choice of sites for industrial occupiers, but to limited demand for large scale distribution linked to higher land values and options elsewhere;
- In South Derbyshire the Study points to a local market but with potential to attract some footloose inward investment along the A50 and A38 Corridors; It identifies a small office market in Swadlincote but demand for industrial units of up to 1,000 sq.m;
- The profile of demand for different sizes of properties is skewed – like many areas – towards smaller businesses (office units to up to 185 sq.m and industrial to 465 sq.m) however there is also demand for larger distribution units of up to 5,000 sq.m and larger office units (particularly in Derby) of over 2,000 sq.m;
- Across the HMA the industrial market is notably stronger than that for office floorspace or development with the exception of in Derby City Centre. There is a continuing demand for industrial sites and premises, strongest outside Derby, although overall the manufacturing sector is expected to decline in size;
- It is suggested that the economic forecasts could underplay the strength of the engineering sector in Derby, which shows little sign of relocating to lower cost counties.

3 OVERVIEW OF PROPERTY MARKET DYNAMICS

- 3.1 The agreed project scope did not include a detailed review of property market conditions, however we have sought to summarise at a headline level in this section. This is based on a desk-based review of published market reports at a national and regional level, supplemented by input from local agents at the Stakeholder Event held on 23rd November 2012.
- 3.2 Overall performance of UK commercial property market continues to be affected by wider economic performance. The UK economy slipped back into recession in late 2011. This continued in the first half of 2012 with three quarters of declining output.
- 3.3 Figure 4 indicates long-term trends in GVA. Economic growth overall in 2011 was a very weak 0.9% compared to 2.1% in 2010. The recent economic recession has been deeper than the previous three UK recessions, and the recovery has been much more protracted: we have not seen a strong return to growth, with economic growth remaining muted.
- 3.4 At a national level, the economy continues to be affected by weak economic performance in Europe, the major export market for UK businesses, and concerns over the resolution of the Eurozone debt crisis, as well as cuts in public spending. These concerns have affected UK business confidence, and together with inflationary pressures have impacted on consumer spending and thus domestic demand, resulting in effectively a stagnant rather than growing economy.

Figure 3.1: UK Economic Growth Trend



Source: ONS

- 3.5 UK unemployment stood at 2.53 million in August 2012. This remains above levels in 2010 (and indeed is similar to those in 1994) however it is falling. Unemployment has fallen from the 2.67 million in December 2010. The unemployment rate is 7.9%, down from 8.1% at the end of 2011.
- 3.6 On the positive side, inflation has fallen notably over the last six months and stood at 2.2% (CPI) in September 2012. Inflationary pressures have receded so far this year and this will provide support to exports and consumer spending.
- 3.7 Looking forwards, the economic outlook in the short-term is relatively poor. We have reviewed a number of forecasts. The Office for Budget Responsibility's Economic and Fiscal Outlook (March 2012) indicated moderate growth of the UK economy by 0.8% in 2012, consistent with 2011, rising to 2.0% in 2013, 2.7% growth in 2014 and 3.0% in 2015 and 2016. This compares to the long-term average of 2.3% per year. It means that the UK economy will have gone through five to six years with little or no growth in the economy.
- 3.8 Unemployment nationally is forecast to rise from 8.4% to 8.7% over the coming year but is expected to fall over the medium-term to around 6.3% by 2016.
- 3.9 The forecasts assume that the Eurozone continues to struggle through its current difficulties, and that the current problems are resolved and a solution delivered which provides sovereign debt sustainability and supports the normal operation of financial markets in the medium-term. The Eurozone situation remains a major risk to the forecasts.
- 3.10 The forecasts also assume that the inflation continues to fall back, providing some support to a recovery in the second half of 2012 from growth in consumer spending albeit with the expectation that real household disposable income growth will be weak in both 2012 and 2013, and only begin to outstrip inflation by a significant margin from 2014 onwards. Again there is a downside risk associated with any further spike in energy or commodity prices.
- 3.11 The Treasury 'consensus forecasts' from April 2012 indicate that while inflation is expected to recede, overall more moderate growth is likely in the short-term with 0.6% growth forecast for 2012 (compared to 0.8% by the OBR) and 1.7% in 2013.
- 3.12 Overall we can expect occupier demand for commercial property to remain weak in 2013 and improve slowly thereafter. The economic outlook suggests that we should not expect a significant bounce-back in demand in the short-term.
- 3.13 The outlook for credit conditions for commercial property improved in mid 2011 however appears to have deteriorated since.

National & Regional Market Trends

- 3.14 The RICS UK Commercial Market Survey Q1 2012 indicates that both demand and the level of available space have stabilised but overall expectations for rental growth remain negative. Levels of new development continue to fall, although that the pace of reduction is falling. With a lack of new development the level of available supply (overall) has been falling resulting in slightly tighter market conditions overall albeit that demand remains subdued. Shortages of prime space are beginning to emerge in some markets, including Central London offices.
- 3.15 Demand has stabilised for offices but has increased for industrial space. On the supply-side, available office floorspace has continued to rise, whilst there has been a modest reduction in availability of industrial premises – the first since 2005. As a result industrial rents are expected to stabilise (having fallen) albeit that further reductions in rents for office space are likely as landlords seek to attract tenants.

Offices

- 3.16 Economic conditions and uncertainty coupled with the impact of austerity measures continue to hinder recovery of the office market. Following a strong bounce-back in take-up in 2010 (particularly in Central London), market performance in 2011 has been more subdued. With companies less likely to expand or upgrade their accommodation, deals are particularly associated with lease events.
- 3.17 Office take-up in 2011 outside of Central London, according to Lambert Smith Hampton, was similar to 2010 both at a national level and in the Midlands. The prime Midlands markets are Birmingham, Nottingham, Leicester and Northampton. Derby has a smaller-scale and more localised market.
- 3.18 Office availability levels remain high across nearly all UK office markets, albeit below their 2009 peak. With an excess of supply over demand, rents have fallen in many centres although there are some exceptions. In the Midlands, availability remains above average, with a vacancy rate for instance in Nottingham of just over 20% in Q3 2011.
- 3.19 In Derby, local agents have pointed to the success of Pride Park in attracting occupiers to invest in the City. This provided a varied offer with the potential to accommodate occupiers of varying sizes and those looking for both freehold and leasehold space. Over the next few years, agents expect to see demand for existing occupiers looking to expand in the City (a number of which require freehold space) and larger corporate occupiers seeking 5-10 year leases. Demand for freehold space is a notable element of the City's office market.

- 3.20 Looking forward, with little speculative development underway, the likelihood is that availability, particularly of Grade A space, should fall over time and drive a reduction in incentives to entice occupiers. However there are downside risks associated with economic performance.
- 3.21 Mute demand conditions, above average availability, business rate liability on empty premises and finance costs all contribute to low current levels of speculative development. There are however opportunities for 'build-to-suit' development, particularly from owner occupiers, in the short-term.
- 3.22 Local agents consulted at the workshop held on 23rd November 2012 identified a need for office development in Derby in the City Centre and for business park space, recognising that there is an element of market differentiation between these, but emphasised the need for a strong 'city centre first' policy. City Centre development will support regeneration and be attractive particularly to occupiers with a requirement for 'client-facing' space, however agents indicated that some business park development could be important in ensuring that the City captures some occupiers who are more cost-conscious or require locations with good road and motorway access and parking provision.

Industrial and Distribution

- 3.23 The industrial and distribution market remained relatively buoyant compared to other commercial centres in 2011, with 9.4 million sq.m (101 million sq.ft) of activity recorded nationally by Lambert Smith Hampton – a decline of just 0.8% on 2010. Indeed the distribution warehouse market saw a 15% increase in activity in the medium-sized sector 930 – 4,645 sq.m (10,000 – 50,000 sq.ft) and a notable decline in availability. Activity however declined in the second half of the year linked to the worsening Eurozone crisis, with recorded take-up 17% below that in the first half. Overall demand in 2012 is expected to remain similar to 2011 according to GVA.
- 3.24 Availability of industrial and distribution space has declined slightly to 10.2% whilst the supply of Grade A floorspace has fallen to less than 12 months supply in most size bands. It represented just 11% of available space at the end of 2011. This reflects limited speculative development activity in 2010/11.
- 3.25 Recent demand for warehouse floorspace has been driven by food and discount retailers and internet operations. There has been a strong level of activity for Grade A and pre-let/build to suit space according to Lambert Smith Hampton, with strong demand in particular for larger units of over 9,300 sq.m (>100,000 sq.ft).
- 3.26 At the other end of the size spectrum, take-up from SMEs has held-up well with occupiers taking advantage of favourable terms. Take-up of units of < 930 sq.m (< 10,000 sq.ft) in 2011 was 6% up

on the previous year, although this was driven by performance in the first half of the year. Despite reasonable demand, availability increased marginally to 7.9 million sq.m (85 million sq.ft) albeit that there remains an acute shortage of Grade A stock in certain regions with less than 10 months supply.

