GL Hearn
Part of Capita Real Estate

Liverpool City Region Strategic Housing & Employment Land Market Assessment (SHELMA)

Final Report

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Contents

Quality Standards Control

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DATE	ORIGINATORS	APPROVED
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Limitations

This document has been prepared for the stated objective and should not be used for any other purpose without the prior written authority of GL Hearn; we accept no responsibility or liability for the consequences of this document being used for a purpose other than for which it was commissioned.

1 INTRODUCTION

1.1 The local planning authorities within the Liverpool City Region have commissioned GL Hearn to prepare a Strategic Housing & Employment Land Market Assessment (SHELMA) for the City Region to provide a consistent joint evidence base for housing and employment land needs over the period to 2037.

Study Context and Objectives

1.2 The Assessment is intended to provide an evidence base to inform the preparation of a statutory City Region Spatial Framework, which the Liverpool City Region Combined Authority Housing and Spatial Planning Board is charged with preparing. It will also provide an evidence base supporting the preparation of local plans by individual authorities within the City Region.

1.3 The scope of work is focused on considering issues related to:

- Future economic performance, and the scale of growth in jobs to 2037;
- The objectively assessed need (OAN) for housing;
- Need for B-class employment land.

1.4 It is intended to provide an integrated evidence base on housing and employment needs, which is consistent with national policy and guidance, is clear and transparent, and which can support future planning policy development. Specific requirements of the consultancy brief included:

- Review and identify the Housing Market Area (HMA) and Functional Economic Market Area (FEMA) geographies affecting the Liverpool City Region Authorities;
- Identify the Objectively Assessed Need (OAN) for housing over the period 2012 - 2037 across the City Region and set out an approach to distribute the City Region OAN to each of the local authorities;
- Consider the scale and distribution of economic growth across the City Region, taking account of past trends and baseline forecasts; as well as committed investment projects which may influence the scale/ distribution of growth;
- Model the need for employment land across the City Region, taking account of the economic data and commercial market dynamics and the expansion of the Port of Liverpool; providing outputs on employment land needs at a local authority level where relevant based on demand-side considerations.

1.5 In terms of housing need, the focus of the assessment is on considering the overall need for housing. Local housing needs / market assessments provide supplementary, locally specific evidence on the need for different types of homes.

1.6 On economics, the core outputs include the net growth in employment (jobs), across the City Region and in individual local authorities; as well as an assessment of the need for B-class employment land. In considering employment land provision, particular consideration is given to the

future strategic need for warehouse / distribution floorspace across the FEMA taking account of local demand drivers and the growth of the Port of Liverpool.

1.7 A separate Strategic Sites Assessment has been produced by GL Hearn alongside this SHELMA which includes a review of sites capable of accommodating B8 warehouse/ distribution units of over 9,290 sq m together with candidate sites for future allocation. The report does not therefore assess all employment sites within the sub-region and this SHELMA should thus be read alongside up-to-date individual local authority employment land reviews.

1.8 Decisions regarding the allocation of specific employment sites are policy issues, which need to draw together evidence regarding need and market attractiveness, which are considered herein, alongside other issues including Green Belt and transport impacts, together with infrastructure provision.

Study Preparation Process

1.9 The SHELMA has been prepared by a consultancy team lead by GL Hearn, supported by Justin Gardner Consulting (JGC) in assessing housing need; and MDS Transmodal in assessing future requirements for large B8 floorspace.

1.10 Alongside the preparation of the SHELMA, the Liverpool City Region LEP has commissioned Oxford Economics (OE) to prepare econometric forecasts for future economic performance. This includes a Baseline Scenario based on OE's baseline econometric forecast, and a Growth Scenario which draws upon additional data provided by each of the local authorities regarding transformational developments which will influence future economic growth but which may not be reflected in the Baseline forecast. The consultancy teams, LEP, and local authorities have liaised with one another in developing economic forecasts which can provide a consistent basis for policy development and have informed this report.

1.11 The SHELMA's preparation has been supported by a Steering Group comprising representatives of the authorities within the Liverpool City Region, West Lancashire Borough Council, together with the Liverpool City Region Local Enterprise Partnership (LEP) and Merseytravel.

1.12 Stakeholder engagement has been an important part of the process of developing the SHELMA. This has included engagement with a range of stakeholders on the proposed methodology, and initial work to define the housing market and functional economic market areas. A Consultation Draft Report was opened for public consultation which ran throughout October 2017. Consultation feedback has drawn upon to inform the finalisation of the SHELMA evidence base.

