Warwick Economics & Development

Employment Land Study for the Economic Zones and Key Sectors in Birmingham

October 2012

A Report for

Birmingham City Council

Regional Observatory
MarketingBirmingham

Table of Contents

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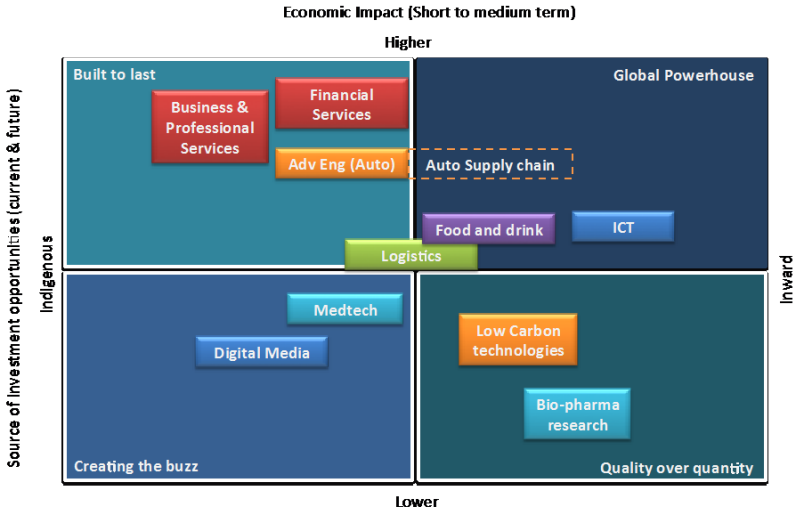
1. Introduction

The Study Brief

1.1 This Employment Land Study has been commissioned by Marketing Birmingham on behalf of Birmingham City Council to review the provision of specific employment land sites for the future requirements of selected sectors of the local economy in the light of the economic development vision of Birmingham.

1.2 The sectors targeted to boost the local economy include: automotive, financial services, business & professional services, food & drink, computer services & software, digital media and life sciences[1]. The capacity of these sectors to support Birmingham's economic growth is highly dependent upon their strength to act as current and future pulling factors of investment opportunities for the area. This in turn means that appropriate support and infrastructure will be needed in order to maximise and capitalise on these strengths for the benefit of the City and the wider region.

Figure 1.1: Key Sectors for Investment in Birmingham



Source: PA Consulting for Marketing Birmingham.The top of the grid represents higher value-creating sectors; the right of the grid represents sectors driven relatively more strongly by inward investment. Similarly coloured sectors indicate potential for linkages.

1.3 As part of this support, six economic zones have been identified to strengthen alignment of Birmingham City's spatial planning and economic priorities, creating the opportunity for new tailored space, facilities and support for the sectors identified as having the greatest impact on attracting inward investment to the area. The economic zones are:

- Advanced Manufacturing Hub
- City Centre Enterprise Zone
- Environmental Enterprise District
- Life Sciences Campus
- The Food Hub
- Longbridge ITEC Park

1.4 The vision for the transformation of Birmingham was first documented in the Birmingham Big City Plan, City Centre Masterplan, that was launched in July 2011 as a non statutory planning and regeneration guidance and framework for Birmingham's city centre, setting out the vision for the

[1]These were identified based on research undertaken by PA Consulting for Marketing Birmingham (Key Sectors for Investment, June 2012).

future of Birmingham to 2026. The key principles for Birmingham's transformation (also included in the Consultation Draft of the Core Strategy[2]) were those of:

- Sustainable growth
- Vibrant global city
- Innovative and connected city
- High quality of life and a sense of place

1.5 The recent recession, however, affected both the service and manufacturing sectors across the wider region and it has been recognised that a concerted effort is needed not to lose the momentum of growth and development. It is within this context that the Birmingham Economic Zones were announced by the Leader of the Council in June 2012 and launched on 25th September 2012.

1.6 In addition to the identification of economic zones, other examples of significant developments for Birmingham include:

- Securing £1.1 million from the European Regional Development Fund (ERDF) – supported by additional funding from Birmingham City Council and significant local business investment in excess of £900,000, to develop and improve Tyseley through a Property Assistance Programme, which aims to help businesses in Tyseley to improve their premises, access and infrastructure, helping to boost performance and employment growth.
- The announcement of the £1.5bn City Deal for Birmingham[3] that offers the opportunity for further growth with focus on investment in life sciences, the expansion of the Green Deal programme and also the launch of a Skills for Growth Compact that will look to commit employers, colleges and schools to investing in skills and guaranteeing work opportunities for learners.

1.7 Within this broad context, the study objectives were set as follows:

- To review the current and likely future levels of demand for sites and premises in the target sectors including from potentially expanding indigenous businesses and inward investors.
- To assess whether the supply of sites in Birmingham in the form of the economic zones can accommodate this demand and whether there are any specific gaps in the supply of sites for these sectors.
- To assess whether new sites need to be identified and developed to meet the needs of new and growing businesses and if so what the locational characteristics of these sites should be.

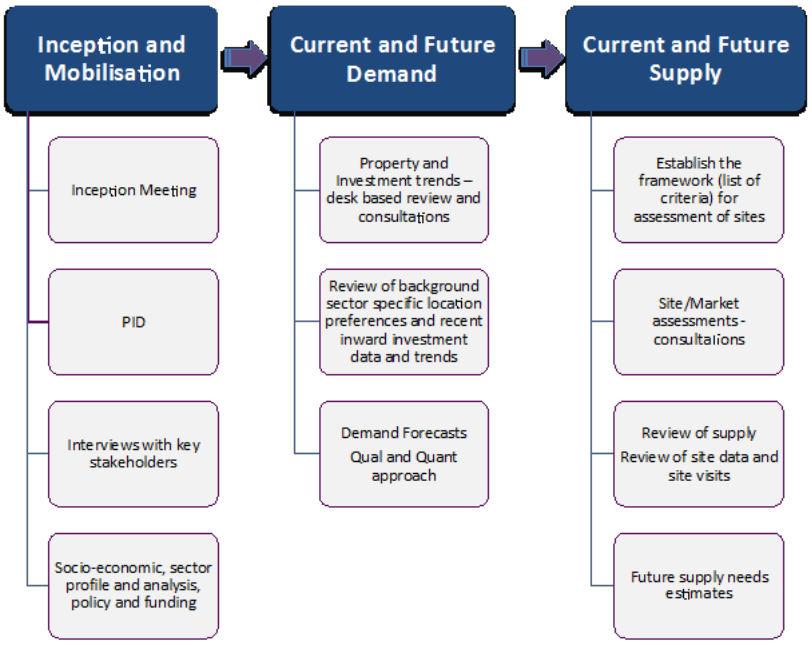
1.8 It is worth noting that the Greater Birmingham and Solihull LEP (GBSLEP) is also currently putting forward investment plans that would provide clarity on how development will be taking place in the identified areas building upon the recognition that early intervention is required to accelerate growth. For example, an investment plan has already been published for the City Centre Enterprise Zone. This piece of work will further inform the investment plans of the announced economic zones in order to provide specific, niche sectors with comprehensive and targeted support that would further stimulate private sector growth and create jobs.

Study Methods

1.9 The key tasks undertaken to meet the objectives of the study are summarised in Figure 1.2.

[2] This is the emerging Birmingham Development Plan (www.birmingham.gov.uk/plan2031)
[3] http://www.communities.gov.uk/news/newsroom/2173980. Unlocking growth in cities: city deals - wave 1

Figure 1.2: Study Approach



1.10 The methods adopted include a combination of qualitative and quantitative methods, desk-based research and analysis, and consultations with a wide range of stakeholders and review of the sites designated as economic zones.

1.11 To review the current and likely future levels of demand for sites and premises by the key sectors, the approach adopted has been guided by the Government's Guidance on preparation of employment land reviews[4] and includes:

- **Review and analysis of projected growth** of key sectors' performance – to provide reference for sectors performance to date in terms of employment and growth and an estimate of their growth in the future. The report produced by PA Consulting identified specific activities within these sectors that are/would be key to the local economy. These are listed in Figure 1.3. It should be noted that it is the land requirements of these activities that have been reviewed for the purposes of this study.

Figure 1.3: Targeted Sectors and their Constituent Activities

Sector	Key Constituent Activities
Advanced Manufacturing	Automotive, Aerospace and other high value added manufacturing activities[5]
Financial Services	Back-office / shared service functions
Business and Professional Services	UK / Regional headquarters
Food and Drink	Process and production
Computer Services and Software	Large IT related operations
Digital Media	Games development
Life Sciences	Medical and surgical equipment manufacture, clinical trials and pharmaceuticals manufacture

Source: WECD adapted from the report produced by PA Consulting. Note: pharmaceuticals manufacturing is included within life sciences. The original list presented in the PA report was refined to reflect the importance of advanced (high valued added) manufacturing as an umbrella sector that incorporates both automotive and aerospace.

[4] www.communities.gov.uk/publications/employmentlandreviews
[5] This definition is based on OECD's definition of technology intensity (used by BIS) and includes high and medium high-technology industries.

- The sector forecasts have been based on a review of the Cambridge Local Economic Forecasting Model (LEFM) projected to 2030 by WECD.The following issues need to be considered in relation to projections of growth:
    - There may well be actions by companies as well as interventions by local and central Government in the future that could accelerate growth prospects in specific sectors. The financial crisis in particular has led the UK Government to aim to increase through a number of initiatives the role that manufacturing is going to play in the growth of the economy. For example, only recently (September 2012) an additional £25m was made available by the Technology Strategy Board for projects in the advanced manufacturing supply chain (aerospace or automotive supply chains), based within the 4 Local Enterprise Partnership areas that were part of existing successful Regional Growth Fund bids including the Greater Birmingham and Solihull area. The Government is also investing on making the UK a world-leading place for life sciences innovation[6], by for example, protecting the £4.5bn science budget and introducing a £180m Biomedical Catalyst Fund.
    - Sectors evolve over time (e.g. due to innovation and technological advancements) and official statistics are in general slow to keep pace. High value (advanced) manufacturing, for example, currently encompasses the application of leading edge technical knowledge that has strong potential to bring higher economic value and wealth to the UK in the future through activities ranging from R&D to recycling. Low carbon, new applications in life sciences, renewable and environmental goods and services cannot be easily identified in the data as they have no specific sector classification and cut across a range of sectors. All these can lead to such activities being undervalued, as official statistics cannot capture the business activities and employment generated by these. Although every effort is made to compare these activities with equivalents from the past (see **Annex B**), it needs to be recognised that figures representing the 'past' may fail to capture a like-to-like comparison.
- Because of the above points, the shorter the forecast period, the more accurate it is likely to be. Conversely, the longer the forecast period, the more actual changes in the future could deviate from those envisaged in the current projections. This uncertainty, however, has been taken into account in translating projections into land requirements.
- Nevertheless, it needs to be remembered that future assessments are only estimates/indications of future patterns of performance. The global economy has been affected by a three-year solid period of recession that has affected most countries and remains highly volatile. Therefore, projections of future growth will need to be reviewed on a regular basis and be refined to take into account of new developments.
- The study also draws upon **review and analysis of business and investment trends and future plans** – to enable *real* time appraisal of impact. The review has drawn on inward investment data and documentation provided by Marketing Birmingham and interviews with key stakeholders, businesses and property agents. A list of consultees is given in **Annex A.**
- **Sub-sectors and sector interdependencies** have been explored –this task has been undertaken to enable establishment of multiplier effects by using location quotients (LQ)[7] and desk-based research looking for evidence of local cluster activity of the study sectors. A brief examination of the supply chain for each of the targeted sectors has also been undertaken. This analysis is also supplemented by research into **other sectors that may be are of potential importance to Birmingham** - there is merit in examining other sectors to see if there are other emerging

[6]Investing in UK Health and Life Sciences, HM Government, December 2011.
[7] The LQ measures the concentration of employment in a sector within a local economy to the concentration of employment in the same industry nationally; therefore a location quotient greater than 1 indicates concentration and therefore indicates that the industry locally could be part of a cluster.

industries that could also be targeted, both for economic development efforts and (potentially) for land provision.

- **Assessment of demand for land and space** is based on estimates of future employment floorspace requirements using the conversion factors noted in the 2010 HCA guidance[8]. Assessment of floorspace requirements for advanced manufacturing uses GVA projections, given the significant investments and employment increases announced and anticipated in the sector (through the automotive industry and its considerable supply chain). This approach has been verified by establishing that there is a positive and strong relationship between GVA and floorspace[9]. Furthermore, as there is an identified future investment within the advanced manufacturing sector in the GBSLEP area and the sub-region, this effect has been taken into account in the calculation of space requirements, as has been the multiplier effect of this investment[10].

1.12 On the supply side, the sites reviewed included the Advanced Manufacturing Hub, the Environmental Enterprise District, the Life Sciences Campus, the Food Hub and the Longbridge ITEC Park. The study also reviewed the suitability of two other sites to accommodate specific sectors: Prologis Park and the Washwood Heath[11]sites.

1.13 To assess the supply of sites, consultations were undertaken with key stakeholders in the property sector and with businesses. An independent assessment of each site was undertaken drawing upon these consultations and based on scoring against a set of criteria (listed in paragraph 4.2 of the report).

Structure of the Report

1.14 The remainder of this report is structured as follows:

- **Section 2 – Future Growth Prospects:** This section provides an overview of the economic growth underpinning demand for space by the key study sectors and other emerging sectors.
- **Section 3 – Demand for Space:** This section explores current and likely future levels of demand for sites and premises by businesses in the sectors identified as potentially key to the Birmingham economy.
- **Section 4- Assessment of the Sites for Economic Zones**: This section provides an overview of the space and land offer in Birmingham in general and assesses the sites of the economic zones.
- **Section 5- Overall Assessment and Conclusions:** The last section of the report provides an overall assessment of the economic zones and key sectors including a SWOT analysis, draws conclusions and makes recommendations for the future.

[8] HCA &OFFPAT, 2010, Employment Densities Guide 2nd Edition.

[9] This has been undertaken by way of regressing floorspace on GVA (with a time trend and through the origin). Floorspace figures have been taken from the rateable value statistics (produced by ONS) andGVA from LEFM. Due to the limited floorspace data available, the regression could only be undertaken for total manufacturing GVA and floorspace and for the years 1998 – 2008. A positive relationship was found that was statistically significant at less than the 1% level. The adjusted R^2 was 0.99 (this assesses how well the model explains the data, with 0 having no explanation and 1 completely explaining it entirely).

[10] The multiplier effect associated with advanced manufacturing is 2.9, 84% of which falls in the manufacturing sector, 10% in the service sector and the remainder in the primary and public sectors.

[11] This reference covers the former Alstom / LDV sites and the land between Wolseley Drive and Drews Lane.

2. Future Growth Prospects

2.1 This section provides an overview of the drivers underpinning economic growth in Birmingham and presents estimates of future trends as demonstrated by:

- **The future performance of the local economy and key sectors**- by way of projections of their future economic performance in terms of output and productivity[12].
- The presence of **sector interdependencies/clusters within the local economy and other sectors of potential importance to Birmingham** - this analysis is important as additional demand could derive from these sectors in the future.
- **Inward investment trends** – to establish the source of demand that could drive growth through inward investment activities.

Projections of Growth

2.2 According to detailed research undertaken by the Regional Observatory[13], recovery from the recession within the GBSLEP area has out-performed national trends so far. This has been underpinned by the strong performance of high value added advanced manufacturing industries such as environmental and transport technologies with strong potential for international trade and inward investment.

2.3 The GBSLEP area enjoyed a healthy growth in Gross Value Added (GVA) of 12.6% between 2000 and 2007. This was followed, however, by a decline of 1.2% in 2008 with the onset of recession[14]. Between 2009 and 2010, GVA grew by 2.3% in the area, from £33.96 billion to £34.73 billion, which compares with growth across the UK of 1.4%[15]. Further analysis by the Regional Observatory indicates that the 10% fastest growing SMEs in the area increased their GVA by 33% between 2009 and 2010 at a time when average GVA growth for all SMEs was only 3%. These firms are strongly represented in advanced engineering industries and many are exporters who are establishing a presence in developing markets such as China, Brazil and India and as a result, they are still seeing strong trading conditions despite the effects of the Eurozone debt crisis.

2.4 Looking further forward, forecasts commissioned from Cambridge Econometrics[16] indicate that GVA will have grown in the GBSLEP area by just over 1.7% in 2011, compared to a rate of less than 1% across the UK as a whole[17]. In 2012 it is forecast that GVA in the area will expand by just over 1.9%, compared to growth of about 1% nationally. Over the 2012-2015 period, meanwhile, GVA growth of just under 6.7% is forecast for the whole GBSLEP area.

2.5 Furthermore, as seen in Figure 2.1, GVA of all the key sectors in Birmingham is projected to increase (£m – base year 2005). The differences in the level of growth of the sectors can be more easily compared using an index of growth shown in Figure 2.2. The life sciences sector, for example, is projected to have the highest *relative* growth in GVA with the digital media and computer services sectors having the second highest growth levels.

[12] These projections are based on the Cambridge Econometrics LEFM model provided by Birmingham City Council. LEFM provides projections for 41 sectors. Each of these sectors is fairly broad and therefore WECD have adjusted the outputs of the LEFM to take account of the constituent parts of the targeted sectors. This has been undertaken using the 2007 SIC and those classifications that are closest to the description of the targeted sectors and their constituent activities. The average proportions over the years 1998 – 2010 of the actual employment figures have then been used as the basis for delineating the relevant sectors' Gross Value Added and employment projections from the LEFM.

[13] www.marketingbirmingham.com/regional_observatoryGBSLEP Future Skills Research, Contextual Review, March 2012.

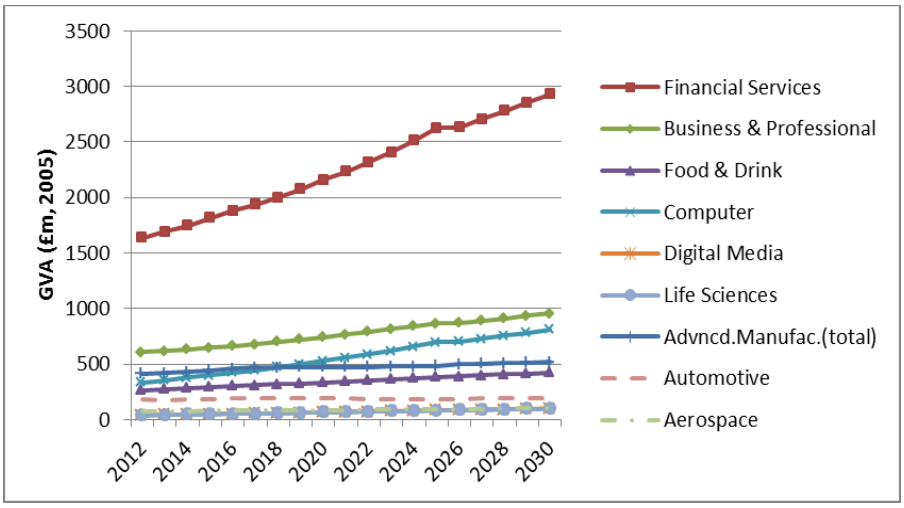
[14] Source: ONS Regional Accounts 2010.

[15] This relates to GDP – the closest comparator to GVA available at a national level for 2009/2010.

[16] These forecasts were commissioned by the West Midlands Regional Observatory in 2010 and take account of the potential economic impact of cuts in public sector expenditure.

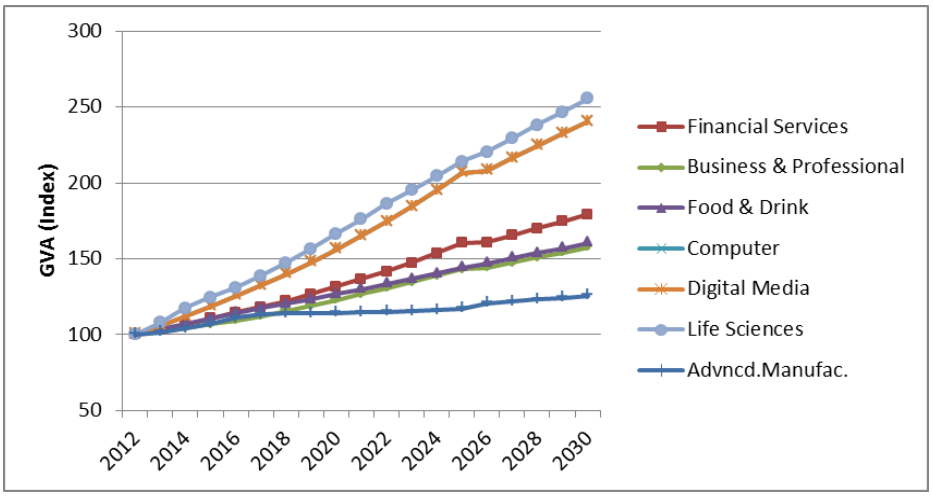
[17] Source: UK Treasury average of forecasts.