- 3.27 Take-up of industrial and distribution floorspace in the East Midlands has held up much better over the last few years than for office floorspace, with the region seeking take-up of over 0.9 million sq.m (10 million sq.ft) for the third year in succession with 1 million sq.m (10.8 million sq.ft) recorded in 2011. This is 23% ahead of the five year average with more than a third accounted for by Grade A space, according to Lambert Smith Hampton's *National Industrial and Distribution Market 2012* report.
- 3.28 Despite strong take-up, availability in the region has increased primarily as second hand space has come onto the market. Total availability across the region stood at 16.3% at the end of 2011. Derby performed better with a 10.0% vacancy rate.
- 3.29 Prime rents for industrial/distribution premises in Derby stood at £55 per sq.m (£5 per sq.ft) in 2011 which is consistent with other strong markets in the region. It is similar to Nottingham and marginally below Leicester. Prime rents have remained flat from 2010. Rents for secondary space have however fallen from £45 per sq.m (£4 per sq.ft) in 2010 to £30 per sq.m (£3 per sq.ft) in 2011 linked to the increase in secondary space on the market.
- 3.30 Total take-up in the Derby market in 2011 was 6,500 sq.m (700,000 sq.ft) Key deals were Crown Crest taking 18,600 sq.m (200,000 sq.ft) at Derby Distribution Centre, Derby's principal location for large warehousing. Gardner Aerospace took 11,150 sq.m (120,000 sq.ft) at Sifin.
- 3.31 Agents have indicated that in the pre-recession period there was an emerging shortage of small industrial sites of between 2 – 4 hectares (5-10 acres) in the City, however levels of availability have increased as a result of the recession. Over the longer-term there can be challenges in maintaining supply of this nature particularly in the face of pressures for residential redevelopment of industrial sites. The agents consulted identified a need to protect good quality employment sites which can cater for smaller industrial requirements from redevelopment for alternative uses. Agents identified an adequate supply of larger sites in Derby to meet demand.
- 3.32 In South Derbyshire agents identified good demand for B8 development, particularly along the A50 Corridor. A need for good quality, well located employment land provision in Amber Valley – particularly along the A38 corridor – was identified at the Stakeholder Workshop; together with policies to support small rural businesses.

- 3.33 Local agents suggested that for distribution occupiers, location remains very important. For companies with a significant workforce, a location with a strong employee catchment is important. Some occupiers seek rail access; whilst for others access to the strategic road network is important. Infrastructure is also a particular issue, including electricity supply and the quality of digital infrastructure. However Derby has performed less well in attracting major distribution requirements than a number of other locations further south on the M1.
- 3.34 Moving forward, infrastructure improvements including widening of the M1 and dualling of the A46 should support demand.
- 3.35 With bank finance remaining limited, design and build pre-lets and build-to-suit development are emerging as a key means of delivering new supply.

4 FUTURE DEMAND FOR EMPLOYMENT LAND

4.1 In this section we consider demand for employment land and floorspace over the plan period from 2008-28 in each of the three authorities in the Derby HMA: Amber Valley, Derby City and South Derbyshire.

Overview of Forecast Approaches

4.2 East Midlands Councils have prepared an Employment Land Study: Source Book to assist in updating Employment Land Reviews in a 'post RS' context. This emphasises that forecasts should be used to inform policy decisions (alongside local knowledge and policy aspirations) and encourages use of a scenarios-based approach.

4.3 There are broadly three main forecasting techniques which can be used to forecast employment land requirements. These are:

- Labour demand forecasts – often based on an economic model, these predict changes in employment by sector (and often other economic variables);
- Labour supply forecasts – these take demographic dynamics as the driver and forecast changes in employment associated with this;
- Projections of past take-up – these roll forward trends in past take-up of employment land and floorspace.

4.4 There are advantages and disadvantages associated with each. Projecting forward past take-up on a linear basis assumes that the property market and economy will continue to behave as it has in the past, and that demand is not constrained by other factors. This forecast is based on actual delivery of employment development, and thus takes account of commercial market conditions; but does not take account of the implications of growth in labour supply associated with housing growth nor any differences in economic performance relative to the past.

4.5 Economic models which forms the basis of labour demand forecasts can be influenced by the input assumptions on population growth and also assume that economic sectors locally perform similarly to how they have in the past. Whilst the model takes account of macro-economic dynamics, the structure of the local economy and the relative past performance of sectors, it is a mathematical model and cannot take account of local knowledge about economic prospects of key investment projects (in so far as these will result in a differential impact relative to past investments). A detailed model is required to relate net forecasts to use classes and to estimate gross floorspace and land requirements.

4.6 Labour supply forecasts are driven by growth in the population. Population growth can create employment in certain sectors (typically activities such as retail, leisure and public services) however these do not often take place on employment land. In B-class sectors, population growth

can support employment growth but it doesn't necessarily create additional jobs. The relationship between population and employment growth is complex and influenced by economic participation rates and commuting dynamics. Nonetheless this forecasting approach does allow consideration, in policy terms, of what level of employment land provision might be necessary to support homes-jobs balance. The potential risk is around the deliverability of this.

4.7 Thus the most appropriate approach, and that adopted herein, is to develop and bring together a variety of forecast approaches. For the purpose of this ELR Update, the following forecasts have been developed:

- Baseline Labour Demand Forecasts – based on Experian econometric forecasts for performance of the three authorities, dated Spring 2012;
- Labour Supply Policy-ON Forecasts – aligned to the demographic forecasts from the 2012 Derby HMA Housing Requirements Study and taking account of potential/ target growth sectors;
- Past Take-Up Forecasts – based on forecasting forward past completions of employment land in the Derby HMA over the past 10 and 20 years.

4.8 The 'Policy-ON' forecast is informed by analysis of potential opportunities for enhanced economic growth in the HMA taking account of the areas of economic focus identified by the D2N2 Local Enterprise Partnership's, understanding of the local economy and interrogation of the Experian baseline forecasts in this context. To provide a control on the scale of employment growth, the forecasts have been linked to the scale of growth in labour supply expected to arise from delivery of the Councils' Preferred Growth Strategy across the HMA.

Calculating Employment Land Requirements

4.9 The labour demand, supply and policy-on forecasts all rely on a number of assumptions to convert net forecasts of growth in jobs in different sectors to floorspace and land (in gross and net terms). In this section we summarise some of the key assumptions made.

Relating Employment in Different Sectors to B-Class Uses

4.10 The Experian econometric model provides forecasts for 37 sectors for each of the three authorities. GLH has considered the composition of employment in each of the authorities in these sectors to estimate the percentage of employment which can typically be expected to take place in B-class employment floorspace. The proportion of employment in different sectors which can be expected to take place in the following B-class sectors has been estimated:

- Office: Use Classes B1a (office) and B1b (research & development);
- Industrial: Use Classes B1c (light industrial) and B2 (industrial);
- Warehouse: Use Class B8 (warehouse and distribution).