Report Structure

1.13 The remainder of the report is structured as follows:

- Section 2: Current policy framework;
- Section 3: Housing & functional economic market areas;
- Section 4: Liverpool City Region's economy;
- Section 5: Commercial property market;
- Section 6: Future economic growth potential;
- Section 7: Demographic trends and projections;
- Section 8: Housing and jobs interaction;
- Section 9: Market signals;
- Section 10: Specialist housing needs;
- Section 11: Need for office and industrial land;
- Section 12: Need for large-scale B8 development;
- Section 13: Need for other specialist employment land;
- Section 14: Draft Conclusions.

2 CURRENT POLICY FRAMEWORK

National Planning Policy

2.1 The National Planning Policy Framework (CLG, 2012) (referred to within this document as 'the Framework' or as the NPPF) sets out a presumption in favour of sustainable development (Para 14). For plan making this means that local plans should meet objectively assessed development needs, with sufficient flexibility to respond to rapid change, unless the adverse impacts of doing so would significantly or demonstrably outweigh the benefits or policies within the Framework indicate that development should be restricted.

2.2 To support policy-making, housing need is intended to be established through local authorities working together at a housing market area (HMA) level, and address the needs arising from households and population projections; the need for all types of housing and for housing demand (Para 159). Plans are expected to align housing and economic evidence base and policies (Para 158). To boost significantly the supply of housing, local planning authorities are expected to use their evidence base to ensure that local plans meet the full objectively assessed needs for market and affordable housing in the housing market area, as far as is consistent with the policies set out in the Framework (Para 49).

2.3 The Framework outlines that the Government is committed to ensuring that the planning system does everything it can to support sustainable economic growth. It outlines that local planning authorities should set a clear economic vision and strategy based on an understanding of business needs, market changes and barriers to investment. This understanding should be achieved through joint working with the business community, neighbouring authorities and the Local Enterprise Partnership. Plans should then proactively seek to meet development needs, support existing and new/ emerging sectors, and support an economy fit for the 21st Century (Paras 18-22).

2.4 Planning Practice Guidance (PPG) provides more specific advice on *Housing and Economic Development Needs Assessments*, and this SHELMA Report responds to and follows the methodology set out therein. The Guidance is clear that land supply and policy issues/ influences must not impact on the assessment of need.

2.5 In regard to identifying the Objectively Assessed Need (OAN) for housing, the PPG outlines that the latest official population and household projections form the starting point for assessing housing need, but may be adjusted adjustment through sensitivity analysis. It then outlines that the need shown by trend-based demographic projections may require adjustment to support economic growth or improve affordability (responding to evidence from market signals and of affordable housing need).

2.6 Employment land needs are expected to be considered across the relevant functional economic market area, and consider both quantitative and qualitative evidence. Quantitative forecasting is expected to include consideration of labour demand and/or labour supply, past take-up and future property market requirements. Market signals and intelligence regarding locational/ premises requirements for particular types of businesses, as well as infrastructure constraints are all relevant in considering employment land needs.

2.7 Paragraph 181 in the Framework sets out that Local Planning Authorities (LPAs) will be expected to demonstrate evidence of having effectively cooperated to plan for issues with cross-boundary impacts when their Local Plans are submitted for examination. This highlights the importance of collaborative working and engaging constructively with neighbouring authorities, as required by Section 33A of the 2004 Planning and Compulsory Purchase Act.

2.8 Local plans must be 'sound.' The NPPF sets out that this means that they must be positively prepared, justified, effective and consistent with national policy. This is tested by an independent inspector through the plan examination process. To be positively prepared, a Plan "*should be prepared based on a strategy which seeks to meet objectively assessed development and infrastructure requirements, including unmet needs from neighbouring authorities where it is reasonable to do so and consistent with achieving sustainable development."*

Devolution Deal

2.9 The Liverpool City Region agreed a Devolution Deal with Government in November 2015 with a top-up package agreed in March 2016. This results in the devolution of a range of powers and responsibilities from Central Government to the new Liverpool City Region Combined Authority and a directly elected mayor for the City Region. The Governance arrangements were subject to public consultation in June 2016.

2.10 The Mayor will have responsibility for a devolved and consolidated transport budget; for franchised bus services; and have strategic planning powers including the responsibility for creating:

- A Single Statutory City Region Framework
- A Mayoral Development Corporation
- A Land Commission
- A Joint Assets Board for economic assets.