Figure 2.1: Projected Levels of GVA by Sector 2012 – 2030, Birmingham



Source: Cambridge Econometrics LEFM and WECD

Figure2.2: Projected Relative Growth in GVA by Sector 2012 – 2030, Birmingham

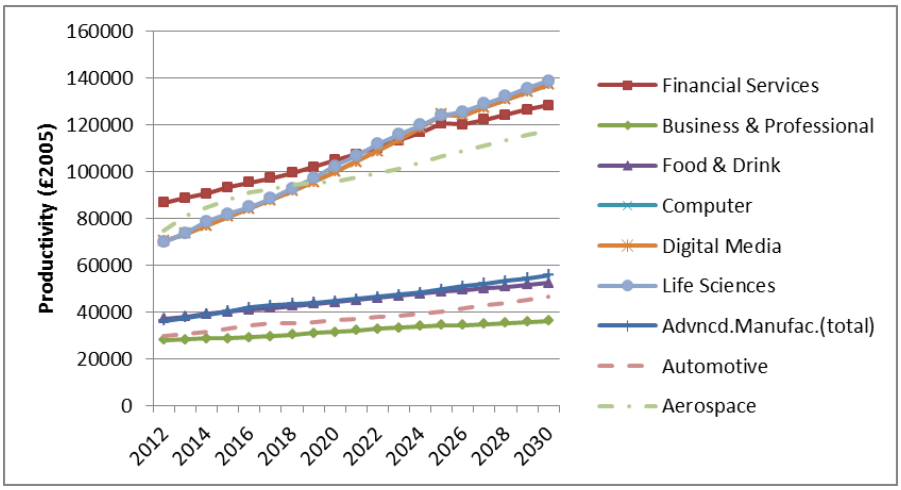


Source: Cambridge Econometrics LEFM and WECD

2.6 As it can be seen in Figure 2.3, productivity is also projected to increase in all the sectors, with life sciences and digital media projected to make especially high gains relative to the other sectors. Productivity improvements are particularly important for a locality as they can lead to higher profits for companies, higher wages and lower (real terms) prices for consumers all of which can, in turn, lead to further expenditure within the local economy and therefore a positive overall effect.

2.7 Some of these sectors cover a wide range of sub-sectors with different dynamics. For example, detailed analysis of the past performance of sub-sectors undertaken for this study (see **Annex B**) indicates that sub-sectors that seemed to have weathered the economic storm (at least to some degree) lie within the automotive, food, computer services / digital media and aerospace target sectors. The manufacture of motorcycles also saw growth in Birmingham (in contrast to a decline in the industry nationally). Similarly, the sub-sectors constituting the computer services and digital media target sectors saw growth at the local level. The manufacture of air and spacecraft and related machinery saw growth locally between 2008 and 2010 (whereas it fell nationally). Within the food and drink target sector, the manufacture of beverages performed positively at the local level, as did the majority of the sub-sectors within the automotive target sector.

Figure 2.3: Estimates of Productivity by Sector 2012-2030



Source: Cambridge Econometrics LEFM and WECD.

2.8 In terms of employment, according to research undertaken by the Regional Observatory, more than 200,000 job opportunities will arise over the 2012-2015 period due to staff turnover and the need to replace people who leave to take other jobs or retire. Of these, more than 180,000 (90%) are expected to be filled by people already in employment. This is particular the case for vacancies in sectors such as advanced manufacturing, financial services and ICT& digital where many opportunities are in higher level occupations and staff with specific skills, experience and qualifications are required. New employment opportunities (the remaining 20,000) will also exist for new entrants to the labour market such as school and college leavers and the unemployed, particularly in sectors creating predominantly lower skilled jobs such as retail, hospitality and other activities that make up the visitor economy, construction and lower value business services.

2.9 Overall, it is true that in common with other developed economies, there has been a marked shift in the structure of the UK economy away from traditional manufacturing and towards knowledge intensive services such as finance, professional services and ICT. However, this shift has been driven by the more rapid growth of service sectors including the 'servicisation' of manufacturing activities and growth in knowledge-based activities, rather than a contraction in the overall manufacturing output[18]. In the future, growth and economic resilience in Birmingham and the wider region is expected to be driven by the key sectors that the UK Government is also committed to developing[19]:

- Advanced manufacturing, particularly aerospace, automotive and life sciences;
- Knowledge-intensive traded services, particularly professional/business services and the information economy; and,
- Enabling industries such as energy.

Sector Cluster Activity and Potential for Growth

2.10 The development of clusters (defined as the geographic concentration of interconnected businesses, suppliers and associated institutions) is central in the economic zones concept and therefore, there is a need to understand the dynamics of the clusters within Birmingham and the wider West Midlands. It should be noted that although clusters often arise spontaneously, cluster development is not automatic. For the cluster to work successfully, for example, key 'input' factors need to be present – these include human resources, capital resources, physical infrastructure,

[18] BIS Economic Papers no 18. Industrial Strategy: UK Sector Analysis, September 2012
[19] BIS Economic Papers no 18. Industrial Strategy: UK Sector Analysis, September 2012

administrative infrastructure, information infrastructure, scientific and technological infrastructure and/or natural resources.

2.11 Identifying whether an industry is part of a cluster is difficult, not least because whether a cluster is present depends upon the geography that is used to support the analysis. However, clues can be garnered from both macro-level information (i.e. the employment / company numbers present within a local economy relative to the same data nationally) and from speaking to representatives of the industry / firms.

2.12 An extensive review of literature on cluster activity in Birmingham/the Midlands (see **Annex C** for detailed analysis and bibliography) confirms that:

- There is an **established, mature automotive cluster in the West Midlands and the region is regarded as a world leader in the industry**. The region has a large, specialised and experienced automotive workforce with 11,500 people employed in the sector in Birmingham and around 100,000 in the wider region. The region's universities have research strengths in low carbon and energy-efficient fuel types. There is also a strong presence of companies within the automotive supply chain. **The region accounts for 30% of all automotive production manufactured in the UK and more than 60% of the UK's automotive R&D.**
- Birmingham has a **long-established financial services sector and is one of the largest financial and business services centres in the UK outside London**. The sector is sizeable, contributing £14bn to the economy of Greater Birmingham, rising to £23bn for the West Midlands region. Over 35% of Birmingham's GVA is generated by the financial (and business) services sector and it accounts for a workforce of over 242,000 in Greater Birmingham and 441,000 across the West Midlands region. There are a number of regional and national HQs based here and over 40 UK and international shared service centres. Many of Birmingham's financial services firms are located in the City Centre and Edgbaston. While the financial services sector is undoubtedly a key sector for both Birmingham and the West Midlands, it could further strengthen its links with academia and other sectors in the area (e.g. life sciences).
- Birmingham and the wider West Midlands region are **home to a significant pool of skilled labour in Financial and Professional Services, ICT and Business Services**. There are 241,500 people employed in these key sectors in the Greater Birmingham area in around 24,000 businesses, with 441,000 people employed within 57,000 businesses across the West Midlands region as a whole. There are a number of regional and national HQs based in the region. The Birmingham Law Society is the largest local law society in the country with over 3,600 solicitors and 200 practices. As with financial services, the business and professional services sector clearly is a key sector for both Birmingham and the West Midlands, but this sector also appears to lack the academic cooperation and collaboration that is present in other clusters in the region.
- The food and drink cluster in the region **is well established and benefits from diversity of produce and centrality to the UK's population.** Food and drink manufacturing (excluding agriculture) employs 58,000 people in the region with a value of around £6bn per annum. The West Midlands has particular strengths in red meat, bakery and confectionery, fruit and vegetables, breweries and drinks, ethnic foods, dairy, food technology and machinery. The region's central location makes it ideal for food distribution. There is a high concentration of food engineering businesses within the cluster. **The cluster also benefits from internationally recognised university expertise such as Harper Adams, University College Birmingham (which now incorporates the former Birmingham College of Food) and University of Birmingham**. The majority of employment within the food sector in Birmingham is in chocolate and confectionary. Elsewhere in the region, there are concentrations of employment in Herefordshire (production of meat and wholesale of fruit and vegetables), Wychavon (fruit and

vegetables), East Staffordshire (production of meat and beer) and Sandwell (production of meat).

- The digital sector employs over 64,000 people in Birmingham across a range of companies from global systems integrators to smaller independent firms. There are more than 12,500 companies present; this represents a rise of 30% since 2005. There is also a strong skills base with around 40,000 students studying computer science or business each year. In addition, there are several specialist networking organisations to link new investors to SME's, large IT companies, education establishments and research institutes. **The digital media cluster appears to be growing.** Specific initiatives in the sector include: the Digital Media Academy - the £25m Birmingham Ormiston Academy, which opened in October 2011, and is the first digital media academy of its kind in the UK, offering young people an opportunity to study Creative, Digital and Performing Arts; Gamer Camp - a finishing school for graduate game developers, is run by Birmingham City University and partners with local companies such as Codemasters and Rare Games; and, Fazeley Studios representing a complex of subsidised work spaces for creative and digital firms in Birmingham, the facility has a role in attracting small, creative, digital media firms to the city.
- There are **signs of a Life Sciences cluster in the West Midlands and in recent years this has grown from an embryonic to a more established cluster and is constantly evolving.** The number of life sciences businesses in the region has grown almost 40% since 2005. The West Midlands also has over 500 medical technology companies, which is more than any other region of the UK. And although the cluster in the West Midlands is not currently as developed as in other parts of the UK, such as London/Oxford/Cambridge; Manchester/Liverpool; Edinburgh/Glasgow and the M1 Corridor (Nottingham/Sheffield/Leeds), it has a very high potential as the scale and population of Birmingham is one of the most diverse in the UK. This makes it an ideal location to undertake clinical trials and the region is home to one of the largest clinical trials clusters in the UK, based at the University of Birmingham. The University of Birmingham also has strong links with many of the world's top pharmaceutical companies including GlaxoSmithKline, Lilly, Pfizer, AstraZeneca, Bayer and Novartis. Birmingham Research Park at Edgbaston and Birmingham Science Park Aston are home to several life sciences companies, particularly high-growth medical technologies companies. In addition, there have been a number of university spin-outs in the sector and the NHS has a strong presence in the city including MidTECH, a regional innovation hub for the NHS. The Government also recently awarded an £12m grant to contribute to the creation of the Institute for Translational Medicine on the Queen Elizabeth Hospital Birmingham campus. The grant was awarded as part of £1.5bn worth of funding secured by the Greater Birmingham and Solihull LEP as part of the Government's recently introduced City Deal. The emerging boom for the region's healthcare market would mean employment for highly skilled clinicians and the science community but also generating new mainstream job opportunities for the wider population. Increased activity, for example in clinical trials which predominantly is carried out in NHS facilities and universities will also create a knock on demand for people working within healthcare at all levels including healthcare assistants, researchers, lab assistants, porters and clinical staff. Overall, the future strength of the healthcare sector in the area is driven by strong and close collaboration between academic research, clinical practice and industry.
- The East and West Midlands are home to just under 25% of the UK aerospace industry, 7% per cent of Europe's and 3% of the world's, with over 40,000 full-time-equivalent jobs based on revenues from manufacturing for global aerospace markets. This excludes the region's airports and military bases. For the future it is important to appreciate that **aerospace is a globally integrated industry with a small number of major manufacturers drawing on a large network of suppliers from across the world.** There are two significant tier one suppliers with operations in Birmingham: GKN and Goodrich. These tier one suppliers support a range of tier two and three

suppliers. The main hub of the cluster - Rolls-Royce - is actually located in the East Midlands, but the West Midlands comprises a quarter of the firm's supply chain in the manufacturing and servicing of Rolls-Royce aero engines. There is a cluster hub organised around the companies Aero Engine Controls, Goodrich, Moog and Meggitt, based in Birmingham, Wolverhampton and Coventry, which supply electro-mechanical systems to control aircraft moving parts to aircraft makers like Airbus, BAE Systems and Boeing, and similar control systems to Rolls-Royce and engine makers across the globe. The region also plays host to a number of specialist aerospace materials producers. In addition, there are major research centres related to the sector at Birmingham and Coventry Universities.

The Supply Chain

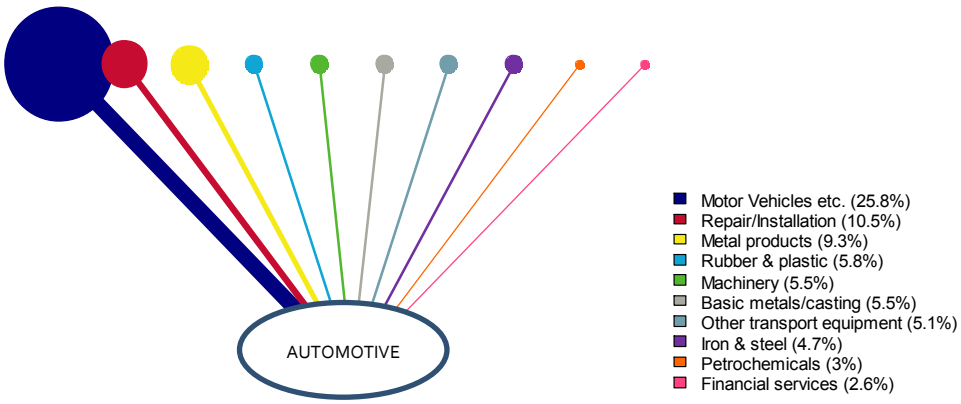
2.13 Many industries have a plethora of linkages to other industries in their supply chain. It is through **these linkages and their multiplying effect** that, changes in the final demand for an industry's products can lead to increases or decreases in the overall employment and economic health of a locality[20]. Because of these linkages it is also important to have an understanding of the supply chain of the key sectors of the economy.

2.14 In view of this, a brief examination of the supply chain for each of the targeted sectors in Birmingham has been undertaken[21]. Because of the number of industries that contribute to the supply chain of the targeted sectors, an assessment of only the top 10 industries that feed into each of the key sectors is presented. The figures used in the analysis indicate the % of the supplies i.e. inputs (intermediate goods), purchased by the key sectors.

Automotive

2.15 Figure 2.5 shows the 10 key sectors from which the automotive sector purchases its supplies. Around a quarter (25.8%) come from motor vehicles businesses. Other key suppliers include businesses in repairs/installations, metals, rubber and plastic, iron & steel and petrochemicals.

Figure 2.5: The Automotive Supply Chain (top 10) - Birmingham



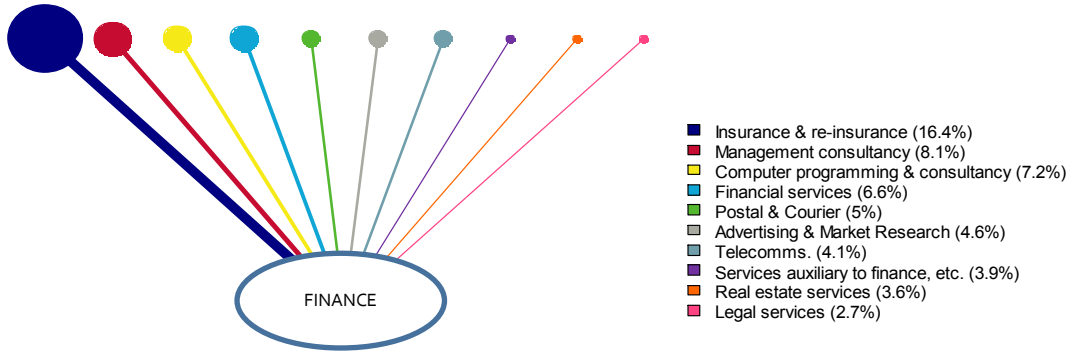
Source: WECD based on input-output (ONS) and employment data (BRES)

Financial Services

2.16 As shown in Figure 2.6, the sector's key suppliers are insurance/re-insurance businesses. Other sectors linked to the financial services include computer programming and consultancy, advertising and market research and legal services.

[20] Using the localised I-O table used for this analysis shows the multipliers to be as follows: Automotive (2.94); Financial services (1.64); Business & professional services (1.46); Food & drink (1.53); Computer services (1.47); Digital media (1.47); Life sciences (1.88); and aerospace (2.5).
[21] The supply chain in this analysis has been derived via the development of a localised input-output table (for intermediate demand only) and the associated technical coefficients. The I-O table is based on 2010 data.

Figure 2.6: The Financial Services Supply Chain (top 10) - Birmingham

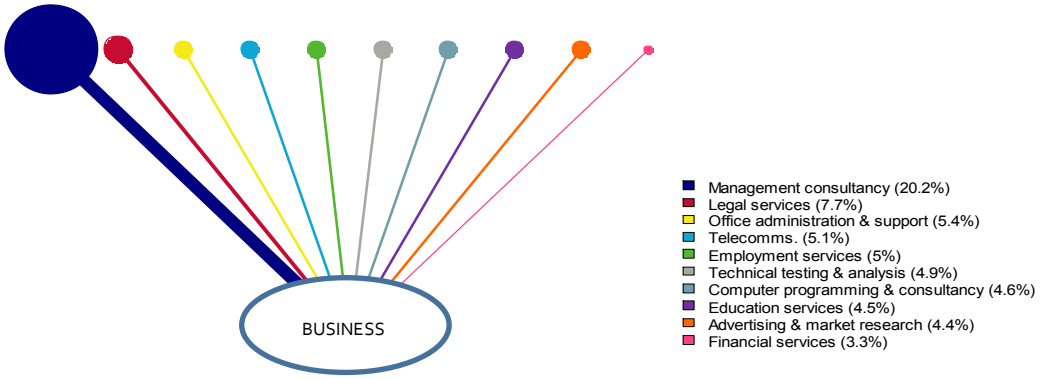


Source: WECD based on input-output (ONS) and employment data (BRES)

Business and Professional Services

2.17 One in five purchases by the sector is from management consultancy businesses. Other suppliers of services to the sector include legal services, telecommunications, office support, employment services, education (private sector provision), computer services and software, marketing and advertising and part of the financial services.

Figure 2.7: The Business and Professional Services Supply Chain (top 10) - Birmingham

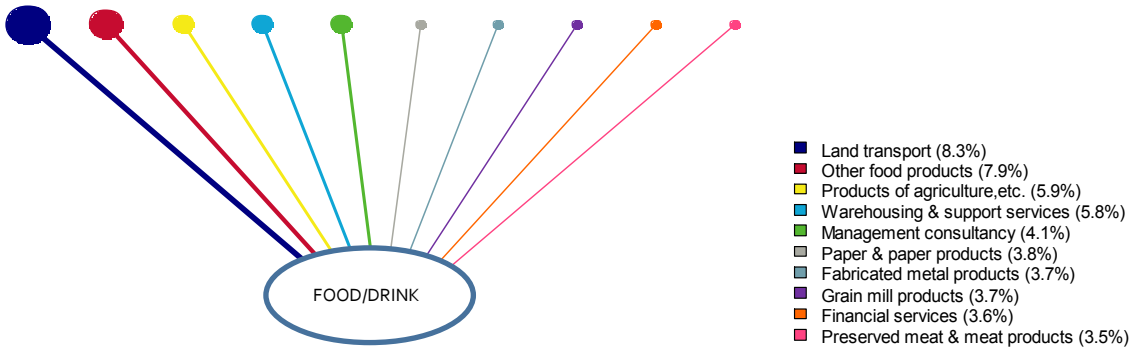


Source: WECD based on input-output (ONS) and employment data (BRES)

Food and Drink

2.18 Food and Drink businesses rely on a mixture of manufactured inputs e.g. land transport, fabricated metal products as well as services including management consultancy and financial services.

Figure 2.8: The Food and Drink Supply Chain (top 10) - Birmingham

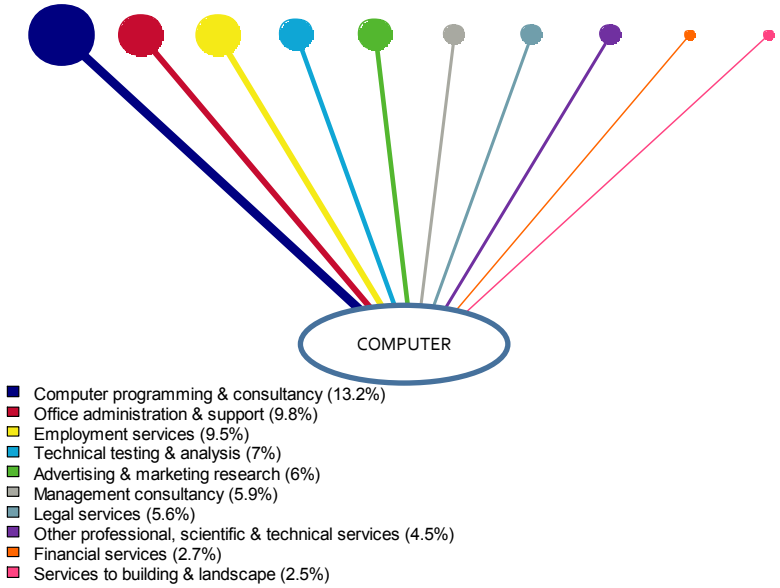


Source: WECD based on input-output (ONS) and employment data (BRES)

Computer Services and Software

2.19 10% of the supplies to the sector come from the same sector of computer services and software. Other key suppliers to this sector include business, professional and financial services sectors.

Figure 2.9: The Computer Services and Software Supply Chain (top 10) - Birmingham

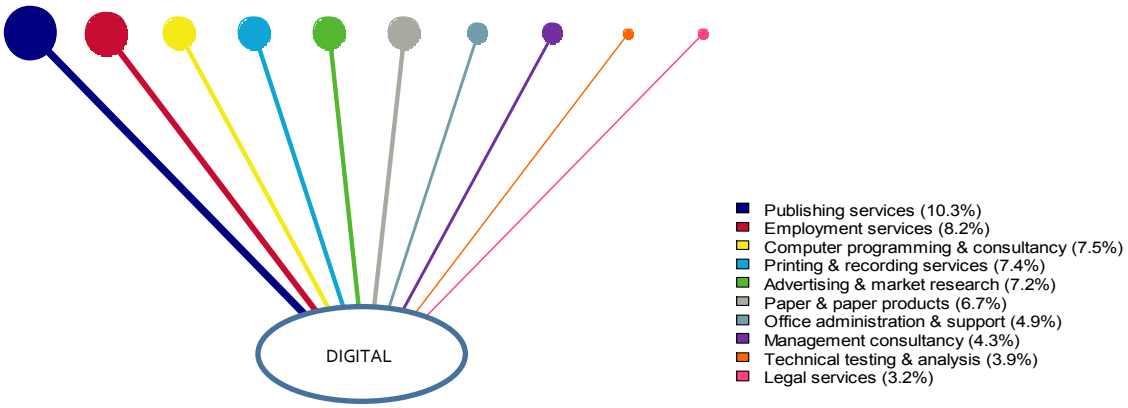


Source: WECD based on input-output (ONS) and employment data (BRES)

Digital Media

2.20 As Figure 2.10 indicates businesses in publishing are the main suppliers to digital media businesses. However, the sector is highly linked with a wide range of other professional services including computer services and software, legal services, advertising &market research and management consultancy.