Employment Densities

- 4.11 Standard employment densities have been applied to estimate the level of floorspace per worker.
- 4.12 The Employment Land Study: Source Book recommends the use of the HCA OffPAT Report prepared at a national level, *Employment Densities Guide: 2nd Edition* (2010). This provides guidance on employment densities for B-class uses as follows:
- Offices: employment densities can vary from between 8 sq.m NIA per Full-Time Equivalent (FTE) employee in call centres to 10 sq.m NIA per FTE worker in business park and serviced office environments to 12 sq.m NIA per FTE worker in general offices (such as HQ or client facing functions, partly as a result of space for meeting rooms);
 - Industrial: employment densities can vary from between 18 – 60 sq.m GIA per worker for industrial premises, with an average density of 36 sq.m GIA. For light industrial premises in a business park setting, densities can be lower at 47 sq.m NIA per worker;
 - Warehousing & Distribution: densities can vary substantially for warehouse floorspace from between 25 – 115 sq.m GEA per worker with higher capital intensity generally reducing the employment density. An average density of 70 sq.m GEA per FTE employee for general warehouse and distribution development and 80 sq.m GEA per FTE employee for large scale and high bay warehousing is recommended.
- 4.13 For office floorspace in the HMA, we consider that an average employment density of 12 sq.m NIA per employee is a reasonable assumption. Market values for office floorspace are moderate and we consider that this is likely to result in slightly lower values than in larger office centres in the region. We assume that the gross external floor area (GEA) is 20% higher than the net internal floor area (NIA). On this basis **we assume an average of 14.5 sq.m GEA per worker for floorspace in B1a and B1b uses.**
- 4.14 Employment densities for industrial floorspace can generally vary widely. For general industrial we have assumed that on average the gross external floor area is 2.5% higher than the net internal area, resulting in a density of 37 sq.m GEA per employee. For light industrial, the GEA could be between 2.5 – 5% higher than NIA resulting in a density of 48 – 49 sq.m per employee. For the purposes of estimating employment land requirements **we have assumed a blended density of 44 sq.m GEA per worker for industrial floorspace in B1c and B2 uses.**
- 4.15 For warehouse/ distribution space we consider that demand is likely to include a mix of general and large scale/ high bay warehousing and have thus **assumed an average of 75 sq.m GEA per worker for B8 uses.**

Plot Ratios

- 4.16 Plot ratios describe the difference between the level of employment floorspace on a site and the site area. So a plot ratio of 1 would mean development of 10,000 sq.m GEA of floorspace on a 1 hectare (10,000 sq.m) site. Plot ratios are influenced by the height of buildings, by parking standards and by circulation and other space on the site (including for instance green space and communal areas on business parks).
- 4.17 The ODPM Guidance on Employment Land Reviews indicates that plot ratios on business parks can vary between 0.25 – 0.4, for industrial premises from 0.35 to 0.45 and for warehouse development between 0.4 – 0.6. Plot ratios for town centre offices can be higher still, with densities up to and exceeding 2.0.
- 4.18 **We have assumed an average plot ratio of 0.3 for office floorspace in South Derbyshire and Amber Valley, taking account of higher parking requirements for office development relative to industrial. For office space in Derby we have assumed that 70% takes place in the City Centre, with an average plot ratio of 1.0, with 30% development of business park floorspace with an average plot ratio of 0.3. An average plot ratio of 0.45 has been used for both industrial and warehouse/ distribution space.** The previous BE Group Study assumed a 0.4 plot ratio across all B-class uses. The plot ratio assumptions have been agreed with the commissioning authorities.

Converting Net to Gross Employment Land Forecasts

- 4.19 Net forecasts for employment floorspace or land can be calculated using economic forecasts or data on changes over time in the overall stock of land and floorspace in an area. These provide an indication of how the overall resource of employment land in an area might be expected to change over a specified period.
- 4.20 For planning purposes it is however also useful to consider gross employment land requirements. These consider what level of land might be expected to be developed for employment use over a specified period. This can be used to consider what level of land might be needed to meet demand, taking account of replacement demand perhaps from existing local businesses looking to move as they grow or shrink or linked to a lease event; and accepting that some employment land may be redeveloped over a period of time (particularly in locations where employment development has taken place for historical reasons but which may be better suited to other uses).
- 4.21 We have calculated gross employment land requirements by estimating losses of employment land through redevelopment moving forwards. GLH has not undertaken an assessment of the

employment land supply within the HMA, and thus this has been estimated at a high level with regard to past losses of employment land over the 2007-12 period and an assessment of likely losses going forward based on the three Councils' respective understanding of land supply in their areas.

Labour Demand Scenario

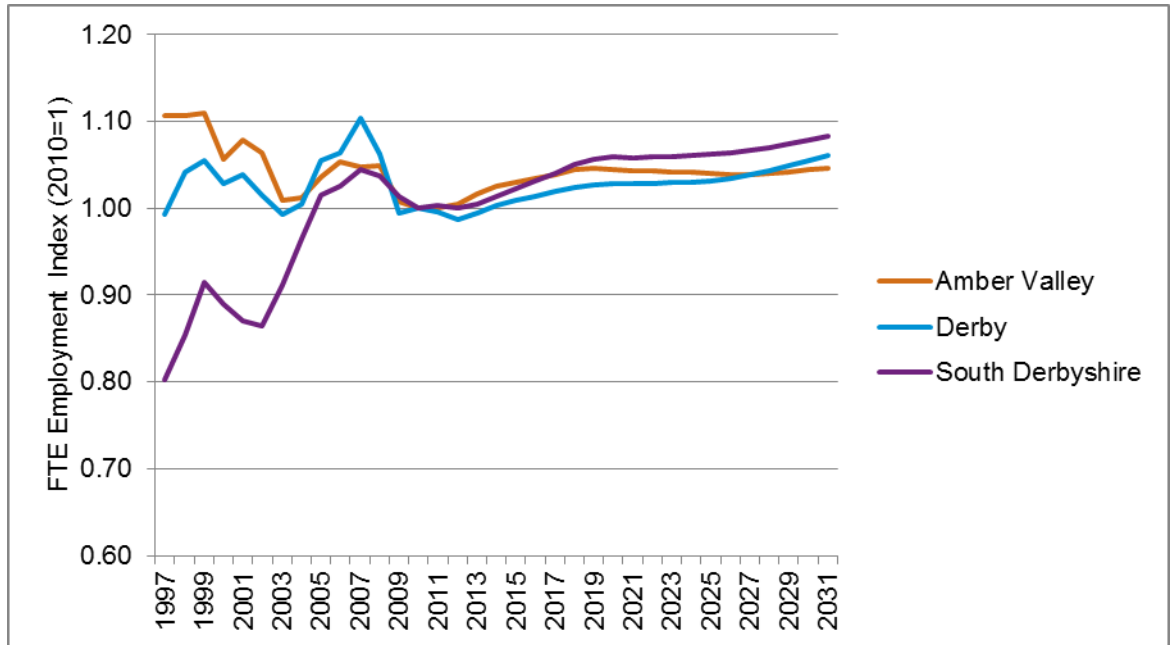
- 4.22 The first scenario is based on forecast labour demand. It is driven by the forecasts for net changes in full-time equivalent employment in each of the three Derby HMA authorities which was purchased from Experian in Spring 2012.
- 4.23 The Experian data indicates that full-time equivalent employment in each of the local authorities fell between 1998-2003. It indicates that FTE employment growth is expected to be negative in each of the three local authorities between 2008-13 (with the strongest reduction in Derby).
- 4.24 Over the longer-term, FTE employment is expected to grow, but with the weakest in Amber Valley. South Derbyshire is expected to perform more strongly in the medium term with longer-term performance similar to Derby.

Figure 4.1: FTE Employment Growth Rates

FTE Employment	1998-2003	2003-2008	2008-2013	2013-2018	2018-2023	2023-2028
	% pa	% pa	% pa	% pa	% pa	% pa
Amber Valley	-1.7%	0.8%	-0.6%	0.5%	0.0%	0.0%
Derby	-1.0%	1.4%	-1.3%	0.6%	0.1%	0.3%
South Derbyshire	1.3%	2.7%	-0.6%	0.9%	0.2%	0.2%

Source: Experian

Figure 4.2: FTE Employment Growth Trend



Source: Experian

- 4.25 In terms of total FTE employment over the 2008-28 plan period, in both Derby and Amber Valley employment growth from 2012 onwards is not expected to fully recoup losses through the recent economic recession. FTE Employment in 2028 is expected to be -1900 lower in Derby and -400 lower in Amber Valley than in 2008. In contrast in South Derbyshire FTE employment in 2028 is expected to be 900 higher than in 2008.
- 4.26 Figures 4.3 to 4.5 indicate employment growth forecasts across key (broad) sectors. As we have identified, key growth sectors are professional and other private services, tourism (accommodation, food etc) and construction. Manufacturing employment is forecast to decline slightly.