2.11 The Combined Authority will have control over a Liverpool City Region Single Investment Fund, with resources of £30 million per annum available to unlock economic potential of the Mersey and Superport and maximise opportunities from the High Speed 2 rail line (HS2). It will also be responsible for 16+ skills provision, business support, inward investment and place-marketing.

Working with Government it will also provide a means of tailoring employment support to bring people back into work.

2.12 The Statutory City Region Framework is intended to include identification of key strategic housing and employment sites. Delivery of these can be supported by the Mayoral Development Corporation (and Mayoral Development Zones), building on the existing framework in place within the Liverpool City Region. The Land Commission will bring together local partners with Central Government to coordinate and release public sector land, including former assets of the North West Regional Development Agency.

2.13 To support innovation, the Government has committed to delivering a dedicated Smart Specialisation Advisory Hub workshop in Liverpool offering expert advice and support. In supporting wider business growth, Government has set out through the Devolution Deal its intention to devolve control and responsibility for business support to local bodies.

2.14 The SHELMA has taken account of the Devolution Deal in considering future economic performance; however it should be borne in mind that past public funding/ resources has influenced past economic performance/ trends in considering the additionality associated with future investment. It should be noted that West Lancashire does not fall within the governance of the Liverpool City Region for the purposes of the Devolution Deal, although it is an associate member of the Combined Authority.

LEP Strategic Economic Plans

2.15 The Liverpool City Region Local Enterprise Partnership's (LEP) Strategic Economic Plan seeks to achieve growth, in terms of both economic output (GVA) and jobs; to increase productivity; and to rebalance the economy, in particular through reducing public sector dependency. It identifies seven key growth sectors: the SuperPort, low carbon economy, visitor economy, advanced manufacturing, life sciences, digital and creative, and business and professional services.

2.16 The Strategic Economic Plan targets in particular closing the £8.2 billion GVA output gap, 18,500 deficit in businesses, 90,000 deficit in jobs, the gap of 46,200 working-age residents (16-64) who need to enter employment, and the £1,700 per head household income deficit. Five strategic growth priorities are identified – Liverpool City Centre; the City Region Freight & Logistics Hub; multi-modal port access; LCR^2 Energy (low carbon economy); and a Capital Investment Fund.

2.17 The econometric forecasts which have informed this SHELMA Report are intended to provide an input to the refresh of the LEP's Strategic Economic Plan.

2.18 The Lancashire LEP, which includes West Lancashire, targets sector development, boosting innovation and globally competitive business clusters; as well as investment in business growth and enterprise, skills, and unlocking new development and employment opportunities to realise local growth.

2.19 The Cheshire and Warrington LEP has identified three priorities: Atlantic Gateway in Cheshire; the Cheshire Science Corridor; and Crewe High Growth City (linked to HS2 investment). The Atlantic Gateway, which includes the Mersey/ Manchester Ship Canal, is intended to be developed as a world trade, logistics, business, and innovation corridor.

Local Plan Progress and Evidence Base

2.20 The SHELMA Report is intended to be considered alongside other local evidence, such as Strategic Housing Market Assessments for individual local authorities which provide further evidence on the need for different types of homes; as well as local Employment Land Reviews, which review the quality of existing employment sites and provide an overall assessment of employment supply across sites of a range of sizes. Some elements of existing evidence base documents may however be superseded by the SHELMA.

2.21 GL Hearn has set out below the existing evidence base regarding housing and employment needs in each authority.

- **Halton**: Halton's Core Strategy was adopted in April 2013. It sets out the spatial vision for the Borough through to 2028.
- The adopted Core Strategy sets out a housing target of 552 dwellings per annum. This was based on the target (500dpa) in the previous Regional Spatial Strategy (RSS) which was extant at the time of the Core Strategy hearing sessions, adjusted for the delivery backlog existing at 2010, divided it by the plan period (52dpa).
- The adopted Core Strategy sets out an employment land requirement of 312.55 ha over the plan period. This figure was based on the long term past take-up rate (1992-2008) with a 20% 'flexibility factor'.
- Halton is currently in the process of preparing a Delivery and Allocations Local Plan, which will update the Core Strategy where appropriate and provide more detailed polices and site allocations, it will cover the period to 2037.
- The latest local employment evidence base is the Joint Employment Land and Premises Study from January 2010 (covering Knowsley, Sefton and West Lancashire) prepared by BE Group. The latest SHMA was prepared by GL Hearn for the Mid Mersey HMA and is dated January 2016.