Figure 2.10: The Digital Media Supply Chain (top 10) - Birmingham



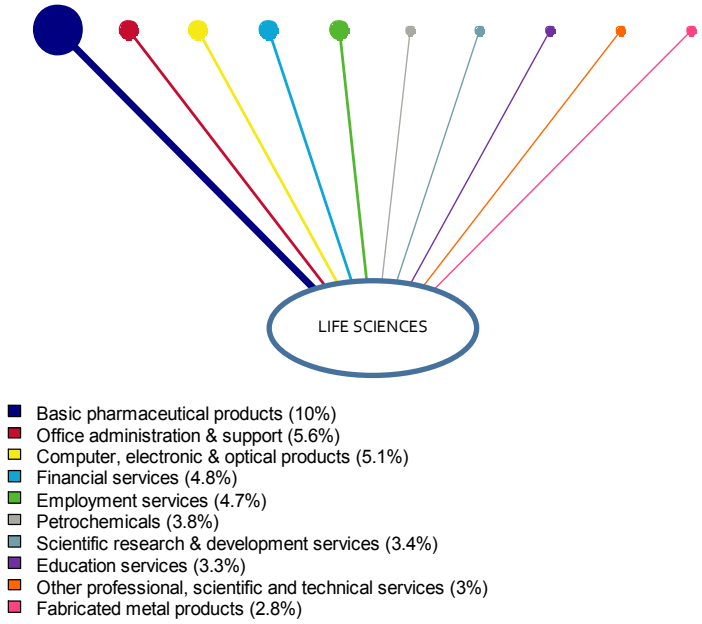
Source: WECD based on input-output (ONS) and employment data (BRES)

Life Sciences

2.21 One in 10 suppliers to this sector is from businesses with basic pharmaceutical products. Other businesses supplying life sciences (but to a lesser extent) include a wide range of services such as office administration, employment and financial services and the production and manufacturing

sectors e.g. petrochemicals and fabricated metal products industries. There is also input from the education services industry, which most likely represents links to universities' research departments.

Figure 2.11: The Life Sciences Supply Chain (top 10) - Birmingham

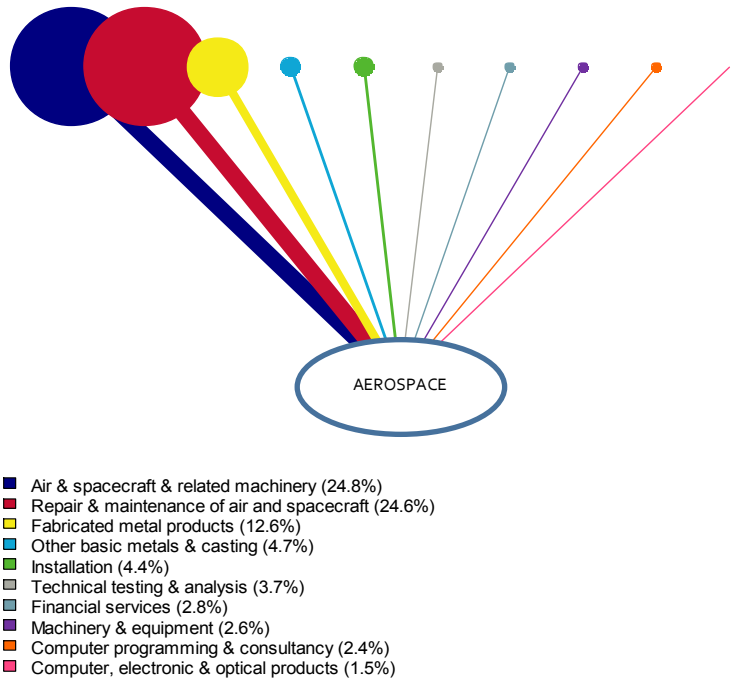


Source: WECD based on input-output (ONS) and employment data (BRES)

Aerospace

2.22 Some 60% of the top 10 suppliers to the sector are from advanced manufacturing and 20% from traditional manufacturing.

Figure 2.12: The Aerospace Supply Chain (top 10) - Birmingham



Source: WECD based on input-output (ONS) and employment data (BRES)

Other Emerging Sectors

2.23 There is also merit in examining other sectors to see if there are other emerging industries that could be targeted, both for economic development efforts and (potentially) for land provision.

2.24 An emerging sector is defined as an industry that is growing nationally; may well have seen positive growth locally (bearing in mind the data used covers a recessionary period); and, the industry has seen higher growth locally than the industry nationally. Furthermore, if the sector has a location quotient (see footnote 7) greater than 1, this coupled with the other items, would be strong evidence of a cluster (with the exception of the public sectors, where this may be simply due to the greater population of Birmingham than average).In summary, where all these facets are true, the sector could be part of a cluster in an industry that is resilient and could be a strong growth sector in the future.

2.25 The analysis undertaken (see **Annex D**) indicates that the sectors where all the factors are met (with the exception of public services) include:

- Manufacturing of wearing apparel - clothing / fashion manufacturing could be a cluster in Birmingham that perhaps should be accommodated for in the future.
- Manufacture of other transport equipment (which may be associated with the automotive target sector).
- Waste collection, disposal and collection (which likely merely reflects the size of the city's population).
- Scientific research and development (which will include those sub-sectors of the life sciences, but is more broad ranging than the life sciences).
- Services to landscaping and building activities (this is a broad sector that incorporates such items as facilities support, cleaning and landscaping; therefore this is probably not a sector that can be "accommodated" per se in terms of floorspace other than within general office type floorspace or light industrial space).

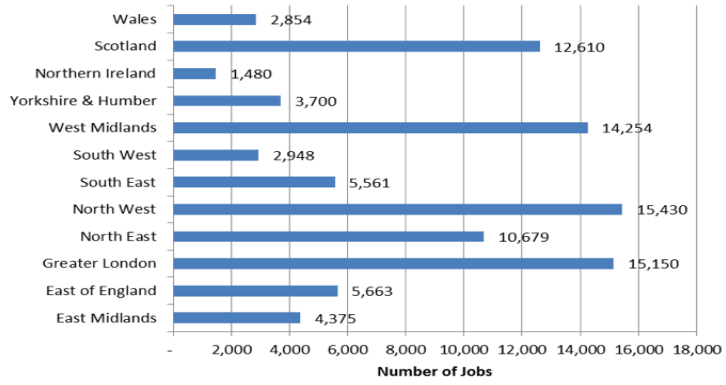
2.26 Those sectors that have seen growth locally, but are not necessarily in an industry growing nationally, include:

- Manufacturing of paper and paper products.
- Water collection, treatment and supply (which will be most likely due to the population size).
- Information service activities (which is related to the computer services target sector, but also includes the activities of news agencies).
- Architectural and engineering activities.
- Motion picture, video and TV programme production, and creative, arts and entertainment activities. Both of these sectors also exhibit a location quotient that is greater than 1 and therefore are relatively more concentrated than is the case nationally. These two sectors may well therefore be part of a cultural cluster within Birmingham.

Inward Investment Trends in Birmingham

2.27 A key driver of the growth within a locality is inward investment as shown by Figure 2.13. According to the UKTI figures, a total of 14,254 jobs were created in the West Midlands in 20011/12 through Foreign Direct Investment (FDI).

Figure 2.13: FDI Jobs Created in the UK by Region 2011/12

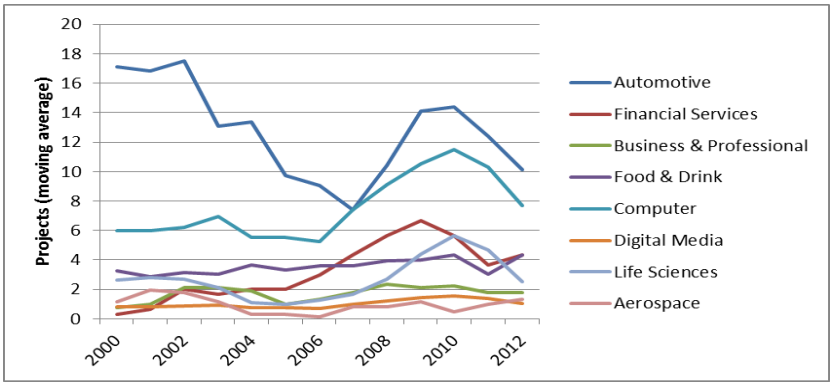


Source: UKTI

Note: Jobs are defined as New and Safeguarded Jobs. Jobs figures include both UKTI involved and non-UKTI involved.

2.28 Figure 2.14 shows trends in investment projects in Birmingham based on a 3-year moving average[22]. In terms of the number of projects, it can be seen that the automotive sector provided by far the largest amount of inward investment with the computer services and software sector coming second.

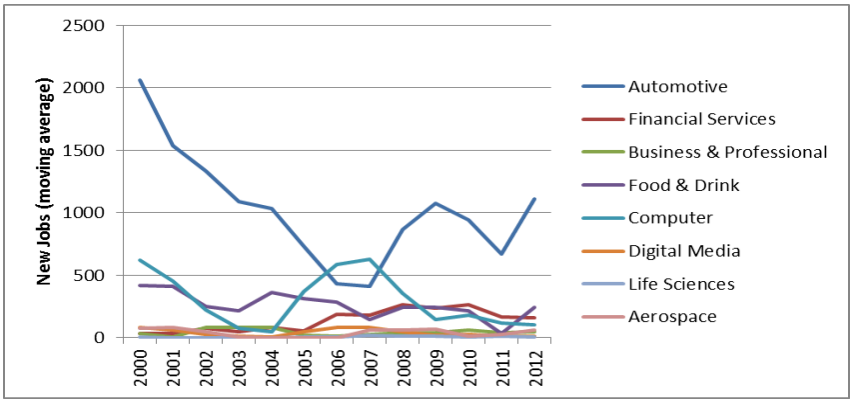
Figure 2.14: Inward Investment Projects 1998 – 2012 (3 year moving average), Birmingham



Source: WECD based on data from Marketing Birmingham

2.29 A similar pattern presents itself in terms of the number of new jobs (Figure 2.15). The automotive sector has provided the largest number of jobs via inward investment of any of the target sectors although the computer services sector peaked above this between 2006 and 2007.

Figure 2.15: Inward Investment New Jobs 1998 - 2012 (3 year moving average), in Birmingham

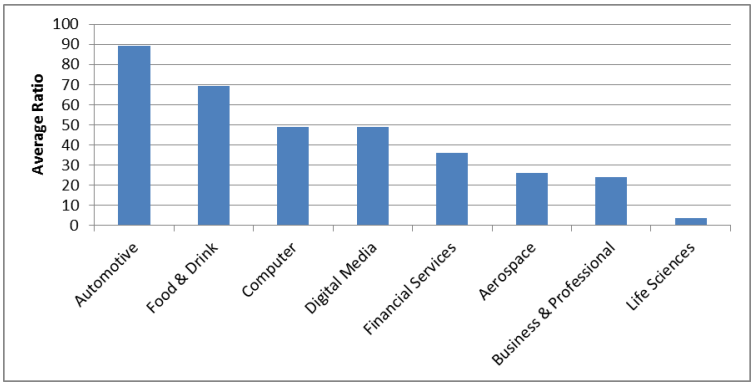


Source: WECD based on data from Marketing Birmingham

[22] Because of the variability inherent in the data, we use a 3 year moving average of the figures in order to more easily pick out the trend.

2.30 Examination of the two charts shows that the number of projects does not always equate to the provision of new jobs on a constant basis. On average, over the period 1998-2012, the automotive sector experienced the largest average ratio of jobs to projects followed by the food and drink and computer services and software sectors.

Figure 2.16: Average Jobs/Projects Ratio 1998 – 2012



Source: WECD based on data from Marketing Birmingham

2.31 Overall, all key sectors for the Birmingham economy have seen inward investment activity, albeit to different degrees. The automotive sector has been especially active in this regard. On the other hand, with the exception of the financial services sector that has exhibited a statistically significant (upwards) trend over the period 1998-2012, the other sectors have not seen a particularly strong trend either upwards or downwards[23].

SUMMARY – KEY SECTORS FUTURE PROSPECTS

The overall position of the target sectors is summarised in the table below.

Sector Activities	Growth	Inward Investment	Supply Chain
Automotive	This is an established and mature sector within both Birmingham and the wider West Midlands. Major private (JLR) and public sector investment (RGF) promises a bright future for the sector. The sector is projected to see growth in GVA and productivity. Recently the sector has grown faster at the local level than nationally. The sector also has the capability to be competitive in the production of technologically advanced cars / transport (low carbon, etc.) Regulatory requirements will likely promote the advancement	The sector on average saw the highest number of inward investment projects and the highest number of jobs created through inward investment. The sector also saw the highest jobs/project ratio.	The sector mostly links through to high value added and traditional manufacturing sectors, but also through to other key sectors targeted in Birmingham.

[23] This has been examined by regression analysis using a time trend as the explanatory variable.

	of technology in the future		
Aerospace	This sector is projected to see growth in GVA and productivity. The sector grew faster at the local level than at the national level over the last few years. Export markets could grow.	There has been a relatively low but constant number of inward investment projects on average. For the future it is important to appreciate that aerospace is a globally integrated industry with a small number of major manufacturers drawing on a large network of suppliers from across the world.	The sector has links with both advanced and traditional manufacturing industries.
Financial Services	Strong presence in the city. Linkages with academic institutions and other sectors (e.g. life sciences) could strengthen the development of a cluster. Projections show growth in GVA, employment and productivity. Over recent years the sector grew faster at the local level than nationally	There have been a relatively high number of inward investment projects on average.	Links are mostly to industries within the service sector including other key sectors targeted in Birmingham.
Business and Professional Services	As with financial services, linkages with academic institutions and other sectors could strengthen the development of a cluster. GVA, employment and productivity are all projected to grow. This sector did not grow as fast at the local level as it did nationally, however.	There has been a relatively low but constant number of inward investment projects.	Mostly links through to other industries in the service sector including other key Birmingham sectors.
Food and Drink	GVA, employment and productivity are all projected to grow in this sector. The cluster of activities in this sector benefits from internationally recognised university expertise such as Harper Adams, University College Birmingham (which now incorporates the former Birmingham College of Food) and University of Birmingham.	There has been a relatively constant level of inward investment projects and the sector has, on average, seen the second highest jobs/project ratio.	This sector links to manufacturing and primary sectors of the local economy as well as other key sectors targeted in Birmingham.
Computer	GVA, employment and	On average, this sector	Mostly links through to

Services and Software	productivity are all projected to grow. This sector saw faster growth at the local level than was seen nationally as have many of its constituent sub-sectors.	saw the 2nd highest level of inward investment projects and saw a relatively high jobs/projects ratio.	other areas of the service sector including other target sectors.
Digital Media	This could potentially be a very strong local cluster with links through to other sectors (e.g. creative industries and tourism/destination) and academia. GVA and employment are projected to grow and it is projected to show the 2nd highest level of growth in productivity. The sector, over recent years, saw faster growth at the local level than was seen nationally.	There have been, on average, a relatively low but constant number of inward investment projects and there was a relatively high jobs/projects ratio.	Mostly links through to other areas of the service sector including other key sectors targeted in Birmingham.
Life Sciences	Employment and GVA are projected to grow and the sector is projected to see the highest relative level of growth in productivity. This is also an emerging strong cluster of activities supported by significant policy drive at national level (life sciences and science) and strong links to academia locally. The future strength of the healthcare sector in the region is driven by strong and close collaboration between academic research, clinical practice and industry.	There have been a relatively high number of projects over the last 4 years (on average). Once the Institute of Translational Medicine and the Biomedical Incubator Hub are running, these will act as the catalyst for attracting more firms to the area.	This sector links through to both the manufacturing and service sectors including other key sectors targeted in Birmingham.
Additional sectors to be considered	These could include landscaping and building activities; architectural and civil engineering activities;and, creative, arts and entertainment activities.		

3. Demand for Space

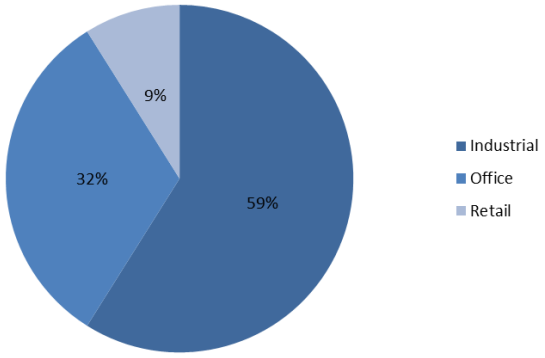
3.1 This section presents an assessment of the current and likely future levels of demand for sites and premises by businesses in the key sectors – in qualitative and quantitative terms. It therefore, includes:

- A **review of inward investment enquiries in Birmingham** (based on data provided by Marketing Birmingham) and an overview of investment trends in the West Midlands.
- An **assessment of the generic locational requirements of the targeted sectors**.
- A **summary of views and perceptions of key stakeholders and local businesses** about Birmingham as a place to do business and about economic and location drivers affecting their future business plans and demand for space i.e. the attractiveness of the location, and where possible their views on specific sites.
- **Estimates of demand for floorspace and land** arising from the identified key sectors in Birmingham.

Inward Investment Inquiries

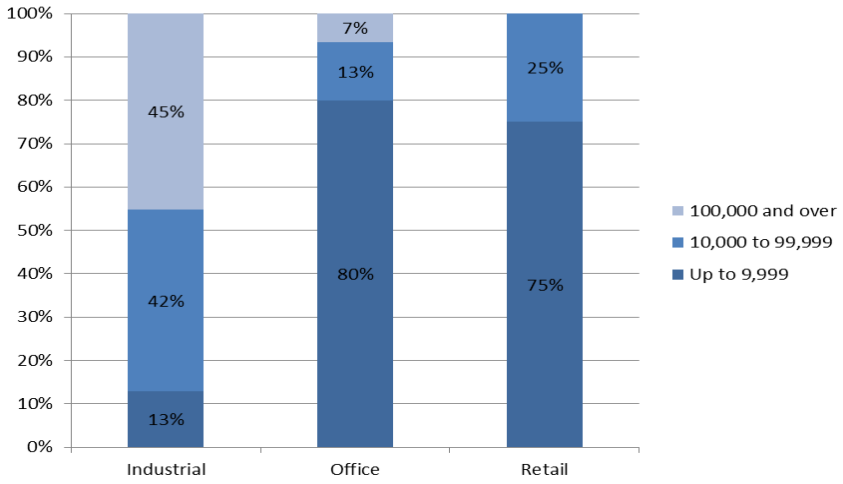
3.2 As shown in Figure 3.1, enquiries received for sites **in the area have been predominantly for industrial space, followed by office space**.

Figure 3.1: Investment Enquiries by Requirement Type



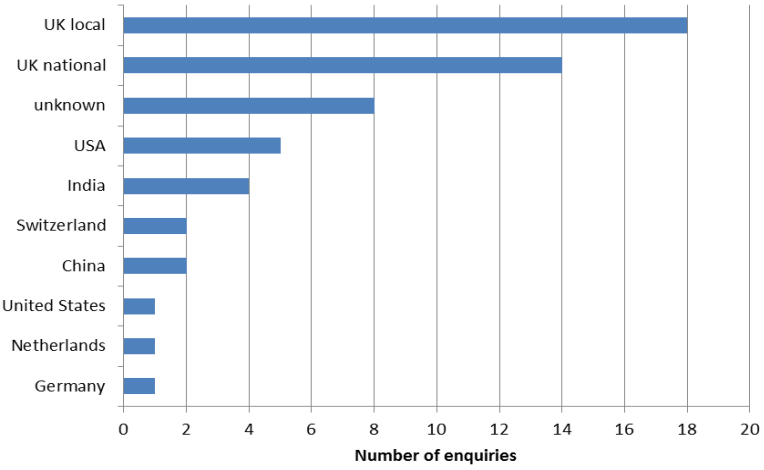
3.3 The space requirements of investors vary **with some large industrial enquiries and several smaller office enquiries** as indicated by the Figure 3.2.