Figure 4.3: Forecast Employment Growth, 2008 -2028 – Amber Valley (Jobs)

	2008-13	2013-18	2018-23	2023-28	2008-28 Total
Agriculture, Forestry & Fishing	72	-11	19	-18	62
Accommodation, Food Services & Recreation	-185	122	195	140	271
Construction	-949	310	88	94	-457
Wholesale & Retail	-368	157	-5	31	-184
Mining and Quarrying	-31	-1	-1	-1	-34
Finance & Insurance	-92	20	69	54	51
Information & communication	-34	33	-4	3	-2
Manufacturing	739	-676	-1449	-1271	-2658
Professional & Other Private Services	-164	403	174	153	567
Public Services	-357	478	556	569	1246
Transport & storage	-212	262	198	142	390
Utilities	163	77	51	56	347
Total	-1419	1173	-108	-48	-402

Source: Experian 2012

Figure 4.4: Forecast Employment Growth, 2008 -2028 – Derby (Jobs)

	2008-13	2013-18	2018-23	2023-28	2008-28 Total
Agriculture, Forestry & Fishing	112	1	-18	-10	85
Accommodation, Food Services & Recreation	-898	248	-6	153	-503
Construction	-1543	160	-163	-22	-1567
Wholesale & Retail	-1117	141	-157	20	-1113
Mining and Quarrying	-78	-33	-24	-15	-150
Finance & Insurance	-546	261	18	21	-246
Information & communication	-28	118	29	49	168
Manufacturing	-1357	-1015	-1624	-1289	-5285
Professional & Other Private Services	-88	1353	841	816	2922
Public Services	-1162	1467	1545	1688	3538
Transport & storage	-474	290	120	96	31
Utilities	227	60	-40	-5	242
Total	-6952	3050	522	1502	-1879

Source: Experian 2012

Figure 4.5: Forecast Employment Growth, 2008 – 2028 – South Derbyshire (Jobs)

	2008-13	2013-18	2018-23	2023-28	2008-28 Total
Agriculture, Forestry & Fishing	89	-12	123	20	220
Accommodation, Food Services & Recreation	-65	107	31	32	105
Construction	-510	266	114	63	-67
Wholesale & Retail	-115	306	136	76	402
Mining and Quarrying	-3	2	1	0	0
Finance & Insurance	-102	1	0	3	-98
Information & communication	-2	28	3	4	33
Manufacturing	87	-225	-699	-528	-1364
Professional & Other Private Services	-151	122	-15	13	-31
Public Services	-55	437	464	445	1291
Transport & storage	-47	130	54	126	264
Utilities	38	28	21	22	110
Total	-836	1190	234	276	864

Source: Experian 2012

4.27 The Experian forecasts are for 38 sectors. GLH has considered the proportion of employment in each of these sectors which is likely to take place in office or R&D floorspace (Use Classes B1a and B1b), industrial floorspace (Use Classes B1c or B2) and warehouse/ distribution floorspace (Use Class B8).

4.28 We have calibrated our standard model which relates sectors and use classes for the economy of each of the three local authorities through interrogation of the composition of employment in key sectors at 4-digit SIC level. This is used to derive the following forecasts of net growth in employment by use class over the plan period. These are shown in Figures 4.6 to 4.8 below.

Figure 4.6: Forecast Net Employment Growth by Use Class, Amber Valley 2008-28 (Jobs)

	2008-13	2013-18	2018-23	2023-28	2008-28
B1a/b	-291	227	173	159	268
B1c/B2	348	-561	-1243	-1068	-2524
B8	-485	240	148	127	31
Sui	153	55	32	35	276
Total	-275	-39	-889	-747	-1949

Source: GLH

Figure 4.7: Forecast Net Employment Growth by Use Class, Derby 2008-28 (Jobs)

	2008-13	2013-18	2018-23	2023-28	2008-28
B1a/b	-518	1058	625	650	1815
B1c/B2	-2318	-763	-1635	-1229	-5946
B8	-961	424	98	122	-316
Sui	102	27	-18	-2	109
Total	-3696	746	-930	-459	-4339

Source: GLH

Figure 4.8: Forecast Net Employment Growth by Use Class, South Derbyshire 2008-28 (Jobs)

	2008-13	2013-18	2018-23	2023-28	2008-28
B1a/b	-81	129	30	42	120
B1c/B2	-156	-53	-625	-488	-1322
B8	-173	279	125	136	367
Sui	25	18	14	14	71
Total	-385	373	-457	-296	-764

Source: GLH

- 4.29 To these figures we have applied standard employment densities as outlined above. Applying these employment densities to the forecasts of net growth in jobs in B-class activities, we can derive forecasts for net changes in employment floorspace.

Net Floorspace Forecasts

- 4.30 The Labour Demand Forecasts suggest moderate net growth in the office floorspace stock in Amber Valley Borough over the 2008-28 plan period can be expected. However, a decline in demand for industrial floorspace will only be partially offset by an expected net growth in warehousing floorspace.

Figure 4.9: Forecasts of Net Changes in Floorspace, Amber Valley (sqm)

	2008-13	2013-18	2018-23	2023-28	2008-28
B1a/b	-4217	3287	2510	2308	3888
B1c/B2	15308	-24687	-54686	-46977	-111043
B8	-36340	17996	11130	9522	2308
Sui	7639	2774	1623	1749	13786
Total	-17611	-629	-39424	-33398	-91062

Source: GLH

- 4.31 In Derby City, stronger net growth in the office floorspace stock is forecast in this scenario than in either Amber Valley or South Derbyshire. However over the plan period as a whole, Experian's

forecasts of declining manufacturing employment in this scenario are expected to lead to some reduction in the overall demand for industrial floorspace. For warehousing activities, the Experian figures would suggest increasing demand of warehousing floorspace over the 2008-13 with relatively modest forecast net growth in floorspace requirements thereafter.

Figure 4.10: Forecasts of Net Changes in Floorspace, Derby City (sqm)

	2008-13	2013-18	2018-23	2023-28	2008-28
B1a/b	-7517	15343	9057	9428	26312
B1c/B2	-102008	-33589	-71922	-54088	-261606
B8	-72080	31837	7344	9162	-23736
Sui	5103	1344	-889	-119	5438
Total	-176501	14936	-56410	-35618	-253592

Source: GLH

- 4.32 The Labour Demand Forecasts suggest notably stronger net growth in B8 warehouse/ distribution floorspace in South Derbyshire relative to the other two authorities, although this only partially offsets expected declining demand for industrial floorspace in net terms. A modest net requirement for additional office floorspace is forecast.

Figure 4.11: Forecasts of Net Changes in Floorspace, South Derbyshire (sqm)

	2008-13	2013-18	2018-23	2023-28	2008-28
B1a/b	-1171	1870	431	614	1744
B1c/B2	-6875	-2313	-27518	-21477	-58183
B8	-12945	20893	9374	10197	27519
Sui	1241	921	699	699	3560
Total	-19750	21373	-17015	-9968	-25360

Source: GLH

Gross Forecasts (Labour Demand)

- 4.33 The above forecasts are for net changes in floorspace. Net changes in land and floorspace should be monitored against this.
- 4.34 As a basis for considering what level of land should be allocated for B class uses, it is more useful to consider what level of land might be required in gross terms. Our gross land forecasts are based on:
- Converting net floorspace forecasts to land based on standard plot ratios;
 - Plus allowance for replacement of expected losses of employment floorspace;
 - Plus a margin to allow for forecasting error and any delays in sites coming forward.

4.35 The plot ratio assumptions used are set out in the methodology section above.

4.36 We have sought to consider the trends in losses of employment land based on analysis of losses of employment land over the 2007-12 period in each of the three authorities and an assessment of likely losses going forward based on the three Councils' respective understanding of land supply in their areas. Estimates of future losses have been agreed by the three authorities and GL Hearn.