- **Knowsley**: The Knowsley Local Plan Core Strategy was adopted in January 2016. It sets out the spatial vision for the Borough through to 2028.
- The adopted Core Strategy sets out that 8,100 homes will provided in Knowsley between 2010 and 2028 which equates to a target of 450 dwellings per annum. The Council considered a range of scenarios, as se out within its "Technical report: Planning for Housing Growth" (link), including the 2010 Knowsley SHMA, the previous NW RSS target, and various projections and historic build rates.

- The Core Strategy sets out the employment land requirements of at least 164 ha of land to be developed within primarily the key employment locations of the council including Knowsley Industrial Park (including Knowsley Business Park); Huyton Business Park; Kings Business Park; South Prescot; and Jaguar Land Rover (Halewood). The requirements were based on the Joint Employment Land and Premises Study of 2010 and the historic completions trend.
- The Core Strategy allocated nine Sustainable Urban Extensions on former Green Belt land, to meet needs for housing and employment development up to 2028.
- The council is currently working on SHLAA and anticipate publishing it in late 2016. They are also currently undertaking work on a further round of SPDs, including masterplans for the three largest Sustainable Urban Extensions; and a masterplan for Huyton Village.

- **Liverpool**: Liverpool City Council is preparing a new Local Plan, and recently completed a second Regulation 18 consultation on a draft Local Plan. This is underpinned by a 2016 Strategic Housing Market Assessment, and 2016 Employment Land Study, both prepared by GL Hearn.
- The precursor to the new Local Plan was a Core Strategy which was based on the RSS target of 1,950 homes per annum (net 2003-21), plus from 2008 a "Growth Point" uplift of 20% on the RSS target which equated to 390 dwellings per annum (dpa). This increased the housing target to 2,340 dpa. However the 20% uplift was not generated through an OAN process and the evidence base for the RSS was already dated at the time the Core Strategy was drafted, but was the only adopted statutory figure available to the City Council at that time.
- In terms of employment, The City Council's previous Employment Land Study (Stage 3 (2009)) set out two preferred forecast scenarios for demand over the plan period to 2026 were established, these being between 200 and 317 Ha of B-class employment land.

- **Sefton**: The Sefton Local Plan was submitted to the Secretary of State for independent examination on 3rd August 2015. The Council is expecting to publish the modifications to the Local Plan for consultation in due course. The housing requirements set on the plan is 615 dwellings per annum for the period 2012-2030.
- This pre-dated the publication of the 2012–based household projections. As a result the Local Plan Inspector, in his initial findings, calculated that the OAN should be 640 dpa. After the release of the 2014-based projections, the Inspector concluded that although the requirement had decreased by about 35 dpa, this was not a material change and did not require the OAN to be adjusted again.
- The local plan submission draft proposed an employment land requirement of 88.59 ha. However the inspector suggested an adjustment to 81.59 ha.
- The 2012 'Employment Land and Premises Study' Refresh and the 2015 ELPS, both prepared by BE Group were the evidence base to inform the local plan requirements.

- **St Helens**: St Helens Council adopted its Core Strategy in October 2012. According to the Core Strategy, the RSS requires St Helens to provide at least 10,260 new dwellings over the period 2003 to 2021, with an average completion rate of 570 dwellings per annum (p.a.) net of clearance replacement.
- In terms of Employment Land Need, St Helens has identified that at least 37 hectares of land have to be provided to meet local needs for B1, B2 or B8 purposes to 2027 according to previous studies commissioned by the Council- St. Helens Economic Land Position Statement (2009), St Helens Employment Land & Premises Study (May 2011), and the Review of Employment Land in St Helens to 2027 (September 2011).
- St Helens currently in the process of preparing a new Local Plan, covering the period to 2037. This is at an early stage, with the current programme expecting adoption around September

2018. A number of Employment and Economic reports, documents and background studies have been undertaken and used to inform the Local Plan. The most recent studies that have been prepared are the St. Helens Allocations Local Plan Economic Evidence Base Paper 2015 and the St. Helens Employment Land Needs Study 2015 delivered by BE Group. The 2016 Mid Mersey SHMA provides the latest evidence on housing need/ mix.