Figure 3.2: Investment Enquiries' Space Requirements (sq.ft.) by Type



3.4 The majority of enquiries have been local or national, **with international enquiries most commonly from the USA and India.**

Figure 3.3: Investment Enquiries by Country of Origin



3.5 In terms of overall trends in Foreign Direct Investment (FDI) in Birmingham and the West Midlands:

- Countries such as China and India have shown an eagerness to invest in Midlands businesses, providing them with a technology leapfrog as well as accessing the developed markets of Western Europe.
- While no one doubts the continuing further investment that will arise from the increasingly cash rich and technology hungry countries of the developing world, authorities must be careful not to ignore the opportunities still present in other parts of the globe - especially those within the large developed nations such as the US.
- The US has for decades been the most prolific investor in the region and, to date, this continues. Indeed, figures from the Marketing Birmingham Regional Observatory show that there has been nearly £2 billion injected into the region by US investors since 2003 with over 700 US firms based here.
- The UK continues to receive the largest share of US investment into Europe and the shared language, adaptable culture and flexible labour market makes the UK and the Midlands an attractive location for US groups to access the European Market place. For example, Chicago, Birmingham's sister city, is similar to the West Midlands economy and has a mixture of mature and emerging industries. Whether it be manufacturing, R&D or business and financial services, the opportunities for cross border tie ups are easily identifiable.
- Business Birmingham is also set to continue to cast its net wider with a visit to a number of cities in the US to promote the advantages of the region as an inward investment opportunity.
- However, it is clear that in talking to US executives that the uncertainty of the Euro in the last eight months resulted in European investment decisions being put on hold. The more barriers that can be removed, the easier it will be to relay a possible message to major investors such as the US.
- With such a long-term relationship, the region has everything to play for in ensuring US investors choose the Midlands, but the area must not underestimate the competition. Having a clear proposition that demonstrates the on-going domestic investment taking place in the area and the ability of the Greater Birmingham and Solihull LEP to nurture an environment for

business to thrive, will be crucial in communicating the ambition to succeed in an increasingly complex and competitive global business network.

- Relationships will also need to be maintained with mainland Europe that accounts for some 60% of trade.
- While emerging markets are an increasingly attractive proposition, the majority should be seen as long-term investment propositions. India received less than one per cent of exports two years ago and China received circa three or four per cent but they are starting to increase exponentially. Qatar, Turkey and Brazil are also quickly expanding markets.

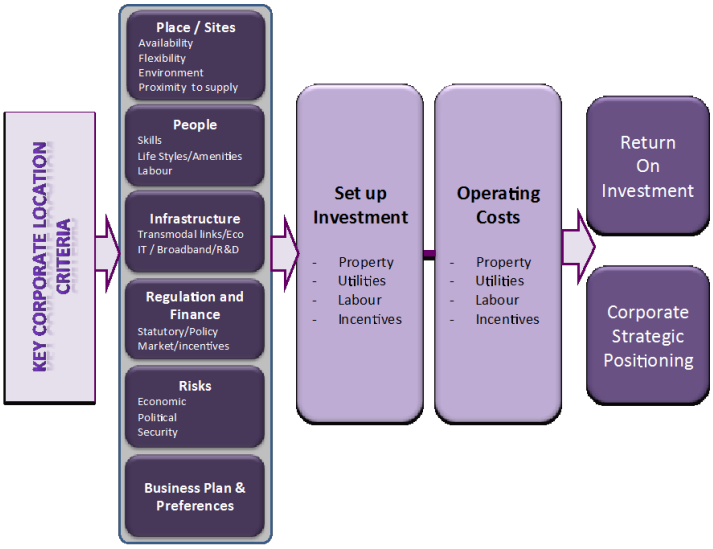
Locational Requirements of the Targeted Key Sectors

3.6 As shown in Figure 3.4, there are a number of factors that will play into the locational decisions of businesses including whether the business is starting or mature and looking to expand / relocate. Factors would include:

- Access to specialist infrastructure
- Access to a specialised labour pool
- Access to specialised knowledge (i.e. knowledge spillovers)
- The costs and risks associated with a location (this is probably more important for firms looking between countries than firms in countries looking between locations)

3.7 There will also be infrastructure and property market related factors such as the cost of transport to customers and the cost of occupancy (i.e. the level of rent or land costs for development) and the type of property that is available in relation to needs, access for workers / clients and the level and type of amenities in the surrounding locale that are considered attractive.

Figure 3.4: Key Corporate Locational Criteria and Decision Making



Source: WECD

3.8 These basic factors will be different (and their importance will differ) dependent upon the type of industry / sector that is under consideration. Because of the different needs of the target sectors, different locational requirements will be applicable between them. Figure 3.5 summarises some indicative locational requirements/characteristics for the targeted sectors drawing upon discussions with businesses but also drawing upon the WECD in-house case study material (global and national world class examples of developments in/around these sectors) and qualitative information provided by IPA World data.

3.9 The Figure also highlights that the availability of a skilled labour pool, links to universities and the ability to minimise transport costs are common in the general locational requirements as are links through the supply chain (especially links to financial and business and professional services). **In this respect, Birmingham is in a good position to capitalise on its educational assets (the universities), its central location within the country and its diverse economy (with so many of the ancillary service requirements of businesses met by the location).**

Figure 3.5: Locational Requirements of the Target Sectors

Target Sector Activities	Overall Location Requirements	Property Requirements
Advanced Manufacturing (Automotive / Aerospace, etc.)	• Skilled Labour Pool • Proximity to supply chain • Links with universities for graduates and R & D expertise • Minimise transportation costs across supply chain • Cost of labour	• Large sites for purpose built, capital intensive large investments • Range of smaller light to heavy industrial properties for supply chain but also logistics facilities • Cost of sites and cost of premises / rents of properties (for supply chain)
Financial Services / Business & Professional	• Skilled labour pool • Good infrastructure (ICT, etc.) • Universities in locale for pool of graduates • Access to good transport links	• Headquarter operations require good quality office space in central city location near major transport links • Amenities of locality • Back office operations generally require cheaper office space with good access to the transport network (often not central city locations due to rental levels of properties)
Food & Drink	• Large labour pool • Skilled labour pool • Access and proximity to supply of raw materials • Transport costs (including those associated with raw materials) • Availability of ancillary services (inc. financial and business & professional) • Proximity to customers (large number of customers, restaurants, etc.)	• Occasionally large sites for capital intensive, purpose built operations. More often light / general industrial units for production. • Good transport links, esp. for logistics operations.
Computer Services / Digital Media	• Skilled labour pool • Links to universities both for graduates and R & D activity • Links to other elements of the creative industries • Transport links • Tax costs	• Central area office / studio type space (not necessarily the same as for financial or business & professional services) • Amenities of locality • Cost of space
Life Sciences	• Skilled labour pool • Proximity to and links to universities both for graduates and for R & D activities. Also links for associated technical services. • Supply chain and associated services (financial services) • Transport access • Proximity to similar companies (knowledge spillovers)	• Occasionally large sites for large-scale purpose built facilities for capital-intensive operations. More usually a mix of light industrial space with offices for smaller scale capital investments • Cost of premises

3.10 In terms of type of space required by the target sectors the following can be used as rule of thumb.

Figure 3.6: Space/Site Characteristics for Sector/Industry Uses

Present Function of Space	Site Characteristics	Potential Use
Incubator/ Starter Units	Prestigious Site Proximity/linkages to University or Research and Development Centre	Research and Development Offices
Business Park	Accessible High quality space Good communication linkages	Offices Light Manufacturing Research and Development
Industrial Estate	Lower environmental quality Accessible	Light/Heavy Manufacturing Distribution
Distribution Park	Large floor space Accessible	Distribution

Business Perceptions of the Location

3.11 From the discussions with key stakeholders (e.g. UKTI, CBI and the Chamber of Commerce) and businesses[24] based in Birmingham, the following conclusions can be drawn:

- **Birmingham is a highly rated business location for businesses – with a combination of access to markets and resources and (less important) efficiency savings.**
- **There are only a few constraints on retention or growth faced by most sectors.**
- **The one exception to this is in the requirement for modern industrial buildings (of 100,000 sq. ft. plus) where there are significant constraints.**

3.12 The consultations have shown that views and findings are sector specific. However, there are some cross-cutting issues and these are set out below:

Strengths	Weaknesses
• **'Heart of England' location with access to first-class transport networks** • **High quality, reasonably priced commercial office property** • Size and vibrancy of local market in most sectors • **Attitude of City Council very pro-business and are also a major influence in the market through procurement '*We stay [in part] because of the helpful City Council*'** • Quality of life often highly rated • Very few reasons to move out once established	• Birmingham Airport not an international hub (missing out on Chinese opportunities). This will be addressed by the lengthening of the runway (now on site) • **Large-scale industrial property in very short supply; especially that suitable for intensive energy users** • **Rare for businesses to re-locate from London (as opposed to open a regional office)**
Opportunities	**Threats**
• HS2 will further improve transport links • Offering early support may prevent businesses leaving if they cannot grow in the area • **For local authorities to work together – to open up land which may be outside the City but still serve the economic area.**	• Other cities are improving their game in terms of attracting inward investment • No 'unique' offer – depends on ability of City to sell itself

[24] A list of consultees is provided in Annex A.

3.13 The discussions also revealed sector specific issues and these are described below by sector:

Sector	Nature
Advanced engineering	Major automotive OEMs (e.g. JLR, Caterpillar) with tier 1 and tier 2 suppliers as part of a cluster across Midlands. Generally manufacturing with design & R&D input. Long investment cycles at top of supply chain.

- Birmingham is an attractive location for advanced engineering and manufacturing businesses (and there is a vibrant network in this sector):
    - Primarily for its access to markets – it is close to customers and suppliers in the immediate vicinity and through transport network.
    - But also access to skilled resource – which is a rich pool, enhanced by good links to higher and further education. However, some parts of the city do not have the right skills and/or training for recruitment.
- Firms are unlikely to move far outside the area (unless they are expanding into new markets), given:
    - Stickiness of investment (complexity, time of finding new premises).
    - Risk of losing skilled workforce – '*After deciding not to go international because of key skills in the UK, then considered 10 mile radius of current location'* (Aero Engine Controls).
- However, those firms which want to expand in the area or are inward investors, are severely constrained by lack of appropriate space *'I get 1 enquiry per week and 80% [of searches] end in failure'* (MAS Advisor):
    - Firms are typically looking for ready-made industrial buildings with over 100,000 sq. ft. of space and have intensive power requirements.
    - '***Someone needs to take some risks and bring forward some properties. There has been no new build in 18 months'*** (MAS Advisor).
    - ***'Companies looking for modern industrial space struggled two years ago; I see no change here'*** (CBI Director/Ex-Head AWM Inward Investment).
- If the land can be found, cost appears not to be a major challenge ***'Of our £60million site development costs, land is £11million…but we were limited by very small number of sites which were large enough – we wanted 15 acres and ended up buying 25 acres***' (Aero Engine Controls – moving to Solihull in 2013).

Sector	Nature
Business, financial and professional services	Regional offices of major national accountants, banks, consultancies; or head office of regional firms. Some back office supply for international banks.

- Birmingham is an important market in its own right and can also serve as a hub to service global markets – enables global operations at lower cost base than London/South East.
- Works well for professional firms in terms of:
    - Skills – Birmingham and Warwick universities are good suppliers of graduates.
    - Quality of life for its staff – walking to work/short commute; as one of the consultees stated *'10 years ago very few lived in the city – now it is 50%' (DLA Piper)*
- Still on an upward trajectory – '*For the first time there is a consensus that leading professionals are moving back to the regions'* (DLA Piper).

- Quality of property good, well priced and currently no supply constraints (although it has been suggested there may be in the future). Sufficient supply of high quality property '***Colmore Row is address to die for and there are still properties empty'*** (Wragge).
- Professional services requiring connectivity and market presence need to be in Central Business District – and the infrastructure is generally excellent.

Sector	Nature
Environmental technologies	Large firms in waste disposal/recycling contracts; servicing local and regional markets; smaller environmental technology firms as part of automotive/aerospace supply chains.

- Birmingham area, with high density of customers is a good market for waste disposal/recycling.
- Market very much driven by local authority contracts, '*but looking to expand into private sector supply*'(Veolia).
- Birmingham has what is required in terms of space, logistics and connectivity for tanker fleets.
- Many environmental technology jobs require skilled people but many can be trained in-house.
- Concern about how real is the commitment to energy efficiency and the resulting need for investment in environmental technology. As stated by one of the consultees, *'We look at progress [on energy efficiency'] being made in other cities such as Exeter rather than Birmingham'* (Energy Company).

Sector	Nature
ITEC/Digital media	Not really an integrated sector: ranges from digital media start-ups in games sector to large business process outsourcers and telecoms providers.

- Established IT/telecoms/BPO suppliers **require sites with good access in order to support a large workforce.**
- Start-ups looking for cheaper, smaller accommodation – within existing cluster.
- Birmingham produces large number of graduates in relevant disciplines and Coventry is a good source of skilled IT people; ***'There are 60,000 new graduates a year, many of them in the disciplines we need. It's a compact Silicon Valley, a good network and community.'*** (Synapse)
- The Birmingham business base is ideal for B2B IT suppliers; rather than *'East London (which is) made up of funky customers'*, as stated by one of the consultees.
- Professional services companies understand the sector.

Assessment of Demand for Floorspace/Land by the Target Sector Activities

3.14 Projections of growth produced by the target sectors are a key component of assessing the future need for floorspace to accommodate these activities and therefore, they form the basis of assessing the overall land requirement of the sectors in the future (to the year 2030). In order to use the employment projections to anticipate floorspace requirements, the conversion factors noted in the 2010 guidance[25] have been used. These are as follows:

[25] HCA &OFFPAT, 2010, Employment Densities Guide 2nd Edition.

Figure 3.7: Floorspace per FTE job

Sector Activities	Floorspace Type	Square Metres per FTE
Advanced manufacturing	Light/General industrial	47
Financial Services	General office	12
Business & Professional	Business park	10
Food & Drink	Light industrial	47
Computer Services & Software	Business park	10
Digital Media	Business park	10
Life Sciences	Business park	10

Source: HCA Employment Densities Guide 2010

3.15 A number of issues need to be considered in taking forward these calculations. These are summarised below:

- It is important to bear in mind that there is inherent uncertainty in projecting any economic activity, particularly over the longer-term as in this case. The wider global and regulatory drivers that may feed into the future development of an industry cannot be accounted for in calculations of this type. Therefore, it is important that any assessments of floorspace / land requirement err on the side of caution.
- Because many of the supply chain industries for the automotive and aerospace industries will fall within the wider advanced manufacturing sector, it is considered that it is best to use this wider sector as a basis for determining floorspace / land requirements.
- It is considered that rather than general industrial type operations, it is likely that many aspects of the future development in the automotive, aerospace and the food and drink sectors will generally fall within light industrial type uses.
- It is also considered that many of the financial services sector operations would be within the city centre and therefore tend to occupy more general type office space[26].
- Business park type space is considered to be appropriate for the remaining uses.

3.16 Using these conversion factors with changes in FTE employment numbers[27]can produce the overall floorspace requirements. Floorspace requirements for advanced manufacturing have been based on estimates of future GVA growth. Assessment of floorspace requirements for this sector based on past trends of employment has been deemed to be an inappropriate methodology for this study given known factors for this sector i.e. significant investments and employment increases announced and anticipated in the sector (through the automotive industry and its considerable supply chain). As noted in the introduction of this report, the methodology deployed is also verified by examining the relationship between GVA and floorspace[28]. The relationship is strong and positive.

[26] Whilst this type of space is a slightly lower density than the business park type space, despite perhaps being more applicable to centres (where costs are such that densities in theory may well increase), there is likely to be relatively increased amounts of meeting room space, etc. which leads to the lower density.

[27] The projections of part-time employment as well as the projections of total employment via the Cambridge Econometrics LEFM have been used to derive conversion factors moving forward and so convert the employment projections into projections of FTEs.

[28] This has been undertaken by way of regressing floorspace on GVA (with a time trend and through the origin). Floorspace figures have been taken from the rateable value statistics (produced by ONS) with GVA having been taken from the Cambridge Econometrics LEFM. Due to the limited floorspace data available, the regression could only be undertaken for total manufacturing GVA and floorspace and for the years 1998 – 2008. However, a positive relationship was found that was statistically significant.

Figure3.8: Changes in FTE Employment in Key Sector Activities in Birmingham

Sector Activities	Change in FTEs 2012 – 2030
Financial Services	3,430
Business & Professional	4,110
Food & Drink	840
Computer Services & Software	970
Digital Media	120
Life Sciences	140

Source: WECD based on Cambridge Econometrics LEFM. Note: Figures have been rounded to the nearest 10.

Figure 3.9: Changes in GVA in Advanced Manufacturing 2012 - 2030

Sector Activities	Change in GVA 2012 – 2030 (£m)
Automotive	12.23
Aerospace	31.52
Advanced Manufacturing (total)	105.4

Source: WECD based on Cambridge Econometrics LEFM.

3.17 As well as the target sectors noted above, there is also interest in the environmental technologies and logistics sectors. For this reason, we also present the floorspace and land requirements resulting from the projected changes in employment in these sectors (Figure 3.10)[29].

3.18 It needs to be noted that in producing the projections of floorspace requirements there are a number of areas where error can creep in[30]. In view of this, there is a need to provide a margin for choice and uncertainty. We consider that **a margin of two years' worth of floorspace** is a **reasonable margin that will allow for uncertainty and choice whilst not producing a major demand on the allocation of sites through the planning system**[31]. Figure 3.10 presents these calculations.

3.19 How this floorspace requirement can be accommodated in terms of land will depend on a number of factors including the type and amount of land available and the nature and health of the commercial property market at the time. Therefore, it is possible that different overall levels of land could accommodate the projected floorspace. For the purposes of this study, it is assumed that the floorspace in question would equate to 40% of the overall plot and with office type floorspace being developed over two storeys.

3.20 The resulting requirement in terms of land would be as presented in Figure 3.11. **Expected growth within the target (and additional) sector activities is therefore expected to produce a**

[29] Although employment and GVA in the environmental technologies sector is projected to decline (as it is based on past trends), there is a national and global drive that will affect positively the sector. It should also be noted that the definition of environmental technologies used for the table above revolves around land remediation, power generation and supply, water purification, etc. Included within the broader sector however will be technologies proper and their manufacture (e.g. solar panels). It is considered that many of these industries would fall within the advanced manufacturing sector and as such any requirement for these industries has been included in the total floorspace requirement.

[30] Firstly, there will be uncertainty in the projections of employment (and GVA), secondly there will be uncertainty in the relationship between employment / GVA and floorspace and finally there will be general uncertainty regarding the economic future, particularly over the longer-term. It is also the case that there should be choice available for companies wishing to start up, expand or relocate to Birmingham in terms of both location and premises; choice can provide for a more competitive property market and better enable general economic growth over time.

[31] Whilst it is perhaps not ideal to have a large 'over-supply' of sites for particular uses (as this could hamper the development of other uses that need land whilst at the same time keeping values lower than might otherwise be the case), given the importance of economic development to an area it is best in the case of employment floorspace / land to err on the side of caution. Given the overall economic conditions, two years' worth of floorspace has been chosen to reflect the rough average period of development from the beginning of the process.

requirement for a total of 617,050 m² between 2012 and 2030 which could translate into a total land requirement of circa 136.3 ha.

Figure 3.10: Floorspace Requirements by Key Sector Activities, Birmingham

Sector Activities	Total Floorspace (m²) Required 2012 – 2030
Advanced Manufacturing	195,800
Financial Services	62,730
Business & Professional	62,360
Food & Drink	60,560
Computer Services	14,830
Digital Media	1,830
Life Sciences	2,140
Environmental technologies	NA
Logistics	216,800
TOTAL	**617,050**

Source: WECD based on Cambridge Econometrics LEFM and Rateable floorspace statistics data from ONS. Note: Figures have been rounded to the nearest 10. These totals have been calculated on the basis of a split time period between 2012 and 2025 and 2025 – 2030; due to the application of the margin for choice and uncertainty over the two separate periods there is a slightly higher proportionate requirement between 2025 and 2030. The total is presented for clarity.

Figure 3.11: Initial Land Requirements 2012 – 2030

Sector Activities	Total Land (ha) Required 2012 – 2030
Advanced Manufacturing	49
Financial Services	7.8
Business & Professional	7.8
Food & Drink	15.1
Computer Services	1.9
Digital Media	0.2
Life Sciences	0.3
Environmental Technologies	NA
Logistics	54.2
TOTAL	**136.3**

Source: WECD based on Cambridge Econometrics LEFM and Rateable floorspace statistics data from ONS.
Note: figures are rounded. Office type space (i.e. financial services, business and professional services, computer services and software, digital media and life sciences) are taken to be developed on 2 storeys.

3.21 It is also expected that **the multiplier effects of the high value added/advanced manufacturing sector would feed through (to different degrees) in the other target sectors and therefore lead to further land requirements.** Land requirements taking into account these multiplier effects are set out in Figure 3.12. It can be seen that the overall multiplier effect in terms of land requirements could be significant, leading to an overall additional requirement of some 36 ha, the majority of this increase being within the advanced manufacturing sector.

Figure 3.12: Initial Land Requirements 2012 – 2030 (with multiplier effect)

Sector Activities	Total Land (ha) Required 2012 – 2030	Total Land (ha) Required 2012 – 2030 with Multiplier Effect
Advanced Manufacturing	49	64.77
Financial Services	7.8	9.65
Business & Professional	7.8	9.49
Food & Drink	15.1	21.5
Computer Services	1.9	2.21
Digital Media	0.2	0.3
Life Sciences	0.3	0.3
Environmental Technologies	NA	NA
Logistics	54.2	64
TOTAL	**136.3**	**172.19**

Source: WECD based on Cambridge Econometrics LEFM and Rateable floorspace statistics data from ONS.
Note: figures are rounded. Office type space (i.e. financial services, business and professional services, computer services and software, digital media and life sciences) are taken to be developed on 2 storeys.