Figure 4.12: Trends in Losses of Employment Land (Hectares)

	Amber Valley	Derby City	South Derbyshire	HMA Total
Estimated Losses per Annum	1.50	3.00	1.0	5.5
Losses 2008-12	3.8	0.8	5.49	10.09
16 Year Replacement of Losses	24.0	48.0	16.0	88.0
20 Year Total	27.8	48.8	21.49	98.09

Source: GLH, AVBC, DDC, SDDC

4.37 We have allocated this by five year time period as follows:

Figure 4.13: Forecast Losses of Employment Land by Five Year Period

Land (Hectares)	2008-13	2013-18	2018-23	2023-28	2008-28
Amber Valley	5.27	7.50	7.50	7.50	27.77
Derby	3.76	15.00	15.00	15.00	48.76
South Derbyshire	6.49	5.00	5.00	5.00	21.49
HMA Total	15.52	27.5	27.5	27.5	98.02

Source: GLH Analysis

4.38 Many employment land assessments additionally include a 'frictional margin' to support choice and competition between sites for investment, to take account of potential delays in sites coming forward and to allow for a degree of variance from the forecasts over a 20 year timeframe. This is a sensible approach. We have assumed a frictional margin equivalent to five years of gross take-up based on average gross completions over the last 20 years (1992 – 2012). This is consistent with the previous (2008) Employment Land Review.

Figure 4.14: Frictional Margin

	Amber Valley	Derby	South Derbyshire	HMA Total
Completions 1992-2012	54.9	142.3	121.9	319.1
Average Annual Completions 1992-2012	2.7	7.1	6.1	16.0
5 Year Margin	13.7	35.6	30.6	79.9

Source: GLH Analysis

4.39 Gross requirements for employment land are forecast by adding together:

- Net land requirements based on standard plot ratios;
- An allowance for replacement of expected losses of employment floorspace based on employment land losses over the 2007-12 period;
- The margin providing a 5 year supply based on past gross completions.

Figure 4.15: Forecast Gross Employment Land Requirements, 2008-28 Labour Demand Scenario

	Net Land Requirement	Replacement of Losses	Margin for Flexibility	Total Provision
Amber Valley	-19.8	27.8	13.7	21.7
Derby	-57.7	48.8	35.6	26.6
South Derbyshire	-5.4	21.49	30.6	46.69
HMA Total	-83.0	98.09	79.9	94.99

4.40 This scenario thus results in a requirement for provision of 95 hectares of land across the HMA over the 2008-28 plan period. There is a requirement for around 22 hectares in Amber Valley, 37 hectares in Derby and 47 hectares in South Derbyshire.

'Policy-ON' Labour Supply-based Forecasts

4.41 As the Housing Requirements Study explored, the Experian forecasts indicate moderate employment growth particularly compared against expected growth in the population based on planned housing provision.

4.42 The Labour Supply Scenario takes the level of planned housing provision in the HMA as its lead. The aligned Core Strategies Preferred Growth Strategy proposes delivery of 33,700 homes across the HMA over the 2008-28 plan period. This is distributed as set out below:

Figure 4.16: Preferred Growth Strategy – Housing Provision & Distribution

	Dwelling Growth, 2008-28 by Local Authority	Of which Extensions to Derby Urban Area
Amber Valley	9000	530
Derby City	12000	0
South Derbyshire	12700	6700
HMA Total	33700	7230

4.43 The Housing Requirements Study modelled the expected growth in residents in employment as part of the demographic modelling which now underpins the preferred growth strategy. Based on changes to the population structure, economic participation and pensionable ages it estimated growth in the number of residents in work of 21,300 over the 2008-28 period.

4.44 This scenario is based on achieving growth in employment across the HMA of 21,300 FTE jobs over the plan period. Whilst arguable because of part-time working it might not be necessary to support this level of FTE jobs, this level of employment growth could be supported by improvements in the jobs density across the HMA – including through improvements in economic participation (particularly in Derby and to a lesser extent Amber Valley) and/or reductions in commuting out of the HMA.

4.45 This forecast has been developed for the Derby HMA as a whole.

Process of Developing the Policy-ON Forecasts

4.46 This scenarios supports a significantly higher level of employment growth than in the baseline employment forecasts used in the Labour Demand Scenarios.

4.47 The sectoral composition of employment in this scenario has been derived based on:

- Analysis of growth rates at a 38-sector level in each five year time period (2008-13 etc.);
- Comparison of growth rates with indicative regional sectoral performance;
- Adjustment to sector growth rates based on analysis of potential sector growth opportunities taking account of:
 - Target sectors identified in the UK Government’s Plan for Growth;
 - The D2N2 LEP Economic Strategy and Target Sectors;
 - Local economic strategies; and
 - Known potential interventions which may support enhanced sector performance.

Figure 4.17: Comparison of Forecast Employment Growth (2008-28) in Labour Demand and Policy-ON Scenarios, Sectors with Over 2000 Jobs

	FTE Jobs 2008	Employment Growth: Labour Demand Scenario		Employment Growth: Policy-ON Scenario	
Transport Equipment	15673	-1103	-7%	1685	11%
Retail	15374	-681	-4%	904	6%
Administrative & Supportive Services	14606	-666	-5%	973	7%
Health	13560	3444	25%	3160	23%
Education	12528	1877	15%	1817	15%
Wholesale	11270	-309	-3%	2245	20%
Residential Care & Social Work	11045	1129	10%	1208	11%
Professional Services	8833	3701	42%	5308	60%
Accommodation & Food Services	8665	80	1%	106	1%
Land Transport, Storage & Post	8568	594	7%	2264	26%
Public Administration & Defence	8169	-996	-12%	-974	-12%
Specialised Construction Activities	6021	-356	-6%	728	12%
Non-Metallic Products	5250	-15	0%	236	4%
Food, Drink & Tobacco	4330	359	8%	1111	26%
Metal Products	4031	-1818	-45%	-1331	-33%
Finance	3809	-303	-8%	3	0%
Recreation	3724	-265	-7%	-200	-5%
Other Manufacturing	3216	-905	-28%	675	21%
Construction of Buildings	2681	-1070	-40%	72	3%
Civil Engineering	2478	-739	-30%	1338	54%
Computing & Information Services	2371	595	25%	940	40%
Other Private Services	2274	1204	53%	1133	50%
Real Estate	2172	-536	-25%	-500	-23%
Machinery & Equipment	2162	-793	-37%	248	11%
Textiles & Clothing	2010	-1412	-70%	-585	-29%

Source: Experian/ GLH

- 4.48 The scenario assumes a much more positive outlook for the manufacturing sector. This is supported by wider research, including analysis by Experian which has indicated that Derby is the local authority in the UK with the strongest potential for industrial property growth between 2013-17².
- 4.49 To some degree the sector specifics are irrelevant, as the modelling takes account of aggregate jobs in broad sectors. This is shown in Figure 4.18.

² Source: EGI, 29th November 2012

Figure 4.18: FTE Employment Change across Broad Sectors, Policy-ON Scenario

FTE Employment	2008-13	2013-18	2018-23	2023-28	2008-28
B1a/b	-387	2088	1858	1861	5420
B1c/B2	-716	998	1129	668	2079
B8	-1563	1947	1579	1410	3373
Sui Generis	274	73	10	25	381
Other Sectors	-4018	4593	4771	4669	10015
Total	-6410	9698	9347	8633	21268

Source: Experian/ GLH

4.50 Figure 4.19 compares the aggregate difference in levels of expected employment growth by 5-year period across the Derby HMA, whilst Figure 4.20 indicates the expected changes in employment across B-Class Uses.