- **West Lancashire**: The West Lancashire Local Plan was adopted by Council on 16 October 2013. It sets out the spatial vision for the Borough through to 2027.
- The adopted Housing requirement in the Local Plan is estimated to a total requirement of 4,858 dwellings, which the Council rounded to 4,860 dwellings (an annual average of 324 dpa). This is distributed in phasing of 302 dpa for 2012-2017 and 335 dpa for 2017-2027. This is based on the Strategic Housing Land Availability Assessment (2013).
- 75ha of employment land would be needed over the 15 year plan period (2012-2027). This figure was derived from historic delivery figures, applying the average of the employment land delivered each year between 1992 and 2011 (excluding anomalously high years of delivery in 1997/98 and 2003/04) and multiplying it by the 15-year plan period before adding a 20% contingency allowance. This total requirement equates to an annual requirement of 5 ha of employment land. This is based on the Employment Land and Premises Study (2013).

- **Wirral**: Wirral Council is in the process of preparing a new Core Strategy Local Plan, with a Regulation 19 Pre-Submission Consultation envisaged in September 2017.
- A revised SHMA and Housing Needs Study, prepared by NLP, was published for public consultation in August 2016. The OAN figure was between 875 and 1,235 per annum to 2032 or between 855 and 1,185 per annum to 2037.
- Employment evidence is set out in the Wirral Employment Land and Premises Study 2012, prepared by BE Group which will be subject to review during early 2017. The 2012 study identified a need for 204.9-259.9 ha of employment land based on past trends and the Council's Investment Strategy.

2.22 Table 1 sets out the objectively assessed housing need identified through the various existing evidence base documents in authorities across the Liverpool and Mid Mersey Housing Market Areas. The existing evidence would imply an OAN of 1,756 dwellings per annum (dpa) across the Mid Mersey HMA; and for 4,283 – 4,613 dpa across the Liverpool HMA.[1]

[1] Using the HMA definitions as set out in Section 3 of this report

Table 1: Housing Need identified in Existing Evidence Studies

Local Authority	Objectively Assessed Housing Need (dwellings per annum)	Source
Halton	466	Mid Mersey SHMA, January 2016
Knowsley	450	Inspector's Report on the Examination of Knowsley Core Strategy, 2015
Liverpool	1,472	Liverpool SHMA, June 2016
Sefton	640	Inspector's Initial Findings, Feb 2016
St Helens	451	Mid Mersey SHMA, January 2016
Warrington	839	Mid Mersey SHMA, January 2016
West Lancashire	302 - 335	Report on the Examination into the West Lancashire Local Plan, September 2013
Wirral	855 - 1185	SHMA and Housing Need Study, May 2016

2.23 Table 2 provides a similar profile of employment land needs identified in existing evidence base studies. It indicates a need equivalent to 81 hectares (ha) of land per annum across the Liverpool Functional Economic Market Area (as defined in Section 3). The highest need figures are shown in Halton and Knowsley.

Table 2: Employment Land Need identified in Existing Evidence Studies

Local Authority	Total need for the employment land (hectares)	Time Period	Equivalent Per Annum Figure	Source
Halton	312.5	2008-2026	17.4	Joint Employment Land and Premises Study, 2010
Knowsley	164	2010-2028	9.1	Inspector's Report on the Examination of Knowsley Core Strategy, 2015
Liverpool	120	2013-33	6.0	GL Hearn Employment Study, 2016
Sefton	69.9	2012-2030	3.9	Employment Land and Premises Study Update, Final Report August 2015.
St Helens	177 – 214	2012- 2037	8.6	Employment Land Needs Study, 2015
West Lancashire	152.5	2010-2026	9.5	Joint Employment Land and Premises Study, 2010
Wirral	204.9 – 259.9	2010-2030	11.6	Wirral Employment Land and Premises Study Refresh, 2012

2.24 There are some inevitable differences in the timing of preparation of these studies, and in the methodology and assumptions made which should be borne in mind.

2.25 **This SHELMA is intended to provide a single consistent evidence base of housing and employment land needs across the relevant FEMA and HMA geographies. In doing so it will update elements within existing evidence-base studies. The economic evidence underpinning the SHELMA is intended to support the refresh of the Liverpool City Region LEP's Strategic Economic Plan.**

Current Policy Framework – Key Points

- National planning policies require objectively-assessed development needs to be assessed leaving aside issues related to land availability and development constraints. This report does this. In this context the figures in it do not represent targets for future development: they are an input to deriving these through the plan-making process alongside wider evidence and sustainability appraisal.