SUMMARY – DEMAND FOR SPACE

- There are a number of factors that play into the location decisions of businesses including access to specialist infrastructure, access to a specialised labour pool and access to specialised knowledge (i.e. knowledge spill overs).
- There will also be infrastructure and property market related factors such as the cost of transport to customers and the cost of occupancy (i.e. the level of rent or land costs for development) and the type of property that is available in relation to needs, access for workers / clients and the level and type of amenities in the surrounding locale that are considered attractive.
- **Overall, Birmingham is seen as an attractive place to invest partly due to the availability of reasonably priced office properties, its location and access to first class transport networks** (although a weakness is seen in Birmingham Airport not being an international hub).
- The wave of optimism running through the West Midlands automotive component sector is bound to drive increased demand for high-quality industrial property. The investment from global car manufacturers and the rapid growth of the export market means that the automotive supply chain would be expanding. With this expansion, companies would need more space.
- In fact the majority of enquiries have also been predominantly for industrial space. However, the general feedback is that **large-scale industrial property is in very short supply, especially that suitable for intensive energy users**.
- Overall, **to 2030**, projections indicate that there **will be a requirement for a total of 617,050 square metres of floorspace. This translates into a requirement for around 136.3 ha of land**. Applying the multiplier effects of the known extra investment in advanced manufacturing, this figure would increase to **around 172 ha of land.**

4. Assessment of the Sites for Economic Zones

4.1 This section provides an overview of the land offer in Birmingham and assesses the sites of the economic zones.

Local Market Overview

- Birmingham is the UK's second largest city, located approximately 190km (118 miles) north west of London, 120km (75 miles) south of Manchester and 68km (42 miles) south west of Leicester. It has a district population of 1,073,000, and an urban area population of 2,383,081 within 20km (12.5 miles), thus forming a significant regional commercial centre with a strong international profile.
- Birmingham is located at the heart of the national motorway network, with the M6, M6 Toll, M40, M42 and M5 all serving the city and providing excellent access to the rest of the UK. Birmingham Airport provides international air travel while Birmingham New Street and Birmingham International train stations provide fast rail connections to other major centres throughout the UK, with London reached in a fastest journey time of 1hr 8mins.
- Birmingham Business Park is located approximately 19km (12 miles) east of Birmingham city centre, adjacent to the M42. The park is served by J6 & J7 of the M42 providing easy access to both the M6 to the north and M40 to the south. Birmingham Airport and train station are located approximately 3.5km (2 miles) to the south of the park.

The Market for Industrial Land

- At national level, reports from a variety of property companies including DTZ, Jones Lang Lasalle (JLL), Savills and Knight Frank suggest that there has been an increase in uptake for industrial space in Q1 of 2012 at 8.1m sq.ft, the highest level for 2 years according to DTZ Property Times UK Industrial Q2 2012.
- However, this has not been purely for A grade stock as there is a shortage of available space, which has led to pressure for B grade space with the highest level of take up for this sector seen since 2010 (DTZ Property Times UK Industrial Q2 2012, a view supported by the other research documents). Overall, there is a shortage of good quality space ready and available to occupy which has been compounded by the fact that developers are still not sufficiently confident to undertake purely speculative industrial schemes. Indeed occupiers are considering design and build schemes, but this is producing other problems in terms of timescale delay. Consequently there is movement in the occupier market towards B grade space as an alternative solution to their space requirements.
- In light of the above, rentals have remained flat. However, it is reported that incentives such as rent-free (which form a part of the overall financial package) are hardening. This is especially true in the A grade space market. There may be modest growth in the rental values of B grade space in areas where A grade supply is restricted and there has been a shift in demand.
- Despite the reticence of developers there is a reported increase in the supply of speculative industrial space in the stronger markets in London and the South East. JLL report levels of some 418,000 sq.ft in London and 93,000 sq.ft in the South East with a predominance for smaller units of less than 100,000 sq.ft. Further afield there is a modest amount of space in the development pipeline with the most in the North West (100,000sqft) dropping to 40,000sqft in the South West and 38,000sqft in the West Midlands. Notably as at May 2012 JLL report there is no speculative space in the North East, Yorkshire & Humberside, East Midlands, East Anglia and Scotland.

- Despite the reduction in market activity from the supermarket chains, retailers and e-tailers, there is an element of future confidence for further market activity in the regions highlighted by several major automotive led deals including Land Rover at Halewood, Steinhoff at Magna Park, Nissan in the North East and Jaguar Land Rover at I54. However there is continued reluctance from both occupiers and developers to commit to new projects so long as there is continued uncertainty in the Eurozone.
- According to the latest statistics from CBRE, from July to September 2012, take-up of large industrial units (over 100,000 sq.ft) totalled 530,00 sq.ft across the East and West Midlands – this representing a 15% increase on the same period last year. Demand for industrial space in Birmingham has recovered strongly since 2010, when take-up fell to the lowest levels recorded in the market. This has been down to the manufacturing sector looking for large units, in particular companies related to the automotive industry. Jaguar Land Rover has had a dramatic increase in sales since 2010 and it has significantly increased production at its two factories in Castle Bromwich and Solihull. Jaguar has also taken 160,000 sq.ft (B8 space) at the Fort Building during 2012; according to the Estates Gazette JLR and Prologis agreed a rent on the 166,052 sq.ft DC3 building on Wingfoot Close, off the A47 Fort Parkway dual carriageway, between junctions 5 and 6 of the M6.
- The increase in production at Jaguar has led to growth in demand from companies who operate in the supply chain and require units in close proximity to the main plant. There has also been growth elsewhere in the automotive industry. For example, this year has seen Toyota Tsusho take the 115,600 sq.ft Unit at Meteor Park in Aston.
- Historically, the West Midlands has had a sizeable distribution industry, partly to service the vast manufacturing base. In recent years, Birmingham's position at the heart of the motorway network has attracted major distribution and retail firms to locate their logistics operations here. These occupiers now dominate the warehouse employment profile. Major occupiers are based to the north east of the city in the 'Golden Triangle' formed by the nearby M1, M6 (M6 Toll) and M42.
- 2012 has seen significant demand for big sheds in the region. Engine controls manufacturer Aero Engine Controls was granted planning permission to build a bespoke 250,000sq.ft facility that will consolidate their existing operations in the region and also enable expansion. There has been further manufacturing demand from Arcelor Mittal who has placed 120,000 sq.ft under offer at the Hub in Witton. Further large lettings have come from Yearsley Group (200,000 sq.ft), Headlam (157,700 sq.ft) and Minor, Weir and Willis (150,000 sq.ft).
- Prologis, the UK's largest developer of industrial and distribution property has let most of its facilities in the West Midlands, so when a newly vacant building comes onto the market, the company generally sees a great deal of interest from potential occupiers.
- At Fort Dunlop, for example, a 167,000 square foot Prologis building will become available at the end of March and the joint agents, BNP Paribas and Cushman & Wakefield, are already receiving enquiries. When vacant, the facility, which has been used as an e-commerce distribution centre, will be refurbished ready for a new customer. *'The Fort Dunlop building is ideally situated for a logistics operation,'* said Alan Sarjant, Senior Vice President at Prologis *'…It is located at the heart of the West Midlands motorway network, close to Junctions 5 and 6 of the M6 and within easy reach of the M6 Toll, the M42 and the M5'.*
- There has also been a significant recovery in demand for units under 100,000sq.ft. Units of between 50,000 and 100,000 sq.ft have seen strong take-up with deals for Novarto, Smiths News and BES ltd. 2011 and 2012 have also seen similar size units taken for Davies Turner, Netlynk, Pointbid Logistics Systems and Farmfoods ltd. It should be noted that after a

number of recent big shed deals there are now very few modern units over 100,00 sq.ft available within Birmingham.

4.2 In terms of key facts and figures:

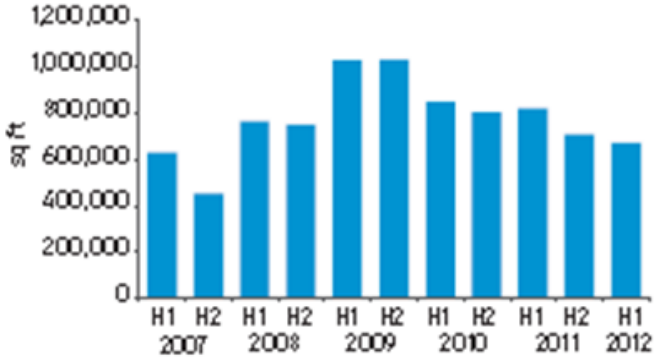
- The total industrial stock at the end of 2007 was 84.5million sq.ft. This makes it the largest industrial market in the country; the nearest sized centre is Manchester.
- The stock can be broken down into factories and warehousing. If broken down, this equates to 55% factories and 45% warehousing.
- In Birmingham, 3.5% of total industrial stock is new and has been built in the past five years.
- Between 2006 and 2011, completions in the main local authority district averaged 596,000 sq.ft per annum. In 2011 completions totalled 454,000 sq.ft compared to 1,042,000 sq.ft in 2008.
- **There has been a very low level of development in Birmingham during the economic downturn. In 2009 and 2010, the vast majority of space completed was speculative, however the reverse was true in 2011, when completions were dominated by pre-lets/ purpose-built schemes.**
- Current data held by Colliers International suggests a current vacancy rate of 8,094,000 sq.ft – an estimated 9.6%. This is well above historic trends (the properties are not of the right quality, size, etc.).
- There is currently 424,000 sq.ft of space under construction in the Birmingham market. It is expected that 213,000 sq.ft will complete this year and another 210,000 sq.ft in 2013. **All this space is pre-let or purpose built.**
- There is 11.3 million sq.ft in the pipeline, excluding space that is currently underway. 8.4 million has planning permission and 2.9 million is at pre-application stage.
- In the pipeline, there are 24 schemes of over 100,000 sq.ft (see **Annex E** of the report).

The Market for Office Use Space

- The DTZ Property Times report on the UK Regional Offices Q2 2012 states that the regional office take up fell to 785,000 sq.ft in Q2. This is well below the quarterly average of 985,000 sq.ft, with a forecast for the annual take up for 2012 to fall marginally. In their national round up of office activity, Knight Frank also report that most markets have experienced lower take up in Q2 2012 compared with the 2011 quarterly average. Scotland has proved the exception to this with increased activity in Aberdeen, Edinburgh and Glasgow.
- The **common theme across the regional centres is a shortage of A grade space combined with a lack of willingness from occupiers to commit to new space in light of continued economic uncertainty.** Lease events, consolidation, cost saving and opportunism continue to be the main precursors to deals. As a consequence, **where transactions have occurred these seem to be in the B grade space market that offers companies good value for money.**
- Speculative development has remained muted, with Knight Frank reporting speculative office development in only 4 of the 11 regional markets analysed. Birmingham is named as only one of two centres (along with Manchester), which have in excess of 100,000 sq.ft of speculative office space underway.
- Office activity across the West Midlands is following the national trend with few transactions. Birmingham is the main provider of top quality prime office space as befits its position in the national economy and supporting the financial and professional services service sector.

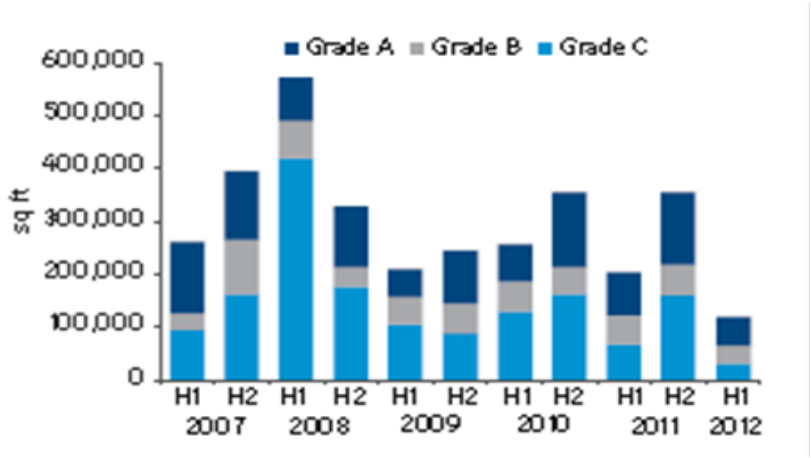
- Birmingham Market Office Forum comprises a mix of the city's property agents and Marketing Birmingham. Their information states that central Birmingham has a total office stock of 18.4m sq.ft with vacant space accounting for 4.1m sq.ft across the range from Grade A space to more cost effective accommodation. Interestingly, only 900,00 sq.ft of this comprises new (538,000sqft) or comprehensively refurbished Grade A accommodation available for immediate accommodation. As at March 2012, two major projects included in this space are located at Two Snow Hill (120,00 sq.ft) and Five Brindleyplace (134,000 sq.ft).
- The general consensus of opinion gathered from interviews with property advisers is that **activity in the office market in Birmingham is subdued**. According to Savills Summer 2012 Spotlight Birmingham Offices, demand for office space over the first half of 2012 totalled some 112,346 sq.ft, 56% down on the same period last year. Indeed, figures for 2011 take up total 669,738 sq.ft with a peak of activity in Q3 at 220,639 sq.ft. The major deals completed averaged around the 25 – 55,000 sq.ft size band.
- Prime rents remain at £27.50 per sq.ft. There is no expectation of a significant uplift in city core headline rents during the course of 2012. Incentive packages continue to enable prime rents to remain at current levels with net effective rents at least 20% below headline figures. It is anticipated that there will be upward movement from late 2013 onwards. The 2014 forecast projects headline rents reaching £31 per sq.ft.
- City core Grade A availability has continued its downward trend as much due to absence of new supply as to any significant uplift in transaction levels. While Q1 take-up of Grade A space in the city core was very modest, Q2 has seen a significant improvement, rising from 3,900 sq.ft in Q1 2012 to 24,319 sq.ft in Q2.
- The increase in Grade A take-up was enough to ensure the positive absorption of Grade A space continued, not just in the core, but across Birmingham as a whole. With key deals expected to complete in H2 2012, it is anticipated that Grade A absorption will see a sharp upward improvement.
- Take-up in Birmingham in H1 2012 has been below average, although Q2 transaction levels showed a marked improvement over Q1 of more than 70% quarter on quarter. Deal negotiations remain protracted and at the mercy of boardroom decision-making. Nevertheless there are some requirements coming out. Microsoft is looking for 40,000sq.ft and Allianz (15,000 sq.ft) and Capita (10,000 sq.ft) have new searches.

Figure 4.1: City Core Grade A Availability



Source: Colliers International

Figure 4.2: Take-up of Office Space by Grade



Source: Colliers International

- Overall, the exceptionally limited number of development opportunities set to come to the market over the next three years will also help to accelerate absorption of Grade A offering during the second half of 2012 and into 2013.
- It is worth noting that a few exceptions exist including the progress at Birmingham Science Park where Thomas Vale has been selected as the JV partner for the new £35m Digital Plaza Development. The first phase is due to deliver 30,000sqft of speculative offices.
- Deutsche Bank also expanded its presence in Birmingham earlier this year by taking 27,600 sq.ft in Baskerville House. This is in addition to the space it occupies at One Brindleyplace.The move is part of the bank's strategy to create a series of globally connected operating centres. Birmingham was selected as a support arm for London ahead of rival cities, such as Manchester, for a number of reasons. Jan Teo, chief operating officer at Deutsche Bank, says: "***The proximity to London was important, and we were particularly interested in the labour pool and availability of talented people. We've made a success out of this location and proved we can do it.*** "Advantage West Midlands' inward investment and access-to-finance teams also played a key role, thanks to a £1m Selective Finance for Investment in England grant. A further grant of £675,000 was offered to the bank, which has created over 500 jobs in the city.
- There has also been a shift in the secondhand office space market with a number of owners considering alternative uses for their space. BNPParibas report in their Office Market Review that Seven Capital was granted consent to convert Auchinleck house into a 300 bed hotel whilst Aviva Investors and Whitbread continue to pursue their plans to convert Exchange Building office tower into a Premier Inn hotel.
- In terms of the out of centre market, office take-up along the M42 is outpacing take-up in Birmingham city centre for the first time since Colliers began collating official take-up figures in 2005. In the first half of 2012, 401,691 sq.ft of offices were let along the M42 corridor, compared with just 147,654 sq.ft in Birmingham's central office core. The half-year figures for the M42 have already surpassed 2011's total take –up of 198,337 sq.ft.
- All property agents agreed that demand is being fuelled by the private sector with the rising fortunes of Jaguar Land Rover and Rolls Royce having boosted take-up in the Coventry and Warwickshire area, from both the car makers and their supply chain.
- Supply is also beginning to tighten in certain locations, for example along the M5 - from Worcester to Walsall, there are just three buildings in excess of 10,000 sq.ft remaining. In

Bromsgrove, there is '*nothing over 7,500 sq.ft and in Stratford-Upon-Avon just one good quality building of any size is still available*.

- It is not, however, as positive in the south western quarter of the city. The impact of high levels of business space supply, general market uncertainty and competition for occupiers has led to significant falls in rental levels and increase in incentive packages. For example, Edgbaston has seen falls in rental levels of up to fifty per cent. Despite this, there are pockets of office development in this area. Examples include a scheme at Pershore Road South, Kings Norton Business Centre that SEGRO has successfully completed (which has led to them also letting a small building business space scheme). At Longbridge, St Modwen has developed two business space buildings on the former Rover works at Devon Way of 4,181 sq.m and 2,880 sq.m, now known as Longbridge ITEC Park. Both have been successful in securing smaller business space lettings to starter and medium-sized companies and are effectively operated as an Innovation Centre.

Assessment of the Sites for Economic Zones

4.3 The overall attractiveness of the sites has been assessed against the following criteria:

Present Function of Space	Site Characteristics	Potential Use
Incubator/ Starter Units	Prestigious Site Proximity/linkages to University or Research and Development Centre	Research and Development Offices
Business Park	Accessible High quality space Good communication linkages	Offices Light Manufacturing Research and Development
Industrial Estate	Lower environmental quality Accessible	Light/Heavy Manufacturing Distribution
Distribution Park	Large floor space Accessible	Distribution

Advanced Manufacturing Hub

- The proposed site is approximately 20 hectares (50 acres) gross and currently comprises a mix of uses including industrial, small-scale retail, leisure, community and residential uses. It also incorporates a large area of vacant land on the former Holte and Priory Housing Estate and the Serpentine site. The site provides a range of employment opportunities including manufacturing activities, research and development facilities, headquarter offices and other supporting uses. The City Council and the Homes and Communities Agency are in the process of using public money to address issues of accessibility and land remediation and there has already been significant market interest from local businesses seeking to expand. A significant pre-let and high quality public realm could aid in bringing the site forward in a relatively short timescale.
- *Market Attractiveness* – Office development would likely be difficult in this area, but could prove attractive to companies within the advanced manufacturing sector. The site has reasonable access to Birmingham city centre and there are two railway stations serving the site.
- *Potential to accommodate new investors* –Development as an advanced manufacturing hub would likely be aided through a substantial pre-let to a company in this sector and / or associated R&D from one of the Birmingham universities (Sheffield Advanced Manufacturing

Park/ Central Park Manchester are two comparable developments). Most of the site would appear to be in public ownership (HCA/BCC), and this, coupled with the investment currently being made in the site, should prove beneficial.

- *Issues/ barriers to development* – The environment of the surrounding area may be a factor in the decision making of firms. The site has some difficulties in directly accessing the A38 expressway and in general the site is fragmented by road and rail infrastructure that limits the number of large plots that can be provided.
- *Shortage/ Surplus of types of property* – Given the investment in the site through public agencies this site could prove attractive to businesses within the traditional and advanced manufacturing sectors.

Environmental Enterprise District (in Tyseley)

- This is an important industrial location in the city representing a traditional industrial estate with access to the strategic road network. It is synonymous with the Tyseley Energy Recovery Facility. There is an extensive supply of industrial property within the District that covers over 100 hectares with over 230 businesses. The City Council estimates that the scope for redevelopment could create in excess of 100,000 sq.m of new floorspace. There may be difficulties in undertaking large developments, as there does not appear to be an availability of large rationalised development plots. However, information from the City Council shows that a number of sites may come forward that average 3 ha in size.
- *Market Attractiveness* – good, established employment site in traditional industrial area. The site is circa three miles from the city centre, with road access commensurate with its more central location. Access to the motorway network is not as good as is the case with some of the other sites considered in this report. The Birmingham to London (Marylebone) railway line passes through the site and there are some local stations.
- *Potential to accommodate new investors* – There do not appear to be large opportunities available for new development, although there is a reasonable sized site available to the rear of Webster &Horsfall and there is also some scope on sites adjacent to railway sidings. There are also a number of development opportunities that average 3 ha in size (ranging from 2.08 – 4.4 ha). The area has been highlighted as an opportunity area for environmental industries, building on the presence of the large energy from waste plant.
- *Issues/ barriers to development* – issues to be considered include multiple land ownerships, congestion and access to strategic routes.
- *Shortage/ Surplus of types of property* – The site has a wide range of property types including an excess of traditional stock, new warehouses, new office buildings, hybrid workspace and a very large Energy from Waste plant.

Life Sciences Campus

- Whilst the site sits outside the traditional central Birmingham market, the site's proximity to the university and hospital should, in the face of the general development of the environs coupled with funding, prove attractive to companies within the life sciences sector.
- *Market Attractiveness* – Recently, there have been encouraging enquiries within the Bio-Pharma / Clinical Trials field with combined jobs of circa 100. There is support from the University Hospital Trust and the University of Birmingham.
- *Potential to accommodate new investors* – The proximity of the University and the new hospital (and the existing hospital) and Life Sciences designation as a key sector, should attract investment to the site.

- *Issues/ barriers to development* – Site conditions could be a barrier to delivery. However, there are advanced discussions for the city to purchase the site and for the site to be remediated. It is capable of being laid out as a landscaped campus.
- *Shortage/ Surplus of types of property* – There would be 4 ha of land available. There is very little other land available in the sider area.