Figure 4.19: Comparison of Expected Employment Growth in Derby HMA 2008-28, Labour Demand and Policy-ON Labour Supply Scenarios

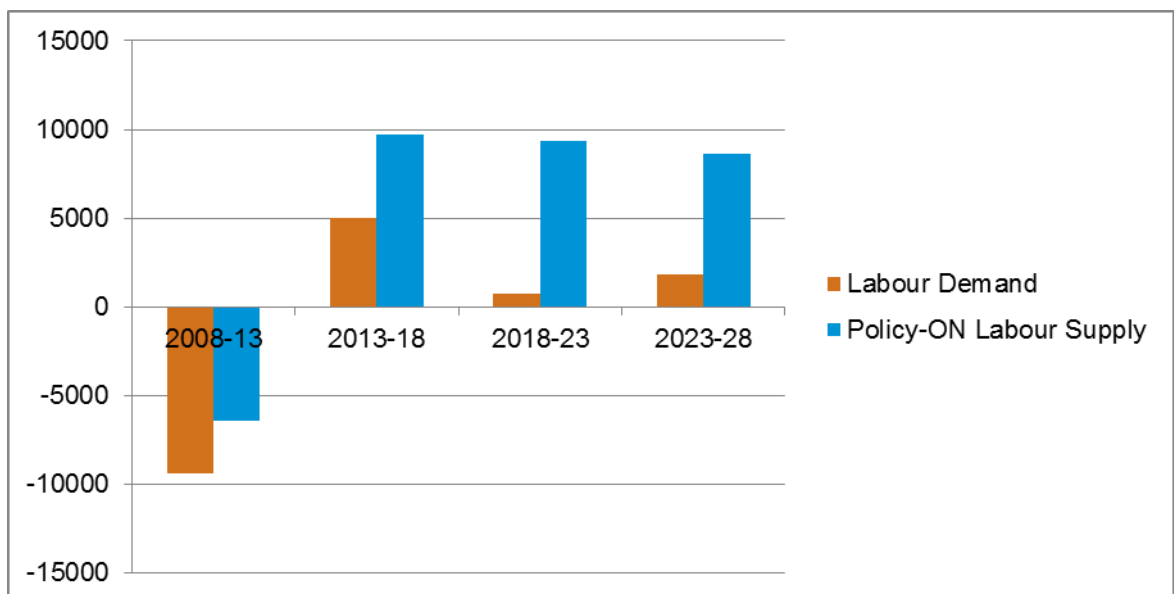


Figure 4.20: Comparison of Expected Employment Growth in Derby HMA by B-Class Use, Labour Demand and Policy-ON Labour Supply Scenarios

2008-28	Labour Demand	Policy-ON
B1a/b	2203	5420
B1c/B2	-9792	2079
B8	81	3373
Sui Generis	456	381
Other Sectors	5139	10015
Total	-1912	21268

Source: GLH

Calculating Employment Land Requirements

- 4.51 Applying consistent employment density assumptions to those in the Labour Demand Scenario (described above), the following forecasts of net changes in floorspace are derived:

Figure 4.21: Forecasts of Net Changes in Floorspace, Derby HMA – Policy-ON Labour Supply Scenario

	2008-13	2013-18	2018-23	2023-28	2008-28
B1a/b	-5619	30280	26947	26984	78593
B1c/B2	-31483	43904	49659	29381	91460
B8	-117203	146021	118419	105739	252975
Sui	13679	3638	482	1270	19069
Total	-140626	223842	195507	163374	442097

Source: GLH

- 4.52 Using standard plot ratios (as described above) this results in a significant requirement for additional land in net terms, as Figure 4.22 indicates. Across the HMA a total of 95 hectares of land would be required in net terms: 15 hectares of land would be required for office uses, 20 hectares for industrial and 56 hectares for warehouse/ distribution.

Figure 4.22: Forecast Net Land Requirements, Derby HMA – Policy-ON Labour Supply Scenario

	2008-13	2013-18	2018-23	2023-28	2008-28
B1a/b	-1.0	5.6	5.0	5.0	14.6
B1c/B2	-7.0	9.8	11.0	6.5	20.3
B8	-26.0	32.4	26.3	23.5	56.2
Sui	3.0	0.8	0.1	0.3	4.2
Total	-31.0	48.6	42.4	35.3	95.3

Source: GLH

4.53 Gross forecasts can be derived on the same basis as the labour demand scenario, taking into account expected losses of employment floorspace. To this we can add the frictional margin of 79.9 hectares, equivalent to five years supply, based on past gross take-up trends.

Figure 4.23: Gross Land Requirement, Derby HMA – Policy-ON Labour Supply Scenario

Land Requirement (Hectares)	Net Land Required	Replacement of Losses	Margin for Flexibility	Total Provision
HMA Total	95.3	98.09	79.9	273.29

4.54 We have considered two alternative approaches to how this requirement might be distributed between the three authorities within the HMA. These are:

- Distribution proportionally based on employment land take-up over the past twenty years; and
- Distribution proportionally based on the stock of employment premises in each authority (2008).

4.55 We therefore present two scenarios for how the net land requirement is distributed between the three authorities. These should be treated as alternative parameters for employment land provision by authority in this scenario. They should be treated as indicative.

Figure 4.24: Policy ON Labour Supply – Gross Land Requirement Distribution based on Past Take-Up

Land Requirement (Hectares)	Net Land Required	Replacement of Losses	Margin for Flexibility	Total Provision
HMA Total	95.3	98.09	79.9	273.29
Amber Valley	10.5	27.8	13.7	52.0
Derby	45.8	48.8	35.6	130.1
South Derbyshire	39.1	21.49	30.6	91.19

Figure 4.25: Policy ON Labour Supply – Gross Land Requirement Distribution based on Employment Stock

Land Requirement (Hectares)	Net Land Required	Replacement of Losses	Margin for Flexibility	Total Provision
HMA Total	95.3	98.09	79.9	273.29
Amber Valley	30.5	27.8	13.7	72.0
Derby	47.7	48.8	35.6	132.0
South Derbyshire	17.2	21.49	30.6	69.29

- 4.56 Drawing the results together, in this scenario there is a total forecast requirement for 273 hectares across the HMA in the Policy-ON Labour Demand Scenario. The indicative distribution of this between the three authorities shows a requirement for:
- Between 52 - 72 hectares in Amber Valley;
 - Between 130 - 132 hectares in Derby; and
 - Between 69 - 91 hectares in South Derbyshire.
- 4.57 The precise distribution across the HMA should take account of other factors not considered in this report, including the distribution of housing provision and demographic dynamics across the three authorities; employment land supply (including the quality of employment sites); and policy ambitions (such as to influence future commuting dynamics).