- Existing evidence points to a need for 1756 dwellings per annum (dpa) across the Mid Mersey HMA; and between 4283 – 4613 dpa in the Liverpool HMA. It indicates an average annual need for 81 ha of employment land across the FEMA. The SHELMA is intended to provide updated assessments of future needs for housing and employment land provision.

3 HOUSING AND FUNCTIONAL ECONOMIC MARKET AREAS

3.1 The National Planning Policy Framework (NPPF) sets out that a SHMA should be prepared for the relevant Housing Market Area (HMA) and economic development needs should be assessed through joint working across the relevant Functional Economic Market Area (FEMA). Planning Practice Guidance (PPG) on *Housing and Economic Development Needs* Assessment reiterates this – setting out that local planning authorities should assess their development needs working with other local authorities in the relevant housing market area or functional economic market area in line with the Duty to Cooperate.

3.2 In advance of the preparation of the SHELMA, GL Hearn has undertaken an assessment of the relevant HMA and FEMA boundaries in the Liverpool City Region. This is set out in the report *Defining the Housing Market Area and Functional Economic Market Area* which is included in Appendix A to this report. This section summarises the conclusions drawn.

Housing Market Geography

3.3 The *Defining the Housing Market Area and Functional Economic Market Area* report (Appendix A) reviews previous work which has been undertaken to consider housing market and economic geographies within the Liverpool City Region, and reviews more recent data including house price data, migration and commuting flow data from the 2011 Census.

3.4 The 2007 Liverpool City Region Housing Strategy defined two housing market areas covering the 'core' Liverpool City Region: a 'Northern Housing Market Area' comprising the local authorities of Liverpool, Sefton, Wirral, Knowsley and West Lancashire; and an Eastern or 'Mid Mersey' HMA comprising Halton, St. Helens and extending into Warrington. The study also identified a 'Southern' HMA comprising Chester, Flintshire, Wrexham, Ellesmere Port and Vale Royal.

3.5 National research undertaken by CURDS (published 2010) defines a 'Silver Standard' HMA geography which is slightly different in which Wirral is defined is part of a Chester-focused HMA; with the rest of the Liverpool City Region authorities included within a Liverpool HMA which also included Warrington and Wigan. This is based on 77.5% commuting self-containment, but from now dated 2001 Census data.

3.6 There have been a number of other studies which have considered HMAs across the City Region:

- The 2016 Mid Mersey SHMA reiterated the findings of the 2007 Liverpool City Region Housing Strategy and identified a HMA covering the local authorities of Halton, St. Helens and Warrington.
- The 2016 Liverpool SHMA supports the inclusion of West Lancashire within a Liverpool-focused HMA comprising Knowsley, Sefton, Liverpool, West Lancashire, and Wirral.

- The 2014 Sefton SHMA and 2016 Wirral SHMA concluded that due to each Borough's high level of self-containment, both Wirral and Sefton can be considered as a single HMA in their own right for the purpose of considering housing needs in the context of the Local Plan.
- The 2010 Knowsley SHMA finds that Knowsley has a low self-containment rate and that Knowsley has strong links with Sefton, Liverpool, and St. Helens. The Study concluded that Knowsley cannot be classed as a standalone HMA in its own right.
- The 2009 West Lancashire SHMA concludes that West Lancashire forms part of the Liverpool City Region in housing market terms, identifying particularly links with Sefton. It also identified linkages to other areas, notably Wigan and St. Helens to the east and Central Lancashire to the north east.
- Cheshire West and Chester and Flintshire and Wrexham are now identified as separate HMAs in their respective Local Plans and as part of a separate FEMA.

3.7 Existing studies thus draw differing conclusions on housing market geographies, in particular where studies have been commissioned by individual authorities (and focused somewhat on links to/ from this).

3.8 GL Hearn has sought to reaffirm the HMA and FEMA definitions taking account of new evidence made available since the publication of these studies – particularly from datasets drawing from the 2011 Census. On a practical basis, the approach used has sought to define a geography based on the aggregation of local authorities as population and household projections and economic data is not available below this level.

3.9 The most important new analysis relates to consideration of migration and commuting patterns drawing on 2011 Census data. This indicates a strong set of flows between Liverpool and Sefton, Liverpool and Wirral, and Liverpool and Knowsley providing clear evidence that these should be considered within the same strategic HMA.