The Food Hub

- The Food Hub is more than 80 acres strategically located between junctions six and seven of the M6 and has planning consent for office, production, warehouse and distribution uses. PRUPIM has developed the £150m scheme, funded by Prudential to offer bespoke high bay units built to individual requirements ranging from 40,000sq.ft up to 750,000sq.ft. This is a good quality site providing rapid access to the motorway network. Access to the rest of the city is through the local road network.
- *Market Attractiveness* – Modern units on a masterplanned site adjacent to the M6. Distribution roads around the city are not generally considered as good as in other locations and this has led to a slower take-up of space on the site than originally envisaged (not helped by the recession).
- *Potential to accommodate new investors* – Discussions are being held regarding a proposal for an energy from waste plant on the site.
- *Issues/ barriers to development* – Access to distributor roads.
- *Shortage/ Surplus of types of property* - There are several large development sites available, although this may go if the wholesale market relocates and / or an energy from waste plant were to be approved.

Longbridge ITEC Park

- Situated about eight miles south west of the city centre, on the site of the former MG Rover plant, St Modwen are responsible for this £1billion regeneration project. This has the potential for 300,000 sq.ft of warehousing space; however recent developments have focused on the retail/ education / residential markets. Consultations with agents suggest that the site is a reasonable office location and that it can support circa 100,000sq.ft of space.
- *Market Attractiveness* – the existing innovation centre and follow on space has proved that there is reasonable demand for office accommodation in the area. Access to the M42/ M5 is reasonable, but it may not be a prime logistics site (as pointed out by agents consulted as part of this study).
- *Potential to accommodate new investors* – Preliminary work into developing the fibre optic network to serve the site is now in progress. A business case is being prepared to provide a basis for bids for future funding and site marketing. Due to its heritage and the location of skilled staff in the hinterland, it would appear that the site could lend itself to be a manufacturing/ advanced manufacturing hub as well as potentially being suitable for a number of the target sectors. There is a large cleared site with frontage on to the A38.
- *Issues/ barriers to development* – Market conditions (and further from the city centre).
- *Shortage/ Surplus of types of property* – cleared site.

4.4 Whilst not an economic zone, Prologis Park is of importance to the logistics sector which could be a key user of space in the future and therefore is assessed here. Midpoint Park is situated between the M6 and M6 Toll. 2011 saw the completion of a 155,000sq.ft pre-let to Europa Worldwide Logistics at the second phase of development. Phase 1 in 2008 saw 550,000sq.ft of

speculative space developed. The two units were taken by Pallet Network and Kuehne & Nagel. Other major occupiers include Cadbury, Hozelock and The Works. This is a high quality site in a sought after location. There are several development plots available and these could be attractive to a range of industries, although the lack of rail access limits its appeal as a strategic site. It is considered that logistics will continue to be the dominant use at this location.

4.5 The Washwood Heath sites (including the former Alstom / LDV sites as well as the land between Wolseley Drive and Drews Lane), whilst not an economic zone either, could also be a significant site for a number of sectors in Birmingham (including logistics). The Washwood Heath sites together total 55 hectares and could provide one of the largest industrial development opportunities in the City. The sites are now available at the same time and there is a willingness from the three owners to work together to deliver the opportunity. St. Modwens have permission to redevelop the former Alstom train factory into 1 million sq.ft of industrial space and the owners of the LDV site have already cleared their site. Agents are of the view that this is an excellent site and in normal circumstances this would likely be developed as a logistics site. However, the site is not currently available; **it is safeguarded within the draft safeguarding area published as part of the Safeguarding Consultation for Phase 1 of HS2 between London and the West Midlands (launched by the Secretary of State for Transport in October 2012).**

4.6 Figure 4.3 presents a summary of the assessment of all key sites designated as economic zones.

Figure 4.3: Assessment of Key Sites for Economic Zones

Site	Economic Zone/Site Attributes
Advanced Manufacturing Hub	The site has reasonable access to the strategic road network but the number of large plots that can be provided is limited. The current and planned public sector investment into and around the site, coupled with a pre-let, may well make the site attractive to operations within the advanced manufacturing sector.
Environmental Enterprise District	This is a very large, more 'traditional' industrial area covering some 200 ha in total. There is reasonable public transport access to the area (though not necessarily through it). There are a plethora of uses currently within Tyseley, including a large energy to waste plant. The multiplicity of ownerships could be a barrier to large-scale development.
The Food Hub	This site is of good quality with plots available for development. There is reasonable access to the strategic road network and good access to a relatively large labour pool. There are no major impediments to development.
Life Sciences Campus	This site is very accessible (particularly by public transport), however its topography and the likely presence of contamination could prolong development of the site coming forward. Its proximity to the university and hospital could prove attractive to companies within the life sciences sector, especially if funding were available to aid its development, remediation and re-levelling.
Longbridge ITEC Park	Longbridge is of prime importance both in policy and land supply terms. There is reasonable access to the strategic road network and it affords access to a large (and skilled) labour pool. Public transport accessibility is good. Apart from general market conditions there would appear to be no major impediments to development.

5. Overall Assessment and Conclusions

5.1 The overall aim of the study has been to review the provision of specific employment land sites in Birmingham in the light of the need to accommodate the future requirements of the local economy and the economic development vision for Birmingham.

5.2 The information gathered through the study enables a review of the sites designated as economic zones against the requirements of the sectors that have been identified as key for the sustainable economic development and growth of Birmingham. Figure 5.1provides a summary in the form of a SWOT analysis of sectors and sites.

Figure 5.1: SWOT Analysis of Economic Zones' Sites and Sectors – Qualitative Assessment

Sector	Locational Requirements	Property Requirements	Site Assessment
Advanced Manufacturing (Automotive / Aerospace, etc.)	Access to a skilled labour pool and proximity to the supply chain are important. Transportation costs (not just pecuniary) especially to the supply chain are also important. Ideally the location should also enable close links to universities for both R&D and a pool of graduates	For larger operations, large sites will be required that enable capital-intensive development. For smaller (supplier) operations there will need to be a range of smaller light – heavier industrial properties available for rental; therefore the costs of sites and premises are a major factor.	**Advance Manufacturing Hub** – This site is identified for industrial use and its access to the road network and central area of Birmingham offers opportunities for linkages. Much of the site being within 'public' ownership offers opportunities for large-scale redevelopment. Potentially more attractive to current business than FDI (although current investment could change that). Also access to a large, skilled labour pool. Following land assembly large developments could be accommodated on two plots but the remainder of the site is more suitable for smaller and medium sized units.
Strengths			Proximity to the strategic road network. Good access to the city centre. Attractive to existing businesses seeking expansion.
Weaknesses			The site is fragmented by road and rail infrastructure that limits the number of large plots that can be provided. The location of the site in relation to the Expressway and the current quality of its environment, whilst potential disincentives, could be alleviated through the public sector investment currently being undertaken.
Opportunities			Much of the site is in public ownership that could potentially allow comprehensive re-development.
Threats			The zone is likely to need a substantial pre-let Remediation requirements could impact upon development costs.

Food & Drink	The food and drink sector will require access to a large labour pool (including skilled labour), good access to the transportation network (especially the strategic road network) for access to raw materials, proximity to customers and an availability of ancillary services (an element of the supply chain).	There will likely be an occasional need for (relatively) large-scale sites for purpose built, capital-intensive operations. More often however, there will likely be a need for light / general industrial premises for small-scale manufacturing and packaging operations.	**The Food Hub** – This site would appear to offer the opportunity for this sector in terms of being capable of accommodating a range of size of development (manufacturing operations are located within the vicinity). There is good access to a large pool of labour and access to the strategic road network is good. The environment within the site is also of a quality that is conducive to modern-day light industrial / distributive operations.
Strengths			This is a good quality site with links to the strategic road network There is relatively good access to a large labour pool.
Weaknesses			Access to the rest of the city (via the local road network) is not ideal which may have led to a slow take-up of the opportunities available at the site over recent years.
Opportunities			Good quality large plots are available for development.
Threats			There is a dearth of large-scale development opportunities left There is a possibility that the opportunities that are available could come forward for other uses.
Computer Services & Software / Digital Media	These sectors require access to a skilled labour pool and links to universities for both graduates and R&D purposes. Good transport links are beneficial as are the amenities within a location. Links to the wider creative industries would also point towards proximity to these sectors.	Many of these operations will be in the form of small companies (particularly in the digital media sector) who would place a premium on central city locations that offer relatively lower cost office type accommodation; however the costs of space (especially for larger operations) and the amenities of the locality will be important considerations.	**Longbridge ITEC Park** – The site has already seen some office development (on the east side) and the surrounding area has the appearance of a commercial (office-based) location. There are good transport links, both public and road and the site offers the opportunity for large-scale development.
Strengths			Good links to the strategic road network. Relatively good access to a large pool

			of labour including skilled labour (this would also be true in the case of advanced manufacturing).
Weaknesses			The site may not be seen as a prime location for HQ operations.
Opportunities			The site is good for (more back office) office development.
Threats			Higher values that could be achieved by alternative uses (although contrary to policy).
Life Sciences	This sector would require access to a skilled labour pool, a quality environment, amenities and close proximity to universities (particularly for R&D purposes). Proximity to other firms in the same or closely related business would also likely be beneficial.	Occasionally larger scale sites may be required for purpose built capital-intensive operations, but there will also be a need for smaller light industrial type space in a good quality environment that can accommodate R&D activities. For such space costs will be an important consideration.	**Life Science Campus** – This site offers proximity to hospitals and universities and has reasonable amenities in the surrounding area.
Strengths			Outline planning permission has been granted for approximately 40,000 sq. m. of office and high technology space. The site is proximate to hospitals and the university allowing relatively easy access to a skilled labour pool and links to R & D activities, etc.
Weaknesses			The topography of the site and likely remediation requirements will impact upon the costs of development on the site.
Opportunities			Clinical trials and R&D space for start-ups wishing to be close to the University.
Threats			**There is a current planning application for retail on the site which is yet to be determined.**
Environmental Technologies	This sector comprises a number of operations from power generation to manufacturing (of various levels) and the locational requirements will generally be geared towards transport	These will be varied dependent upon the type of operation. Large scale sites may well be required for capital intensive manufacturing or power generation operations, but there will also be a need for	**Environmental Enterprise District (Tyseley)** – The nature and location of this area should prove attractive to the sector although there is perhaps a dearth of large-scale development opportunities available. Some of the existing units should prove attractive to smaller scale operations.

	access and the nature of the surrounding area.	light industrial space for the smaller scale operations.	
Strengths			This is an important and extensive industrial area, with relatively good access via public transport. There is an extensive supply of commercial property. Environmental technologies are already present in the area. Medium scale development opportunities are present within the area.
Weaknesses			The area could prove problematical to access via the strategic road network at times.
Opportunities			Despite the above, there are some development opportunities available, particularly near railway sidings / depots.
Threats			Multiple ownerships would likely make large-scale development / re-development challenging. Congestion around the site could prove a disincentive for investors looking for large-scale development opportunities.

5.3 Figure 5.2 presents a quantitative assessment of the demand/supply situation (a negative number means there is an undersupply, a positive number an oversupply). The figures suggest that:

- Overall, unless additional land becomes available/developed, there will be a shortage of employment land in Birmingham of between 52.01ha and 87.90ha, with the latter figure representing the likely multiplier impact on the economy from investments on key sectors such as Advanced Manufacturing.
- There will also be a need to accommodate other industries than those included in the target sectors, including those sectors in the supply chain. These industries will also create a demand for premises / land and therefore the actual shortfall is likely to be greater than that pictured here.
- Advanced Manufacturing and Logistics are the two sectors that will be affected relatively more by shortage of land with respect to the sites allocated for their development. There would appear to be a requirement to allocate approximately a further 63 ha of land in the long term, principally for these sectors (the Washwood Heath sites situation notwithstanding).
- The demand for sites/land for Life Sciences is very likely to be underestimated by the current calculations given the concerted efforts and investments to build up the city's profile in this area and the potential to capitalise on the fact that the area is home to one of the largest clinical trials clusters in the UK, based at the University of Birmingham. The same would apply to Environmental Technologies.
- It is also recognised that the city centre will present some opportunities for development in the financial services, business and professional services, computer services, etc. and digital

media sectors in which case the overall undersupply may reduce somewhat. However, there is likely to be a need for some office space within the city that is not in the centre and which is available on a more cost effective basis (and Longbridge would appear to be the best of the sites to accommodate such development).

Figure5.2: Supply of and Demand for Land for Key Sectors in Birmingham to 2030

Allocated Sites	Target Sector/Key Activities	Requirement by the sector (ha) to 2030	Readily* Available (ha)	Gap for key sector accommodation (ha)
Advanced Manuf. Hub	Advanced Manufacturing	**49**	**8.5 (20)**	**-40.5 (-29)**
Longbridge ITEC Park	Financial Services	7.8	23.37	
	Business & Professional	7.8		
	Computer Services	1.9		
	Digital Media	0.2		
	Total	**17.7**	**23.37**	**5.67**
Life Sciences Campus	Life Sciences	**0.3**	**0**	**-0.3**
The Food Hub	Food & Drink	**15.1**	**29.0**	**13.90**
Environmental Enterprise District	Enviro Technologies	**NA**	**3.16**	**3.16**
Washwood Heath sites	Logistics	**54.2**	**0****	**-33.94**
Prologis Park			**20.26**	
	TOTAL Key Sector Activities	**136.3**	**84.29 (95.79)**	**-52.01 (-40.51)**
	TOTAL Key Sector Activities with multiplier impact	**172.19**	**84.29 (95.79)**	**-87.90 (-76.4)**

Source: WECD with site areas taken from the Employment Land Review April 2012, BCC.
*8.5 ha are estimated to be readily available at the Advanced Manufacturing Hub, with a further 11.5 ha available in the longer term, making the total available 20 ha in the long term (figures reflecting this availability of land are presented in brackets).
** The sites are not considered readily available as they are currently included within the draft safeguarding areas as part of the Safeguarding Consultation for Phase 1 of HS2 between London and the West Midlands (launched by the Secretary of State for Transport in October 2012).

5.4 It is also worth noting that using the average annual completion figures for the planning use classes B1, B2 and B8 over the period 2002 – 2011 and extrapolating these forward, also leads to a total requirement of 341 ha to 2030. This represents a need for 69 ha for B1, 152 ha for B2 and 120 ha for B8 to 2030. Furthermore, according to the City Centre Enterprise Zone (EZ) Model, there

will be a demand for 609,500 sq.m (60.95ha) of office floorspace in the city centre alone over the next 25 years i.e. to 2037[32].

Conclusions

5.5 Within the last three years there have been a number of changes that have affected the local economic and property markets. These range from the global impact of the economic recession that continues to impact on economic productivity and influence business decisions, to the local impact of specific factors such as proposals for the HS2 rail link and the local consequences of property transactions such as JLR at i54.

5.6 However, the study has shown that although the local economy has been hit relatively hard by the economic downturn, the economic fabric of the local area has been resilient with new sectors emerging and existing and mature industries expanding and attracting relatively significant public and private sector investments. Advanced engineering and the automotive sector are the key local investment anchors. Future projections also suggest that GVA of all key sectors in Birmingham will increase, including both the production and services sectors and in particular the financial services sector, life sciences sector, the digital media and computer services sectors. Productivity is also projected to increase in all these sectors; productivity improvements are particularly important for a locality as they can lead to higher profits for companies, higher wages and lower (real terms) prices for consumers all of which can, in turn, lead to further expenditure within the local economy and therefore a positive overall effect.

5.7 Furthermore, inward investment may have slowed down at times but it has not stopped. The study has confirmed that, overall, Birmingham is seen as an attractive place to invest partly due to the availability of reasonably priced office properties, its location and access to first class transport networks. The wave of optimism running through the West Midlands automotive component sector is bound to drive increased demand for high-quality industrial property. The investment from global car manufacturers and the rapid growth of the export market means that the automotive supply chain would be expanding.

5.8 With this expansion, companies would need more space. Indeed, the majority of investment enquiries have been predominantly for industrial space. Projections undertaken as part of this study also indicate that there will be a requirement for a total of 617,050 square metres of floorspace to 2030. This translates into a requirement for land between 136 ha and 172 ha, the latter figure including the multiplier effects of the known extra investment in advanced manufacturing.

5.9 The space requirements of investors indicated demand for both large industrial enquiries and several smaller office enquiries. However, the general feedback is that large-scale industrial property is in very short supply, especially land suitable for intensive energy users.

5.10 In fact, there has been a very low level of development for industrial space in Birmingham during the economic downturn. In 2009 and 2010, the vast majority of space completed was speculative (admittedly, the reverse was true in 2011, when completions were dominated by pre-lets / purpose-built schemes). As far as office space is concerned, the common theme across the regional centres in the UK including Birmingham is a shortage of A grade space combined with a lack of willingness from occupiers to commit to new space in light of continued economic uncertainty. Lease events, consolidation, cost savings and opportunism continue to be the main

[32] Variations in estimates can be explained by different assumptions made and definitions used in modelling the future. For example, B1 estimates cover a wide range of uses. The EZ model also draws upon past/existing land and space allocations/planning policy rather than economic activity and covers A2 and B1a and B1b use classes. On the other hand, the WECD estimates for floorspace and land refer specifically to the sector activities that were looked for future economic activity purposes (and these were based on the way that the sector activities/opportunities were defined by PA Consulting, which sometimes do not cover the full sector – see Figure 1.3).

precursors to deals. As a consequence, where transactions have occurred these seem to be in the B grade space market that offers companies good value for money.

5.11 A review of the sites allocated for the economic zones in Birmingham indicates a mixture of offer in particular when availability and timing are considered. For example, some of them are at a stage where relocation and/or expansion of small and modest developments can physically take place immediately (i.e. the sites have been cleared and either remediation or building can already take place) whilst others cannot accommodate large-scale industrial property immediately and/or may need significant investment and time to become available even to modest developments. The study has shown that in the latter case, public sector funding and intervention can play a critical/accelerating role in bringing developments forward and/or attracting private monies by signalling its support for the development.

5.12 Most importantly, the study has shown that unless additional land becomes available/developed, there will be a shortage of employment land in Birmingham to 2030 of between 52 ha and 88 ha, (with the latter figure representing the likely multiplier impact on the economy from investments on key sectors such as advanced manufacturing). The actual shortfall and implications could be greater than this figure suggests if the demand for land by the other sectors of the economy is considered but also the global and local emphasis on investment on life sciences and environmental and green technologies is taken into account (with both these sectors requiring prestigious and high quality space).

5.13 An early review of world-class examples of sites/zones developments (included in Annex F) has shown that a sector/cluster based development approach promotes a greater measure of diversity in economic activity. Coupled with private and public sector investment that could boost the competitiveness of key sectors of the local economy, this would provide a better security for an enhanced local resilience to economic shocks. Regional specialisations, such as clusters, can further generate powerful positive spillover benefits. For example, if the clusters of economic activities/zones are well designed, benefits will arise from the spatial concentration and the agglomeration of activities, including greater labour market pooling and knowledge sharing.

5.14 The review has also shown that such sector developments do not often arise spontaneously. For such developments to work successfully, some key 'input' factors need to be present – these could include human resources, capital resources, physical infrastructure, administrative infrastructure, information infrastructure, scientific and technological infrastructure (and some times natural resources). Most importantly, such developments tend to require: a strategic approach and persistent multiple interventions; significant investment for marketing campaigns; coordinated efforts for raising of their profile by both public sector agencies and local businesses acting as local 'champions'; and, provision of infrastructure and space that allows for future expansion.

5.15 Public presence and intervention have been particularly important in those cases in order to coordinate, incentivise and attract the necessary investment by the private sector including large-scale inward investment but also smaller scale supply chain and new start-ups. The public sector is in general needed in order to address a market failure (i.e. provide funding where a public good is concerned such as public infrastructure and/or the private sector is clearly not prepared to take the risk) and/or accelerate and maximise a market opportunity (i.e. through marketing but also purchasing of assets).

5.16 Birmingham may not be able to control or predict accurately wider macroeconomic conditions. However, through a coordinated and strategic approach can ensure that the locality is in the best position possible to take advantage of any/the upturn in the economy and provide businesses – indigenous and external, with access to appropriate resources including land, space and infrastructure. In going forward, a number of other issues may also need to be considered:

- Providing some clarity in defining the offer of the economic zones i.e. have a clear understanding of what uses are permitted on which sites and importantly, how soon they would/could become available. Transparent and clear information is required to help businesses make the decision to locate or expand in Birmingham.
- Planning carefully the next stages. Once sites have been identified, additional work is needed to bring forward appropriate development. In uncertain economic times all parties including developers and investors strive to minimise uncertainty. There is, therefore, a need to prepare clear plans of action; these should identify tasks, timescales and accountable parties responsible for the delivery of key tasks. This in turn would require clarity in relation to delivery mechanisms and vehicles. For example, there may be a potential for overlap in parties involved and potential for conflicting priorities that will need to be clarified. There may be similar issues to be dealt with in relation to land assembly and the potential need for Compulsory Purchase where the public sector could have an important role to play.
- There is also a key issue in respect to the availability of public sector funding to assist with bringing forward employment development sites, particularly for industrial use. It is currently not clear what *total* level of funding is required; this is likely to range from funding of the preparation of supplementary planning guidance to major decontamination/ infrastructure works in some cases.
- Finally, competition for uses within the wider sub-region needs to be co-ordinated and well managed. Third party occupiers and developers tend to see the area as a whole rather than subdivided in local government administrative or policy boundaries.