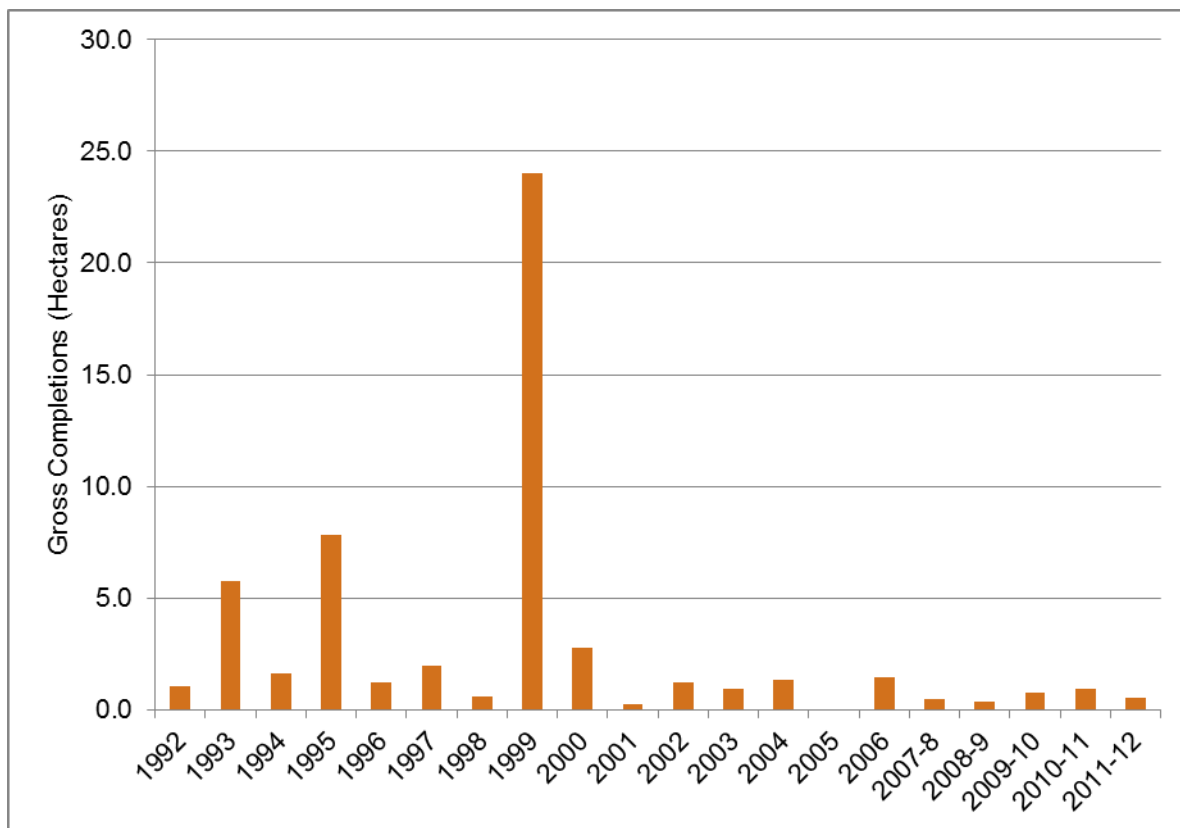
Past Take-Up of Employment Land

- 4.58 The third approach to demand forecasting is based on a linear projection forward of past trends in gross employment completions. It is based on monitoring data recorded by the three authorities.
- 4.59 Each of the three authorities has supplied monitoring data to GLH. The monitoring data includes details of gross development of employment land dating back to the early 1990s.
- 4.60 Gross completions include development on vacant brownfield sites, greenfield sites and redevelopment and intensification on existing employment land. They are thus highly likely to over-estimate the level of additional employment land required. It is thus not necessary to include provision for a margin for flexibility; and as the figures are already gross, it is not appropriate to include provision for replacement of losses.
- 4.61 Details of gross floorspace completions are only available over the past five years. **We do not regard it as robust to project forward short-term (five year) trends given that the past five years (2007-12) have been characterised by economic recession and low growth** in a historical context, and subdued property market conditions. On this basis, we do not consider that the floorspace data provides a robust basis for long-term forecasting.
- 4.62 **The projections in this section are thus based on projecting forward long-term trends (over the past 10 and 20 years) in gross employment land completions.** It should be noted that these completions figures include development on new employment land as well as redevelopment on existing employment sites. These forecasts can thus be expected to be higher than those arising from the Labour Demand and Policy-ON Labour Supply proposals and are likely to over-estimate the level of land supply which is necessary to meet demand identified in this scenario.
- 4.63 We first review employment completions trends in each of the authorities.

Employment Completions in Amber Valley

4.64 Over the last 10 years employment land completions in Amber Valley have averaged 0.8 hectares per annum. Completions were however stronger in the 1990s (with a particular peak in 1999), and thus over the last 20 years completions have averaged 2.7 hectares per annum.

Figure 4.26: Gross Employment Land Completions Trends, Amber Valley



Source: AVBC Monitoring Data

4.65 If we project these trends forward on a linear basis, demand for employment land in Amber Valley over the 2008-28 plan period would fall between 16 – 55 hectares. The high completions in 1999 have a particular impact on the figures.

Figure 4.27: Projection of Gross Completions, Amber Valley 2008-2028

Hectares	Total Completions	Per Annum	20 Year Projections
2002-12	7.9	0.8	15.8
1992-12	54.9	2.7	54.9
1992-12 exc. 1999	30.9	1.6	32.5

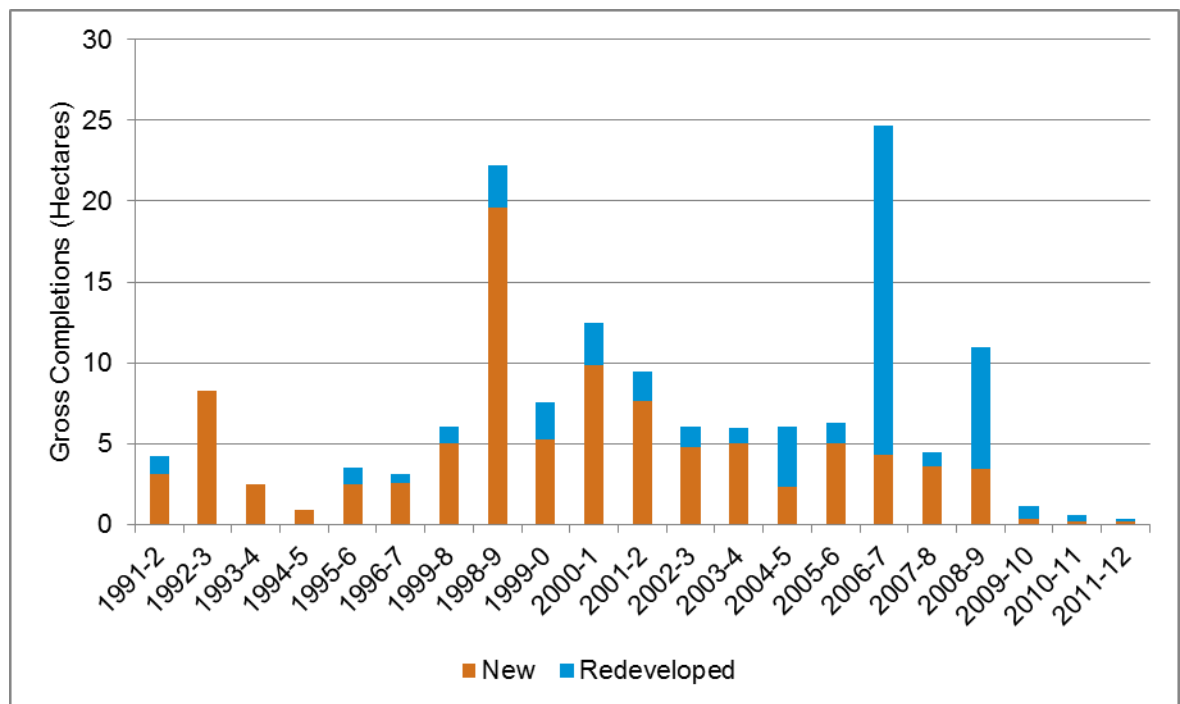
4.66 In interpreting the projection, it should be borne in mind that the 2008 ELR identified that Amber Valley had a poor quality land resource and that historically low take-up could well be linked to this,

suggesting that there could be latent demand which could support stronger take-up than has historically been the case. Against this context the projection based on 10 year trends could potentially be regarded as conservative.

Employment Completions in Derby City

- 4.67 In Derby, employment land completions have averaged 6.6 hectares per year over the last 10 years, and a higher 7.1 hectares looking back over the past 20 years. The lower 10-year figures particularly reflect very limited levels of development in a historical context over the past three years.
- 4.68 Strong employment development in 1998-9 reflected completions of employment development at Pride Park. The high levels of completions in 2006-7 were influenced by significant redevelopment by Rolls Royce.

Figure 4.28: Gross Employment Land Completions Trend, Derby City



Source: DCC Monitoring Data

- 4.69 If we project these trends forward on a linear basis, demand for employment land in Derby City over the 2008-28 plan period would fall between 133 - 142 hectares.

Figure 4.29: Projection of Gross Completions, Derby City 2008-2028

Hectares	Total Completions	Per Annum	20 Year Projections
2002-12	66.3	6.6	132.7
1992-12	142.3	7.1	142.3

4.70 The Derby City data includes details of the level of development which took place on new employment sites, as against development (i.e. redevelopment) on existing employment sites. This is shown in Figure 4.30. The analysis indicates that it might be reasonable to assume on this basis that between 45-65% of completions occur through redevelopment of existing employment land.