3.10 There are also flows between West Lancashire and both Merseyside and Central Lancashire; but the stronger links are towards Merseyside, particularly with Sefton. This supports the inclusion of West Lancashire within a Liverpool-focused HMA.

3.11 Halton and St. Helens have strong migratory and commuting links both with Liverpool and with Warrington, and St. Helens in particular also has links with Wigan. However, the flows data shows that Wigan relates far more strongly in migration terms to Greater Manchester (whereas Halton and St Helens do not).

3.12 Analysis of self-containment rates indicates that that most local authorities have self-containment of commuting and migration patterns which exceeds 70%. However analysis of migration and commuting inter-relationships is also relevant and points to strong flows between Knowsley and Liverpool, Liverpool and Sefton, and Liverpool and Wirral (and to a lesser extent Sefton and West Lancs). Strong flows between authorities suggests that the definition of a broader strategic HMA is

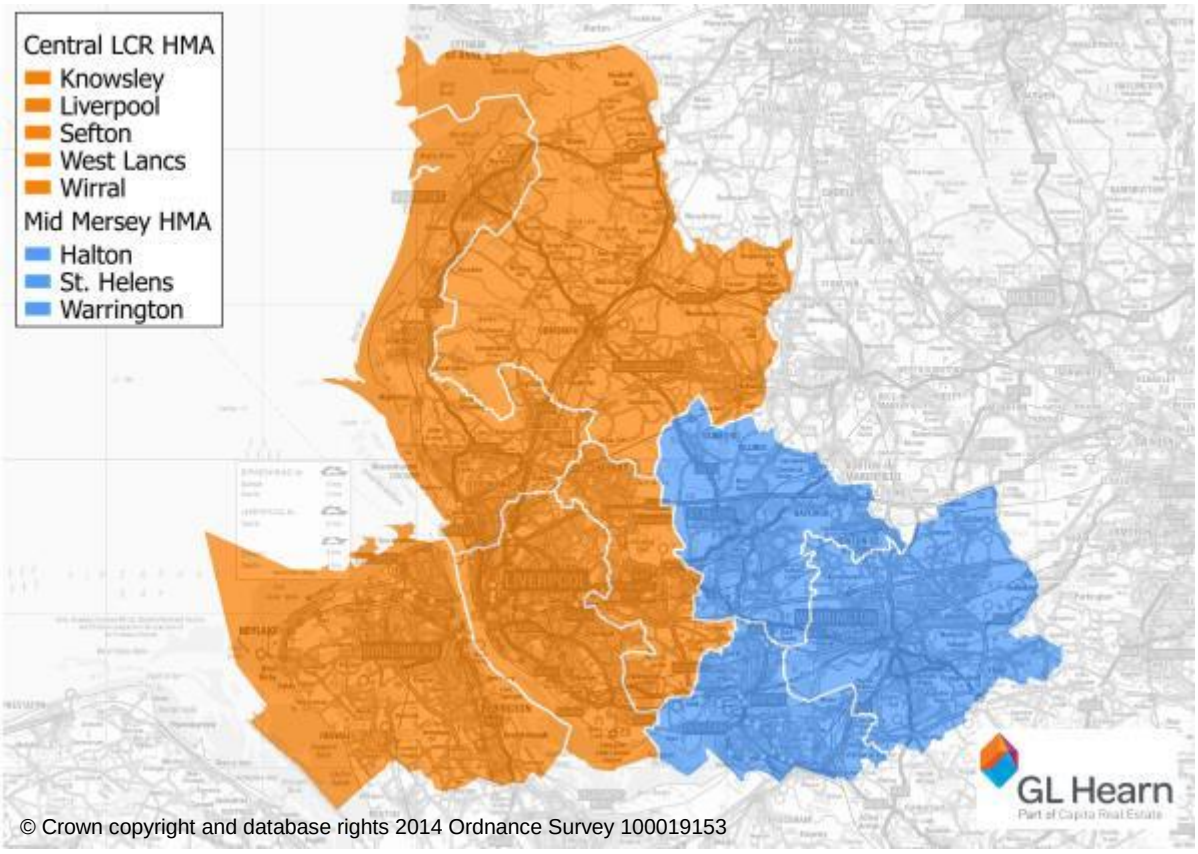
justified for the purposes of this LCR-level assessment. Liverpool, Wirral, Knowsley, Sefton, and West Lancashire together have a self-containment of around 90%.