Warwick Economics & Development

Employment Land Study for the Economic Zones and Key Sectors in Birmingham ANNEXES

October 2012

A Report for

Birmingham City Council

Regional Observatory
MarketingBirmingham

LIST OF ANNEXES

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Annex A: List of Consultees and Contributions

Sector	Company Name	Name and position	Position
Advanced Engineering	Aero Engine Controls (Goodrich & Rolls Royce)	Stuart Baker	Site Strategy Director
	West Midlands Manufacturing Advisory Service	Rachel Eade	Regional Advisor
Environmental Services	Veolia Environmental Services Birmingham Ltd	Mark Heesom	General Manager
	Alstom Transport	Paul Crowley	Sourcing Manager
	Anonymous energy company		
ICT	Fujitsu Telecom	Roy Stevens	Estates Manager
ICT/ Outsourcing	Synapse Information Ltd	Brian Donnelly	CEO & Founder
Digital Media	Character Shop	Andy Guest	Commercial Director
Business & Professional Services	DLA Piper UK LLP	Mark Beardmoor	Office Managing Partner
	Wragge LLP	Penny March	Head of Facilities
Property/ Development	Calthorpe Estates	Tim Abbotts	Head of Estates
	Colliers	Douglas Bonham	Head of out of town offices at the Birmingham office of Colliers International
	DTZ (part of UGL Services, a division of UGL Limited)	Simon Lloyd	Head of Industrial and Logistics
	Land Securities	Neil Carron	Project Director
	Savills	Barry Allen	Development Director
Regional	West Midlands and Oxfordshire CBI	Richard Butler	Regional Director (and ex Head AWM Inward Investment)
Greater Local	Marketing Birmingham/Business Birmingham	Wouter Schuitemaker	Investment Director
		Martyn Mangan	Investment Manager

Annex B: Micro and Macro Economic Drivers of Sectors Past Performance

Figure B1 provides an overview of the sectors discussed in the report.

Figure B1: Key Sectors Definitions

Sector	Constituent Activities	Constituent Sectors	SIC 2007 Codes
Advanced Manufacturing	Automotive, Aerospace and other high value added manufacturing activities	Aircraft & spacecraft	30.3, 33.16
		Office, accounting & computing machinery	26
		Radio, TV & communications equipment	NA*
		Electrical machinery & apparatus nec	27
		Motor vehicles, trailers & semi-trailers	29, 30.91
		Chemicals excluding pharmaceuticals	20
		Railroad equipment & transport equipment nec	30 (exc. 30.3 & 30.91)
		Machinery & equipment nec	28
Financial Services	Back-office / shared service functions	Financial service activities except insurance and pension funding	64
		Insurance, reinsurance and pension funding, except compulsory social security	65
Business & Professional Services	UK / Regional headquarters	Legal and Accounting activities	69
		Activities of head offices; management consultancy activities	70
		Publishing Activities (except 58.21)	58 (exc. 58.21)
		Advertising and Market Research	73
Food & Drink	Process and production	Manufacture of Food Products	10
		Manufacture of Beverages	11
		Wholesale of food, beverages and tobacco (minus tobacco)	46.3 (exc. 46.35)
Computer Services & Software	Large IT related operations	Computer programming, consultancy and related activities (minus those in Digital Media)	62 (exc. 62.01)
		Information service activities (minus News Agency Activities and Other information service activities nec)	63 (exc. 63.9)
Digital Media	Games development	Computer programming activities	62.01
		Publishing of computer games	58.21
Life Sciences	Medical and surgical equipment manufacture; clinical trials	Research and experimental development on biotechnology	72.11
		Manufacture of basic pharmaceutical products and pharmaceutical preparations	21**
		Manufacture of medical and dental instruments and supplies	32.50

Note: nec = not elsewhere classified.
*There is not a separate item for Radio, TV & communications equipment manufacture in the 2007 SIC, such items would come within codes 27 and 28.
**This code is within the OECD definition of advanced manufacturing however we have included this within the life sciences sector (and therefore excluded it from advanced manufacturing to avoid double counting).

The main target sectors include within them a number of sub-sectors. The original research that highlighted the key sectors for Birmingham did not provide information as to the classification of the target sectors or their stated constituent elements. In order to examine the sub-sectors therefore, SIC codes (2003 and 2007) have been used. There are issues (noted in the main report) regarding the cross-classification between the two sets of SIC codes (and the differing description of the component industries) is applicable. Shift-share approach has been used and applied to the sub-sectors in order to identify the drivers of growth over the time periods of 1998 – 2008 (Figure B2) and the recessionary period 2008 – 2010 (Figure B3). This method breaks changes in employment seen within an area into a component that is due to the general macroeconomic situation, a component due to the performance of the industry at the

national level and a final component due to the relative performance of the industry at the local level. Those industries that have performed relatively better at the local level (highlighted in green in the figures below) can be termed leading industries in that they have grown at a faster rate (or not declined as fast) than the industry nationally.

Figure B2: Drivers of Sub-Sectors 1998 - 2008

Target Sector	Constituent Sub-Sector	Growth (Birmingham)	Growth (GB)		Macro	Industrial	Local
Automotive	Manufacture of motor vehicles						
Automotive	Manufacture of bodies						
Automotive	Manufacture of parts and accessories						
Automotive	Manufacture of motorcycles and bicycles						
Financial Services	Monetary intermed.						
Financial Services	Other financial intermed.						
Financial Services	Insurance and pension funding						
Financial Services	Activities auxiliary to financial						
Financial Services	Activities auxiliary to insurance and pension funding						
Business & Professional	Legal, accounting, etc.						
Business & Professional	Advertising						
Food	Production, processing and preserving						
Food	Processing and preserving						
Food	Manufacture of dairy						
Food	Manufacture of other food products						
Food	Manufacture of beverages						
Food	Wholesale of food, beverages						
Computer Services	(Computer / Digital) Hardware consultancy						
Computer Services	(Computer / Digital) Data processing						
Computer Services	(Computer / Digital) Data base activities						
Digital Media	(Computer / Digital) Software consultancy and supply						
Life Sciences	Manufacture of pharmaceuticals, etc.						
Life Sciences	Manufacture of medical equipment, etc.						
Life Sciences	Research and experimental development						
Aerospace	Manufacture of aircraft and spacecraft						
Aerospace	Manufacture of other transport equipment nec						

Source: WECD using data from the ABI. Note: red = negative growth, green = positive growth.

The general situation of many of the sub-sectors reflects that of the main targeted sectors.

- The financial services sector had mixed fortunes with two of the sub-sectors experiencing growth over the period and activities auxiliary to insurance and pension funding also seeing positive contributions from the macroeconomic context, the national industrial context and the local industrial context.
- The legal and accounting element of the business and professional services target sector performed well, although there appears to have been both an industrial and local driver behind the decline seen in the industry over the period.
- Overall, the food and drink target sector saw declines in employment at both the local and national levels with the exception of the production and preserving of meat and meat products and the manufacture of beverages. It can be noted that these two sub-sectors also exhibited a positive

localised industrial driver over the period as well as positive macroeconomic context. The performance of these two sub-sectors within Birmingham therefore drove the overall growth in these industries locally (as well as general macroeconomic growth).

- Computer services sub-sectors generally saw decline in employment at the local level, which appears to have been predominantly driven by decline in the industry at the local level. An exception to this has been database activities, which saw growth across the board with positive contributions from the macroeconomic context and the position of the industry both nationally and locally.
- The digital media sub-sector of software consultancy and supply saw growth at both the local and national levels with this growth being driven by the macroeconomic and national industrial contexts. It would appear that its growth locally was held back a little by the sector at the local level.
- The life sciences sub-sectors generally saw growth over the period with the exception of the manufacture of pharmaceuticals, which nationally saw a decline. Apart from the research and experimental development sub-sector it would also appear that the performance of the component sectors of the life sciences was provided with a positive impetus from the macroeconomy and by the local industry, with their potential performance being reduced by the national industrial context.

Using the same mode of analysis over the period 2008 – 2010 (Figure B2) shows some interesting differences between the time periods:

- Over the period 1998 – 2008, 62% of the sub-sectors saw decline in employment both locally and nationally. As would be expected in a time of recession, over 2008 – 2010 the proportions are higher with 67% of the sub-sectors seeing employment fall locally whereas 86% of the sub-sectors saw decline nationally. This greater resilience to the recession (at least between 2008 and 2010) in Birmingham is reflected in the local industry component of the shift-share analysis; between 1998 and 2008, 69% of the sub-sectors contributed negatively to growth at the local level whereas between 2008 and 2010, this reduces to 48% (circa 71% of sub-sectors contributed negatively at the national industrial level between 2008 and 2010).
- The sub-sectors that seemed to have weathered the economic storm (at least to some degree) lie within the automotive, food, computer services / digital media and aerospace target sectors. The manufacture of motorcycles saw growth in Birmingham with the shift-share components being similar to the previous period of 1998 – 2008 (a decline in the industry nationally and growth at the local level). Similarly, the sub-sectors constituting the computer services and digital media target sectors (with the exception of the publishing of computer games) saw growth at the local level, negative influences from the industry nationally (on the whole) and a positive influence from the industries at the local level. The manufacture of air and spacecraft and related machinery saw growth locally between 2008 and 2010 (whereas it fell nationally) and there was a positive impetus from the industry nationally and, perhaps most importantly from the local level.
- Within the food and drink target sector, the manufacture of beverages performed positively at the local level as did the majority of the sub-sectors within the automotive target sector.

Figure B3: Driver of Sub-sectors 2008 – 2010

Target Sector	Sub-sector	Growth (Birmingham)	Growth (GB)		Macro	Industrial	Local
Automotive	Manufacture of motor vehicles						
Automotive	Manufacture of bodies						
Automotive	Manufacture of parts and accessories						
Automotive	Manufacture of motorcycles						
Financial Services	Financial service activities						
Financial Services	Insurance, reinsurance and pension funding						
Business and Professional Services	Legal and accounting activities						

Target Sector	Sub-sector	Growth (Birmingham)	Growth (GB)		Macro	Industrial	Local
Business and Professional Services	Activities of head offices; management consultancy activities						
Business and Professional Services	Advertising and market research						
Food	Wholesale of food & beverages						
Food	Manufacture of food products						
Food	Manufacture of beverages						
Computer Services and Software	Computer programming, consultancy and related activities						
Computer Services and Software	Information service activities						
Digital	Computer programming activities						
Digital	Publishing of computer games						
Life Sciences	Manufacture of medical and dental instruments and supplies						
Life Sciences	Research and experimental development on biotechnology						
Life Sciences	Manufacture of basic pharmaceutical products and pharmaceutical preps						
Aerospace	Manufacture of air and spacecraft and related machinery						
Aerospace	Repair and maintenance of aircraft and spacecraft						

Source: WECD using data from the BRES. Note: red = negative growth, green = positive growth.

Annex C: Brief Overview of Key Sectors in Birmingham and the West Midlands

Automotive[1]

There is an established, mature automotive cluster in the West Midlands and the region is regarded as a world leader in the industry. The region has a large, specialised and experienced automotive workforce with 11,500 people employed in the sector in Birmingham and around 100,000 in the wider region. The region's universities have research strengths in low carbon and energy-efficient fuel types. There is also a strong presence of companies within the automotive supply chain. The region accounts for 30% of all automotive production manufactured in the UK and more than 60% of the UK's automotive R&D.

The presence of large players such as Jaguar Land Rover is strategically important as it ensures a strong local supply chain and drives innovation in collaboration with universities in Birmingham and the wider region. There are a number of global original equipment manufacturers (OEM) based across the West Midlands. There have been several recent announcements relating to investment at these sites including:

- Aston Martin: £300 million investment in facilities expansion in Gaydon, creating 2,000 new jobs.
- BMW: £500m investment across 3 sites at Birmingham, Oxford and Swindon.
- Jaguar Land Rover:
  - £490m investment in Solihull to build C-X75 all-hybrid supercar, creating over 100 highly skilled jobs with plans to recruit a further 1,000 production employees.
  - £2bn investment in Halewood to build new Range Rover Evoque, creating more than 3,000 new jobs.
  - £355 million investment in a new facility in the Midlands to manufacture low emission engines, creating 750 new jobs
  - A planning application is expected to be submitted in December for a new body shop.
- JCB: £31 million investment in a new engine development project in the Midlands and Wales creating 350 new jobs.
- MG: The new MG6 GT sports fastback will be designed, engineered and assembled in the UK.
- Michelin: Up to £50 million investment into renewed manufacturing facilities at 3 sites: Ballymena, Dundee and Stoke-on-Trent.
- MIRA: £300 million investment in facilities expansion, creating 2,000 new jobs at Nuneaton.
- Tata Motors: pledged to increase investment in Tata Motors European Technical Centre (TMETC) in Coventry by 40%.

This shows that the sector while it is well developed, it is still evolving and adapting to meet new market conditions. The key automotive manufacturing companies in the West Midlands include:

- Aston Martin, Gaydon
- BMW, Hams Hall
- Dana, Witton, Birmingham
- Dennis Eagle, Warwick
- Draexlmaier, Rubery Park
- Goodrich/Universal Technologies, Hall Green, Birmingham
- Jaguar Land Rover, Castle Bromwich, Coventry, Halewood and Solihull
- Johnson Controls
- Lear, Redditch
- LTI, Coventry
- MG Motors, Longbridge
- Michelin, Stoke-on-Trent
- Morgan, Malvern
- Thyssen Krupp, Cradley Heath

[1] Sources: http://www.smmt.co.uk/wp-content/uploads/Motor-Industry-Facts-2012.pdf
http://businessbirmingham.com/files/Factsheets/BusBhamFactsheetTransportTechnology.pdf

Financial Services[2]

Birmingham has a long-established financial services sector and is one of the largest financial and business services centres in the UK outside London. The sector is sizeable, contributing £14bn to the economy of Greater Birmingham, rising to £23bn for the West Midlands region. Over 35% of Birmingham's GVA is generated by the financial (and business) services sector and it accounts for a workforce of over 242,000 in Greater Birmingham and 441,000 across the West Midlands region. There are a number of regional and national HQs based here and over 40 UK and international shared service centres.

Many of Birmingham's financial services firms are located in Ladywood and Edgbaston. The financial services sector is undoubtedly a key sector for both Birmingham and the West Midlands. The key financial services companies in the West Midlands include:

- Deutsche Bank
- Barclays
- HSBC
- Lloyds Banking Group
- RBS-NatWest
- NM Rothshild & Co
- Islamic Bank of Britain
- Arbuthnot Banking
- Goldman Sachs & Co
- Unity Trust Bank

Business and Professional Services[3]

Birmingham and the wider West Midlands region are home to a significant pool of skilled labour in Financial and Professional Services, ICT and Business Services. There are 241,500 people employed in these key sectors in the Greater Birmingham area in around 24,000 businesses, with 441,000 people employed within 57,000 businesses across the West Midlands region as a whole. There are a number of regional and national HQs based in the region.

Organisations such as Birmingham Forward bring together representatives of the business and professional services sector and provide support. The Birmingham Law Society is the largest local law society in the country with over 3,600 solicitors and 200 practices.

As with financial services, the business and professional services sector clearly is a key sector for both Birmingham and the West Midlands. Key players in the business and professional services sector in the West Midlands include:

- Wragge & Co LLP
- DLA Piper UK LLP
- Eversheds LLP
- Pinsent Masons LLP
- PwC
- Deloitte
- KPMG
- Ernst & Young
- Grant Thornton

[2] Sources: http://businessbirmingham.com/files/Factsheets/1506BusBhamFactsheetFinanceFINAL.pdf
http://businessbirmingham.com/files/BusBhamFactsheetSharedServices_AW.pdf
http://www.thecityuk.com/financial-services-in-the-uk/uk-by-region/west-midlands/
[3] Sources: http://www.birminghamforward.co.uk
http://www.birminghamlawsociety.co.uk/
http://businessbirmingham.com/files/BusBhamFactsheetSharedServices_AW.pdf

Food and Drink[4]

The food and drink cluster in the region is established and benefits from diversity of produce and centrality to the population. Food and drink manufacturing (excluding agriculture) employs 58,000 people in the region with a value of around £6bn per annum. The West Midlands has particular strengths in red meat, bakery and confectionery, fruit and vegetables, breweries and drinks, ethnic foods, dairy, food technology and machinery. The region's central location makes it ideal for food distribution.

There is a high concentration of food engineering businesses within the cluster. The cluster also benefits from internationally recognised university expertise such as Harper Adams, University College Birmingham (previously Birmingham College of Food) and University of Birmingham.

The majority of employment within the food sector in Birmingham is in chocolate and confectionary. Elsewhere in the region, there are concentrations of employment in Herefordshire (production of meat and wholesale of fruit and vegetables), Wychavon (fruit and vegetables), East Staffordshire (production of meat and beer) and Sandwell (production and processing of meat).

Regional initiatives include:

- Regional Food Academy: Based at Harper Adams University College in Shropshire, the Regional Food Academy (RFA) provides business, education, technical support and research to companies across the food and drink industry.
- Heart of England Fine Foods: HEFF is the food group for the heart of England region and works with small to medium sized food businesses to provide essential services to help companies successfully compete in their market place.
- Shropshire Food Enterprise Centre: The Centre is owned by Shropshire Council and managed by HEFF and is a state of the art facility built to house twelve start-up or growing food production businesses.

The West Midlands is home to a number of globally recognised local and international brands including:

- Cadbury
- Bass
- Muller
- Florette
- Groupe Danone
- Sun Valley
- Heinz
- Nestle
- PepsiCo

Computer Services / Software[5]

The ICT sector is important to West Midlands' economic development both as a key sector and as an enabling set of technologies driving productivity and profitability in other sectors. The sector is growing the region has developed a stronger supply base of ICT businesses. The sector is now ready to exploit the market opportunities emerging from convergence between existing and new technologies. However, significant opportunities exist for innovation if regional firms engage more closely with the knowledge base of the sector. There are several major ICT players located within the region:

- AT and T
- Celestica

[4] Sources: http://webarchive.nationalarchives.gov.uk/+/http://www.advantagewm.co.uk/working-with-us/business-clusters/food-and-drink.aspx
http://www.theworkfoundation.com/DownloadPublication/Report/264_Economic%20Growth%20in%20WM%20Final%2025%2008%20(2).pdf
http://regionalfoodacademy.org/
http://www.heff.co.uk/pages/BUSINESS.htm
http://www.shropshirefoodcentre.co.uk/

[5] Source: http://www.growing-businesses.co.uk/ict.php

- Ericsson
- Fujitsu
- IBM
- Ricoh
- CapGemini
- Sun Microsystems
- Oracle
- QinetiQ
- LogicaCMG
- Serco

Digital Media[6]

The digital sector employs over 64,000 people in Birmingham across a range of companies from global systems integrators to smaller independent firms. There are more than 12,500 companies present, which represents a rise of 30% since 2005. There is also a strong skills base with around 40,000 students studying computer science or business each year. In addition, there are several specialist networking organisations to link new investors to SMEs, large IT companies, education establishments and research institutes.Overall there seems to be a digital media cluster evolving in the West Midlands. Active initiatives in the sector include:

- Serious Games Institute: based at Coventry University with a focus on the use of interactive games technology for non-entertainment purposes. The Institute provides the interface between the high-level applied academic research at Coventry University and leading-edge companies in the games-based learning field and provides business support to seek to grow businesses in the sector.
- Digital Media Academy: the £25m Birmingham Ormiston Academy, which opened in October 2011, is the first digital media academy of its kind in the UK, offering young people an opportunity to study Creative, Digital and Performing Arts.
- Gamer Camp: a finishing school for graduate game developers, is run by Birmingham City University and partners with local companies such as Codemasters and Rare Games.
- Fazeley Studios: a complex of subsidised work spaces for creative and digital firms in Birmingham, the facility has a role in attracting small, creative, digital media firms to the city.

The computer games sector is particularly strong in the Warwick, Leamington and Coventry areas, with recent growth in Birmingham. There are strong links between industry and the region's academic base, with Birmingham City University, Coventry University, Warwick University and University of Birmingham particularly active in this area. Digital Media is featured as an area of focus for the Birmingham Science City demonstrator projects. In addition to BBC, leading digital media companies within the region include:

- Codemasters
- Blitz
- Rare Ltd
- Maverick TV
- CharacterShop
- Activision

[6] Sources: http://dl.dropbox.com/u/2865380/Digital%20Media%20sector%20%20cluster%20paper%202010%20final.pdf
http://businessbirmingham.com/files/Factsheets/BusBhamFactsheetDigitalUnlimited.pdf
http://www.seriousgamesinstitute.co.uk/
http://www.digitalbirmingham.co.uk/
http://www.boa-academy.co.uk/
http://www.bcu.ac.uk/pme/nti/gamercamp
http://www.fazeleystudios.com
http://www.birminghamsciencecity.co.uk

Life Sciences[7]

The Life Sciences sector in the West Midlands has grown from an embryonic to a more established cluster and is constantly evolving. The number of life sciences businesses in the region has grown almost 40% since 2005.

The scale and population of Birmingham is one of the most ethnically diverse in the UK, which makes it an ideal location to undertake clinical trials. The West Midlands has over 500 medical technology companies, which is more than any other region of the UK. The region is home to one of the largest clinical trials clusters in the UK, based at the University of Birmingham. The University of Birmingham has strong links with many of the world's top pharmaceutical companies including GlaxoSmithKline, Lilly, Pfizer, AstraZeneca, Bayer and Novartis.

Birmingham Research Park at Edgbaston and Birmingham Science Park Aston are home to several life sciences companies, particularly high-growth medical technologies companies. Indeed, Edgbaston is being developed as Birmingham's Medical Quarter. In addition, there have been a number of university spin-outs in the sector and the NHS has a strong presence in the city including MidTECH, a regional innovation hub for the NHS.