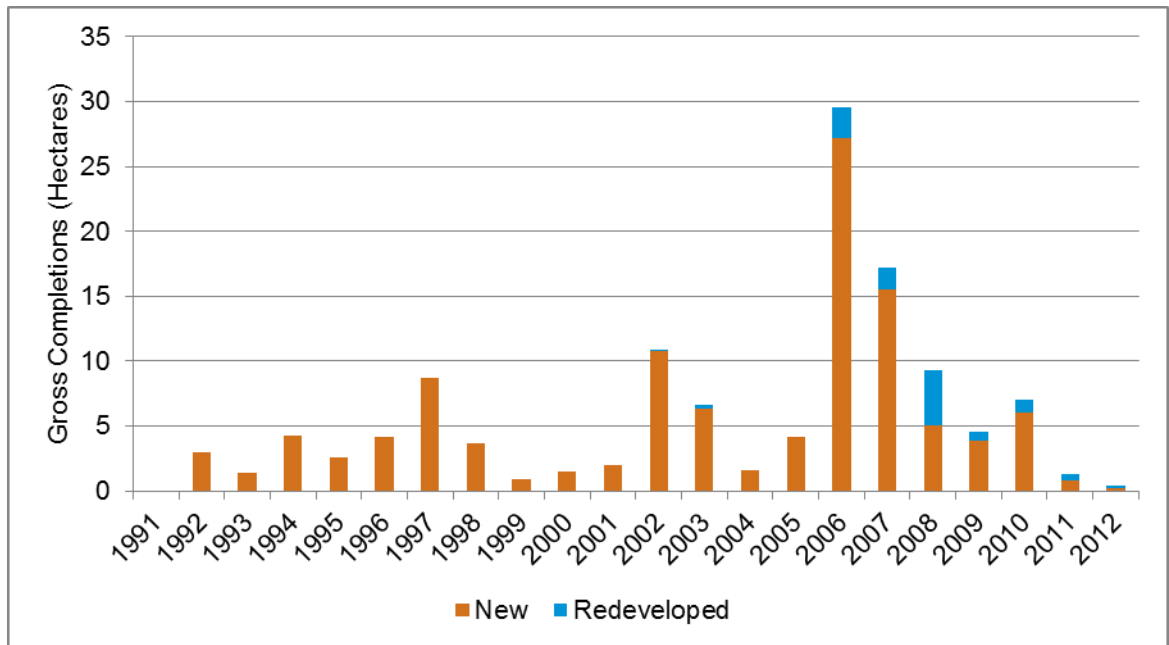
Figure 4.30: Projection of Gross Completions, Derby City 1998-2008 (New Land & Redevelopment)

Hectares	20 Year Projection			
	Forecast based on	New Land	Redevelopment of Existing Land	Total Gross Completions Projection
2002-12 Average Completions		58.1	74.6	132.7
1992-2012 Average Completions		93.0	49.3	142.3

Employment Completions in South Derbyshire

4.71 In South Derbyshire, gross employment land completions have averaged 8.2 hectares per year over the last 10 years, which is slightly above the 20 year average of 6.1 hectares per year.

Figure 4.31: Gross Employment Land Completions Trend, South Derbyshire



Source: SDDC Monitoring Data

4.72 If we forecast these trends forward on a linear basis, demand for employment land in South Derbyshire over the 2008-28 plan period would fall between 122 - 164 hectares.

Figure 4.32: Forecast of Gross Completions, South Derbyshire 2008-2028

Hectares	Total Completions	Per Annum	20 Year Forecast
2002-12	81.77	8.2	163.5
1992-12	121.9	6.1	121.9

4.73 Of the average completions over the past 10 years of 8.2 hectares per annum, an average of 1.1 hectares has been developed on existing sites (redevelopment) with 7.1 hectares developed on new employment land.

Completions Forecasts for Derby HMA

4.74 **Drawing the forecasts for the three Districts together we find that there is relatively limited difference between the 10-year and 20-year trends.** Projecting these forward over the 20 year plan period from 2008-28, the requirement across the HMA varies from 297 – 312 hectares.

Figure 4.33: Gross Completions Forecasts, 2008-28

Combined Forecast (Hectares)	10 Year Average	20 Year Average
Amber Valley	15.8	32.5
Derby	132.7	142.3
South Derbyshire	164	122
HMA Total	312.0	297.3

Drawing the Different Forecasts Together

4.75 In this final section we draw together the preceding analysis to consider what the scenarios together tell us about potential future demand for employment land in the Derby HMA.

4.76 Figure 4.34 below draws together the forecasts. It indicates that:

- The Labour Demand Scenario, based on the Experian forecasts, indicates a very limited requirement for additional employment land. Additional employment land is required in this scenario primarily to provide a choice of sites.
- This scenario (labour demand) however supports very moderate levels of employment growth and is perhaps not the most appropriate basis to plan for, given expected growth in the population and associated growth in labour supply. It could arguably constrain the potential of the economy to perform better than indicated in the forecast and/or result in growth in out-commuting or continued subdued levels of economic participation;
- The Labour Supply Policy-ON Scenario models a requirement for employment land of 193 hectares, to which the 80 ha margin is added. This scenario would support employment growth in line with growth in labour supply. However arguably it is based on an optimistic set of assumptions about employment growth within the HMA, based on the current evidence, and particularly strong performance of the manufacturing sector relative to past trends.
- Looking at the forecasts based on past completions, both the 10 and 20 year completions trends show much stronger completions than have occurred over the last 4 years. Over the first four years of the plan period, gross completions have averaged 7.2 hectares per annum. If this is projected forward it would support demand for 144 hectares over the 20 year plan period.
- Projecting past completions forward would result in a requirement for 297 – 312 ha of land, however this is likely to over-estimate land requirements as the trend data includes completions, redevelopment and intensification on existing employment sites.

Figure 4.34: Summary of Forecasts, Derby HMA 2008-28

	Forecast Demand, 2008-28	Margin	Total Requirement
Labour Demand Scenario	15.09	79.9	94.99
Labour Supply Policy-ON Scenario	193.39	79.9	273.29
20 Year Gross Completions	297.2		297.2
10 Year Gross Completions	312.0		312.0

Figure 4.35: Summary of Forecasts, Local Authorities 2008-28

Land Requirement (Ha)	Amber Valley	Derby	South Derbyshire	HMA Total
Labour Demand	21.7	26.6	46.69	94.99
Policy-ON Labour Supply	52.0 – 72.0	130.1 – 129.7	69.29 – 91.19	273.29
20 Year Completions	32.5	142.3	122.0	196.8
10 Year Completions	15.8	132.7	164.0	312.5

- 4.77 The forecasts highlight that the level of land which is developed for employment across the HMA over the next 20 years is difficult to accurately predict, and could vary widely influenced by economic circumstances and performance as well as investment decisions by individual businesses.
- 4.78 Looking at the scenarios developed, we would consider that the labour demand scenario is overly pessimistic as a basis for long-term strategic planning. It does not fully recognise some of the growth opportunities in the sub-region and planning on this basis could constrain the ability of the economy to perform better than this.
- 4.79 The Policy-ON Labour Scenario on the other hand represents a more positive scenario for the HMA's economy, which would align more strongly with the emphasis in national planning policy on supporting sustainable economic growth. It would align with the level of housing provision proposed in the Preferred Growth Strategy. On the other hand it is based on an ambitious set of assumptions regarding economic growth which may be difficult to achieve, and national planning policy warns against rolling forward land allocations where there is no realistic prospect of development taking place.
- 4.80 We would consider that the completions-led forecasts are likely to over-estimate the level of development of new employment sites, as the data from which they are drawn includes all employment development including redevelopment and intensification on existing employment land. Planning on the basis of meeting these forecasts comes with a risk that it could inhibit investment in the regeneration and upgrading of existing employment sites in the HMA.

- 4.81 This level of provision is however based on meeting general employment needs. There may be specific instances where additional employment land provision would be appropriate to meet the needs of specific 'catalyst' businesses or sectors; or to support major inward investment.
- 4.82 The forecasts do not however provide a specific allowance to support major inward investments, although they do take a relatively optimistic view of economic performance relative to past trends and baseline forecasts.
- 4.83 The quantitative analysis undertaken indicates that there is a potential wide variation between potential land requirements depending on the methodology and assumptions used. This makes it extremely difficult to make a definitive recommendation about an exact requirement or target for the authorities' respective Core Strategies to identify.
- 4.84 The information does, however, provide a robust basis from which a policy approach can be derived, taking into account issues relating to the existing portfolio of employment sites in the different parts of the HMA and quality of this, an local evidence regarding business dynamics and qualitative gaps in land supply.
- 4.85 In considering the distribution of employment land provision within the HMA, there are a range of wider issues which need to be considered including the supply of land on existing sites or within the development pipeline; the strategy for distribution of housing provision across the HMA and associated growth in labour supply in different areas; market dynamics in different areas; and policy aspirations, including to change commuting dynamics.
- 4.86 In devising a strategy for employment land provision across the HMA, the quantitative analysis in this reports needs to be brought together with assessment of the current, pipeline and future supply of employment land. This includes the quality of the current portfolio of employment sites and premises in different parts of the HMA.
- 4.87 It will be important that local market dynamics, including potential local shortfalls of different types or sizes of employment space, are considered in informing future employment land allocations. The 2008 BE Group Study addresses a number of these issues.
- 4.88 It will be important that the on-going economic performance of the HMA, as well as the take-up and supply of employment land is monitored to inform decision making in line with a 'plan, monitor and manage' approach.