The strength of the healthcare sector in the region is driven by strong collaborations between academic research, clinical practice and industry. Key players in the life sciences sector in the region include:

- The Binding Site
- Bionostics Holdings Ltd
- Bodyguard Work Wear
- Euroshowers (Midlands) Ltd
- Farmoza Ltd
- The Hearing Services Centre
- RSL Steeper Holdings Ltd
- Salts Healthcare Ltd
- TripleODental Laboratories Ltd
- WerfenControl S.L.

Aerospace[8]

The Midlands aerospace cluster does not produce aircraft. Yet the East and West Midlands are home to just under 25% of the UK aerospace industry, 7% per cent of Europe's and 3% of the world's, with over 40,000 full-time-equivalent jobs based on revenues from manufacturing for global aerospace markets. This excludes the region's airports and military bases.

Aerospace is a globally integrated industry with a small number of major manufacturers drawing on a large network of suppliers from across the world. There are two significant tier one suppliers with operations Birmingham; GKN and Goodrich. These tier one suppliers support a range of tier two and three suppliers. The main hub of the cluster - Rolls-Royce - is actually located in the East Midlands, but the West Midlands comprises a quarter of the firm's supply chain in the manufacturing and servicing of Rolls-Royce aero engines.

There is a cluster hub organised around the companies Aero Engine Controls, Goodrich, Moog and Meggitt, based in Birmingham, Wolverhampton and Coventry, which supply electro-mechanical systems to control aircraft moving parts to aircraft makers like Airbus, BAE Systems and Boeing, and similar control systems to Rolls-Royce and engine makers across the globe. The region also plays host to a number of

[7] Sources: http://www.medilinkwm.co.uk/
http://businessbirmingham.com/files/BusBhamFactsheetLifesciences_web.pdf
http://www.biocity.co.uk/assetlibrary/FINAL%20Life%20Science%20Start%20up%20report%20LR.pdf
[8] Sources: http://www.midlandsaerospace.org.uk/aerospace
http://businessbirmingham.com/files/Factsheets/BusBhamFactsheetTransportTechnology.pdf

specialist aerospace materials producers. In addition, there are research centres at Birmingham and Coventry Universities.

The key aerospace companies in the West Midlands include:

- GKN Aerospace
- Goodrich
- Rolls-Royce
- Timet UK
- Bromford Industries
- Aero Engine Controls
- Moog
- Meggitt
- Alcoa

Annex D: Key Emerging Sectors

Additional analysis has been undertaken to establish whether there are other sectors of the local economy that could be targeted, both for economic development efforts and (potentially) for land provision. It may also be the case that some of these emerging sectors may feed into the target sectors via the supply chain.

The analysis presented here (Figure D1) uses data covering the period 2008 – 2010 (based on 2007 2-digit level data). Whilst this is a short period of time, being within a recession, any industries that appear to have performed well will likely be resilient and have the potential for growth in the future.

An emerging sector is one within an industry that is growing nationally (separating out the component of macroeconomic growth), may well have seen positive growth locally (bearing in mind the data used cover a recessionary period), could be a leading sector in that the industry locally has seen higher growth than the industry nationally (taking macroeconomic and industrial growth into account) and / or has grown at a faster rate than the industry nationally for industries that have seen growth. Furthermore, if the sector has a LQ greater than 1, this, coupled with the other items, would be strong evidence of a cluster (with the exception of the public sectors, where this may be simply due to the greater population of Birmingham than average).

Where all these facets are true, the sector could be part of a cluster in an industry that is resilient and could be a strong growth sector in the future.

- There is only one sector where all the factors are met (with the exception of public services) manufacturing of wearing apparel; clothing / fashion manufacturing could be a cluster in Birmingham that perhaps should be accommodated for in the future.
- Of the four factors relating to growth and relative growth i.e. the last four columns in Figure D1), the sectors where all four factors are met are:
    - manufacture of wood products
    - manufacture of other transport equipment (which may be associated with the automotive target sector)
    - waste collection
    - disposal and collection (which will likely reflect the size of the city's population)
    - scientific research and development (which will include those sub-sectors of the life sciences, but is more broad ranging than the life sciences)
    - services to landscape and building activities (this is a broad sector that incorporates such items as facilities support, cleaning and landscaping; therefore this is probably not a sector that can be "accommodated" *per se* in terms of floorspace other than within general office type floorspace or light industrial space)
    - residential care activities and the activities of membership organisations. The latter two sectors probably reflect the (above national average) size of Birmingham's population and position as the nation's second city (e.g. the law society membership within the city)
- Those sectors that have seen growth locally, but aren't necessarily in an industry that's growing nationally include manufacturing of paper and paper products, water collection, treatment and supply (which will be most likely due to the population size), information service activities (which is related to the computer services target sector, but also includes the activities of news agencies) and architectural and engineering activities. Interestingly, this group also includes motion picture, video and TV programme production, etc. and creative, arts and entertainment activities. Both of these sectors also exhibit a LQ that is greater than 1 and therefore are relatively more concentrated than is the case nationally. These two sectors may well therefore be part of a cultural cluster within Birmingham.

Figure D1: Characteristics of Other Emerging Sectors

Sector	LQ>1	Industry Growing	Leading Industry	Positive Growth	Growing Faster than National
Manufacture of food products		■			
Manufacture of beverages			■	■	
Manufacture of textiles		■			
Manufacture of wearing apparel	■	■	■	■	■
Manufacture of wood and of products of wood and cork, except furniture;manufacture of articles of straw and plaiting materials		■	■	■	■
Manufacture of paper and paper products			■	■	■
Manufacture of coke and refined petroleum products		■			
Manufacture of rubber and plastic products			■		
Manufacture of other non-metallic mineral products			■		
Manufacture of basic metals	■				
Manufacture of fabricated metal products, except machinery and equipment	■				
Manufacture of electrical equipment	■				
Manufacture of motor vehicles, trailers and semi-trailers	■		■		
Manufacture of other transport equipment		■	■	■	■
Manufacture of furniture			■	■	
Other manufacturing	■	■			
Repair and installation of machinery and equipment		■			
Electricity, gas, steam and air conditioning supply		■		■	
Water collection, treatment and supply	■		■	■	■
Waste collection, treatment and disposal activities; materials recovery		■	■	■	■
Civil engineering			■		
Specialised construction activities			■	■	
Retail trade, except of motor vehicles and motorcycles			■		
Land transport and transport via pipelines	■				
Warehousing and support activities for transportation			■		
Postal and courier activities	■	■			
Accommodation		■			
Motion picture, video and television programme production, sound recording and music publishing activities	■		■	■	■
Programming and broadcasting activities					
Telecommunications		■			
Computer programming, consultancy and related activities			■	■	
Information service activities			■	■	■
Financial service activities, except insurance and pension funding	■		■		
Insurance, reinsurance and pension funding, except compulsory social security	■				
Activities auxiliary to financial services and insurance activities	■	■			
Legal and accounting activities	■	■			
Activities of head offices; management consultancy activities		■			
Architectural and engineering activities; technical testing and analysis	■		■	■	■

Sector	LQ>1	Industry Growing	Leading Industry	Positive Growth	Growing Faster than National
Scientific research and development					
Veterinary activities					
Rental and leasing activities					
Employment activities					
Security and investigation activities					
Services to buildings and landscape activities					
Office administrative, office support and other business support activities					
Public administration and defence; compulsory social security					
Education					
Human health activities					
Residential care activities					
Social work activities without accommodation					
Creative, arts and entertainment activities					
Libraries, archives, museums and other cultural activities					
Gambling and betting activities					
Sports activities and amusement and recreation activities					
Activities of membership organisations					
Repair of computers and personal and household goods					

Source: WECD using data from the BRES.

Annex E: Pipeline of Projects/Developments

Key planned schemes

Scheme	Developer	Status	Size note	Gross Sqft	Notes
Heartlands Pk, Fmr Alstom Site, Common Ln, Bromford (subject to potential HS2 safeguarding)	Key Prop Investments	OPPG	A	1,000,000	
Ph2, The Hub, Witton Rd, Witton	Prudential (PRUPIM)	FPPG	A	737,600	B1/B2/B8 - offices not to exceed 50%
Jaguar Land Rover Site, Lode Ln, Solihull	Jaguar Land Rover	S106	B	636,400	
DC5 & DC6, Prologis Pk, Park Ln, Minworth	Prologis Devts	FPPG	A	570,000	
Signal Point Phs 2+3. Fmr Yuasa Batteries Site, Warwick Rd, Tyseley	A & J Mucklow	OPPG	A	363,800	
Fmr Birmingham Battery/ Site & adj land (Battery Pk), Bristol Rd, Selly Oak	J Sainsbury Devts/Land Securities	OPPG	E	355,100	B1/B2/B8 plus retail/A3/lels/resid
Hams Hall, Faraday Ave, Coleshill	BMW	FPPG	B	291,000	Ph2 of engine factory
Plot 5000, Birmingham BPk, Parkway, Elmdon	Aero Engine Controls	OPPG	B	250,900	
Ph2, Longbridge East Site, Groveley Ln, Longbridge	St Modwen Devts/Reman Heenan Props	OPPG	A	225,000	Former vehicle storage area
The Kettleworks, Fmr Moullnex Swan Works, Pope St	Bizspace/Chord Deeley	FPPG	E	210,900	Refurb
Ph3, The Hub, Witton Rd, Witton	Prudential (PRUPIM)	OPPG	A	199,200	
2 Hay Hall Rd, Tyseley	Dunn Bros	FPPG	B	177,900	
Units 8-11, Ph3, The Hub, Witton Rd, Witton	Prudential (PRUPIM)	FPPG	A	166,400	
Tyseley Energy Pk, Hay Mills, Tyseley	Webster & Horsfall	OPPG	E	163,000	
Highway Point, Gorsey Ln, Coleshill	Headlam Grp	FPPG	C	157,700	
Plot 10B, Hams Hall, Faraday Ave, Cosehill	ProLogis/BP Investment Management	FPPG	C	144,100	Dist unit
Phase V B8, Hams Hall Dist Pk, Hams Ln, Coleshill	ProLogis	FPPG	C	140,000	B8 devt
Plot 3b/3C, Hams Hall, Hams Ln, Coleshill	ProLogis	FPPG	A	134,500	134.5k lnd unit & 118.4k dist unti
DC1, Prologis Pk, Park Ln, Minworth	Prologis Devts	FPPG	A	132,000	
Plot 5000, Birmingham BPk, Parkway, Elmdon	Goodman International	OPPG	A	121,500	

Nexus Point, Holford Way, Witton	Wilson Bowden Devts	OPPG	A	116,000	Site remainder
Phase IV B8, Hams Hall Dist Pk, Faraday Ave, Coleshill	ProLogis	FPPG	C	110,000	B8 devt
Plot 6B, Hams Hall, Faraday Ave, Coleshill	ProLogis	FPPG	C	107,600	Wnse
Signal Point Ph1, Fmr Yuasa Batteries Site, Warwick Rd, Tyseley	A & J Mucklow	FPPG	A	92,300	
U101, Holymoor Pt, Birmingham Great Park, Rubery	Sladen Estates/Horton Estates Developments	FPPG	C	90,000	
Faraday Point, Hams Hall, Hams Ln, Coleshill	McAleer & Rushe	FPPG	A	89,200	Seeking D&B
Unit 101 ISYS, Birmingham Great Pk, Hollymoor Way, Rubery	Corporate Land	FPPG	B	87,000	Ind unit, site cleared
Robins + Day Site, 12 Armoury Rd, Small Heath	Robins + Day	FPPG	C	85,400	
Tameside Pk, Aldridge Rd, Perry Barr	Hinton Props (Tamworth)	OPPG	E	73,300	
Holford Drive Playing Fields, Holford Dr, Perry Barr	Sandpiper Estates	FPPG	A	73,000	
Highway Point, Gorsey Ln, Coleshill	London + Standard Investments	FPPG	A	71,800	
Opus Aspect, Omega Pk, Chester Rd, Erdington	Opus Land	FPPG	A	71,200	
Ph2, Containerbase, College Rd, Perry Barr	Premier Moto Auctions	OPPG	B	66,500	
Sapcote Trading Ctre, Fmr Balfour Beatty Site, Small Heath Highway, Small Heath	Boultbee Devts	FPPG	A	62,400	
Hams Hall, Faraday Ave, Coleshill	BMW	FPPG	B	53,800	
106/116 Aston Church Rd, Aston	DSM Demolition/S & M Purvis	FPPG	A	53,500	Ind/wnse devt, alt perm for 85k B2/B8
Chorino UK & Muracon Sites, Highland Rd, Monkspath	James West Construction	FPPG	E	45,000	
K600, King's Norton Bus Ctre, Sovereign Rd, King's Norton	SEGRO	FPPG	E	41,000	SPZ PP for unrestrcited B1 devt, site clearance
Warwick Rd TE, Warwick Rd, Tyseley	Rellew Finance	OPPG	A	38,400	
Fmr Astra Training Ctre, Holyhead Rd, Handsworth	Chase Commercial	OPPG	A	36,700	
Radway IE, Radway Rd, Monkspath	Travis Perkins	FPPG	C	33,900	
69 Dartmouth Middleway	Bodyguard Workwear	FPPG	A	33,400	

r/o Netto, Bordesley Green	Netto Foodstores	S106	B	32,200	Light Ind unit

Annex F: Selected Examples of World Class Developments (Birmingham Key Sectors)

Category	Automotive	Aerospace	Environmental Technologies
Location	Bavaria, Germany	Washington State, USA	Thames Gateway, UK
Scale of cluster	• Employment: 180,000 people in sector • Companies: Bavaria's automotive industry is comprised of 1000 companies, of which 180 are Tier 1 – 4 suppliers. • Revenue: Nearly two thirds of the sales registered by Bavaria's automobile industry are exports	• Employment: 6,550 aerospace engineers and 92,000 skilled workers • Companies: 153 with total of 650 companies in cluster • Revenue: $35.4 billion and $27.2 billion exports	• Employment: Aim is for 750 jobs on the site with 500 construction jobs • Companies: 2 occupiers to date • Revenue: Not available
Key cluster facts	• Most of the world's leading automotive suppliers have set up operations in Bavaria • Audi and BMW are headquartered here • 5% of the automotive patents applied for in Germany stem from Bavaria • 6.3% of the country's automotive suppliers are based here	• Active in 6 subsectors: airframe manufacturing; avionics; composites; engineering & research; tooling; and interiors. • Largest concentration of aerospace workers in the US.	• The UK cleantech sector has grown at 4% per annum throughout the recession. • The market is worth over £23 billion in London alone. • Sub-sectors include recycling and reprocessing facilities, waste-to-energy and combined heat and power schemes and renewable energy techniques.
Developed zones	• Located in northernmost Bavaria's Upper Franconia region are the center of automotive engineering and its adjoining suppliers' park, this complex offers a number of advantages—advanced, user-configurable equipment, a large number of suppliers in the vicinity, and access to high-performance networks • The supplier park covers 156 ha	• The Aerospace Innovation Partnership Zone is located in Snohomish County with a concentration around the Paine Field Airport in Everett including the Center of Excellence for Aerospace and Advanced Materials Manufacturing and Boeing's final assembly operations for several commercial aircraft. The airports footprint consists of approximately 1,284 acres with companies including Boeing located adjacent to the airport site.	• The London Sustainable Industries Park (SIP) at Dagenham Dock within the Thames Gateway has ambitions to be the UK's largest concentration of environmental technology companies. London SIP provides 125,000 sq m of BREEAM Excellent space in total with nine commercial plots of varying size ranging from 4,390 sq m to 33,540 sq m. • Total site size is 670,000 sq ft
Web links	http://www.invest-in-bavaria.de/en/bavarias-clusters/mobility/automotive-engineering/ http://www.bavaria-westcoast.com/fileadmin/pdf/Automotive_EN.pdf	http://www.choosewashington.com/industries/aerospace/Pages/default.aspx http://www.painefield.com/about.html http://www.painefield.com/new_masterplan/Paine%20Field%20MPU%20-%20A.%20Inventory%20of%20Existing%20Conditions.pdf	http://www.investthamesgateway.com/business/thames-gateway-sectors/environmental-technologies/dagenham.html http://www.londonsip.com/ http://www.london.gov.uk/media/press_releases_mayoral/mayor-announces-%C2%A330m-investment-london%E2%80%99s-first-sustainable-industries-park

Category	Financial Services	Business & Professional Services	Computer Services/Software
Location	Edinburgh, UK	London, UK	Silicon Valley, USA
Scale of cluster	• Employment: 44,000 people directly employed • Companies: Not available • Revenue: $4.6 billion GVA from financial and insurance activities	• Employment: Over 1m in London • Companies: • Revenue: London's legal services contribute £4.5bn p.a. and accounting services £3.5bn in GVA	• Employment: 23,000 on Park • Companies: 150 on Park • Revenue: Not available
Key cluster facts	• Edinburgh is the UK's second financial centre after London and Europe's fourth by equity assets. • Over 80% of Scottish fund managers based in city	• London is the number one business location for European headquarters and has attracted three times more European HQs than any other city in Europe • Inner London has the highest concentration of business services in Europe	• Stanford Research Park is home to a range of scientific, technical and research oriented companies in a range of sectors including electronics, biotechnology, computer hardware and software. • More than 100,000 visitors come annually to the 10 largest companies on the Park.
Developed zones	• The head offices of the Royal Bank of Scotland Group are in West Edinburgh. Edinburgh Park is based in the West of the city; this 58 hectare business park is recognised as one of the best in Europe and is home to more than 20 companies including HSBC Securities, AEGON UK, Sainsbury's Finance, Lloyds Banking Group, Computershare Investor Services, Oracle, Convergys and JP Morgan Chase. • The financial services sector employs approximately 10,000 people in West Edinburgh.	• The hub of professional and business services in London represents one of the world's most successful business clusters. • Many of the key features of the international standing of the sector relate to the particular concentration of financial, legal and associated activities in London, and more specifically the City of London.	• Stanford Research Park was founded in 1951 and formed the cornerstone of Silicon Valley, growing to become one of the largest parks of its kind in the world. • Hewlett-Packard and Facebook have their HQ's on the Park. • The Park covers 700 acres and has 162 buildings with 10 million sq ft of developed facilities.
Web links	http://www.edinburgh-inspiringcapital.com/invest/key_business_sectors/financial_services.aspx	http://d2mns3z2df8ldk.cloudfront.net/l-and-p/assets/business/european_headquarters_brochure.pdf http://www.ukces.org.uk/assets/ukces/docs/publications/evidence-report-56-professional-business-v2.pdf http://217.154.230.218/NR/rdonlyres/BD693D62-5241-397009E9F594/0/BC_RS_THECITYPROSPECTUSfullfinalJan2011.pdf	http://lbre.stanford.edu/realestate/research_park http://www.stanford.edu/dept/govcr/documents/economic-impact-study.pdf

Category	Digital Media	Food and Drink	Life Sciences
Location	Manchester, UK	Skejby, Aarhus, Denmark	San Diego, USA
Scale of cluster	• Employment: nearly 150,000 creative and digital sector employees in Manchester • Companies: more than 20,000 companies • Revenue: GVA of £2.7 billion p.a.	• Employment: Agro Food Park accommodates 800 employees • Companies: 25 companies on park • Revenue: no info available	• Employment: 42,000 life sciences jobs • Companies: 1,705 establishments • Revenue: $22 billion economic activity with $2.4 billion in key support industries and $1.9 billion in exports
Key cluster facts	• The city is home to the second largest cluster in Europe. • By spring 2012 more than 2,300 BBC staff will be working out of BBC North - BBC Breakfast, Children's, Sport, Radio 5 Live, Learning, and Future Media and Technology are all relocating. • To date over 50 small creative companies have located in MediaCityUK, mainly based in The Greenhouse and The Pie Factory, including casting, lighting, camera hire, PR and digital media.	• The high concentration of international companies in the area around Skejby, such as Danisco, Arla Foods, Aarhus Karlshamn and Danish Crown, provides many opportunities for close cooperation. • It was recognised that Denmark cannot compete on low production costs or wages, or production areas; therefore it was seen as critical that the cluster developed its strengths of innovation and development.	• The San Diego region is one of the largest life sciences clusters in the US, anchored by prominent non-profit medical research institutions and R&D-oriented private companies
Developed zones	• MediaCityUK at Salford Quays is a 200-acre mixed-use property development site with the following key components: ○ 780,870 sq ft commercial office space ○ 60,000 sq ft of retail ○ 250,000 sq ft studio complex ○ 378 apartments across two buildings ○ 218 bed Holiday Inn hotel ○ 2,300 space multi storey car park ○ 5-acre piazza • Tenants include the BBC, ITV and the University of Salford	• Agro Food Park has 23,000 m2 of office space, laboratory and conference facilities with a further 5,000 m2 office space added recently • The ambition is to grow the park to 40-50 companies and organisations with 3,000 employees by 2020	• San Diego's leading life sciences location, Torrey Pines, is home to the region's largest concentration of lab space with 5.3 million square feet of lab space. • Of this total, more than 50% is owned and used by Big Pharma and research institutes including The Scripps Research Institute, the Sanford-Burnham Institute, Pfizer and the Salk Institute. • The cluster is also supported by large concentrations of lab space in UTC, Sorrento Mesa and Sorrento Valley.
Web links	http://www.mediacityuk.co.uk/ http://neweconomymanchester.com/stories/1660-greater_manchester_key_facts	http://www.agrofoodpark.dk/English/ http://www.rim-europa.eu/index.cfm?q=p.organisation&n=13233	http://www.joneslanglasalle.com/ResearchLevel1/Global_Life%20oSciences%20Cluster%20Report_2011_gb.pdf http://www.biocom.org/?m=sp_view_doc&file=Shared%20Documents/Images/Home%20page/BIOCOM_EconomicImpactReport.pdf