3.13 There is also a strong case for the grouping of St. Helens and Halton along with Warrington. St. Helens, Halton and Warrington together have a self-containment of around 80%. Again this exceeds the typical thresholds. There is an inter-relationship between this area and Wigan, but Wigan relates more strongly towards Greater Manchester.

3.14 The ONS 2011 Travel to Work Areas (TTWAs) identifies a Liverpool TTWA which covers Liverpool, Knowsley, Sefton and most of West Lancashire. Halton and St. Helens however are included within the Warrington and Wigan TTWA, while Wirral is included in the Birkenhead TTWA.

3.15 Taking the above into consideration, the analysis broadly confirms the conclusions of the 2007 Liverpool City Region Housing Strategy as well as the 2016 Liverpool SHMA and 2016 Mid Mersey SHMA. These identify a HMA which, based on the best fit to local authority boundaries, comprises Liverpool, Sefton, Wirral, Knowsley and West Lancashire – the 'Liverpool' or 'Central LCR HMA'; Halton and St. Helens form a separate HMA with Warrington – the 'Mid Mersey HMA'. There is a degree of overlap between these two HMAs as well as with surrounding areas, as is the case with all HMAs.

Figure 1: Housing Market Areas



3.16 The HMA analysis is focussed on the definition of HMAs at a strategic level. The focus on strategic HMAs reflects the sub-regional scope of the work and is suitable for considering the overall Objectively Assessed Housing Need (OAHN) figure for each authority. The analysis does not consider more local housing market areas and housing sub-markets which are of greater relevance in considering issues relating to more local market dynamics and housing mix. This is addressed through SHMAs/ other studies for individual local authorities. In meeting the OAHN each authority is subject to the Duty to Cooperate and the identified HMA boundaries should not be treated as a basis for ignoring Duty to Cooperate obligations with neighbouring authorities.

Functional Economic Market Area

3.17 The NPPF sets out that economic development needs should be assessed for the relevant Functional Economic Market Area (FEMA). The CLG's 2010 publication *Functional Economic Market Areas – An Economic Note* outlines that a FEMA is the geographical area over which the local economy and its key markets operate, suggesting that this is likely to correspond to sub-regions or city regions.

3.18 Along with defining the City Region's HMAs, the *Defining the Housing Market Area and Functional Economic Market Area* report (Appendix A) also considers the definition of the Functional Economic Market Area (FEMA) in the City Region. The report's findings in relation to FEMA is summarised below.

Defining the FEMA

3.19 The PPG on *Housing and Economic Development Needs Assessments* sets out what FEMAs are and provides guidance on how these should be defined. This includes taking account of LEP geographies, travel to work and housing market areas, administrative geographies, flows of goods, catchment areas for shopping and services, and the transport network.

3.20 The 2011 Census based data shows the Liverpool City Region divided into four Travel to Work Areas (TTWAs) – a Liverpool TTWA, Warrington and Wigan TTWA, Birkenhead TTWA, and Preston TTWA. However the Census data also shows complex commuting patterns across the region with numerous main employment centres in relative proximity. While this suggests that Warrington and Wigan should be considered as economic areas which are significantly separate to Liverpool, areas such as St. Helens and Halton show influences from multiple directions.

3.21 Detailed review of the evidence indicates that it is reasonable to consider a FEMA which stretches beyond the Liverpool TTWA. The City of Liverpool is an important economic and employment centre as well as a retail and leisure destination of national importance. Liverpool is the largest retail centre in the Liverpool City Region (LCR) with the highest level of retail expenditure, and the City is

identified as a key leisure destination for all of the LCR authorities. The Liverpool City Region LEP area covers the authorities of Halton, Knowsley, Liverpool, Sefton, and Wirral.

3.22 Analysis of LCR's existing development pattern and Motorway / Strategic A-Road network suggests that key strategic A-Road and Motorway corridors along the M53, M57, M58, and M62 will likely be vital to meeting the increased distribution needs arising from the SuperPort.

3.23 GL Hearn recognises that in many cases housing market and functional economic market areas are coterminous, and that there can be practical benefits associated with aligning the two.

3.24 However, in undertaking this assessment for the LCR, GL Hearn consider that there is a strong basis for defining non-coterminous HMAs and FEMA. The basis for this is described in detail in Appendix A which identified distinctions between the Mid Mersey authorities and the rest of the City Region in terms of housing market characteristics and HMA definition. This has led to the identification of two HMAs in the city region: a Mid Mersey HMA and a Central LCR HMA.

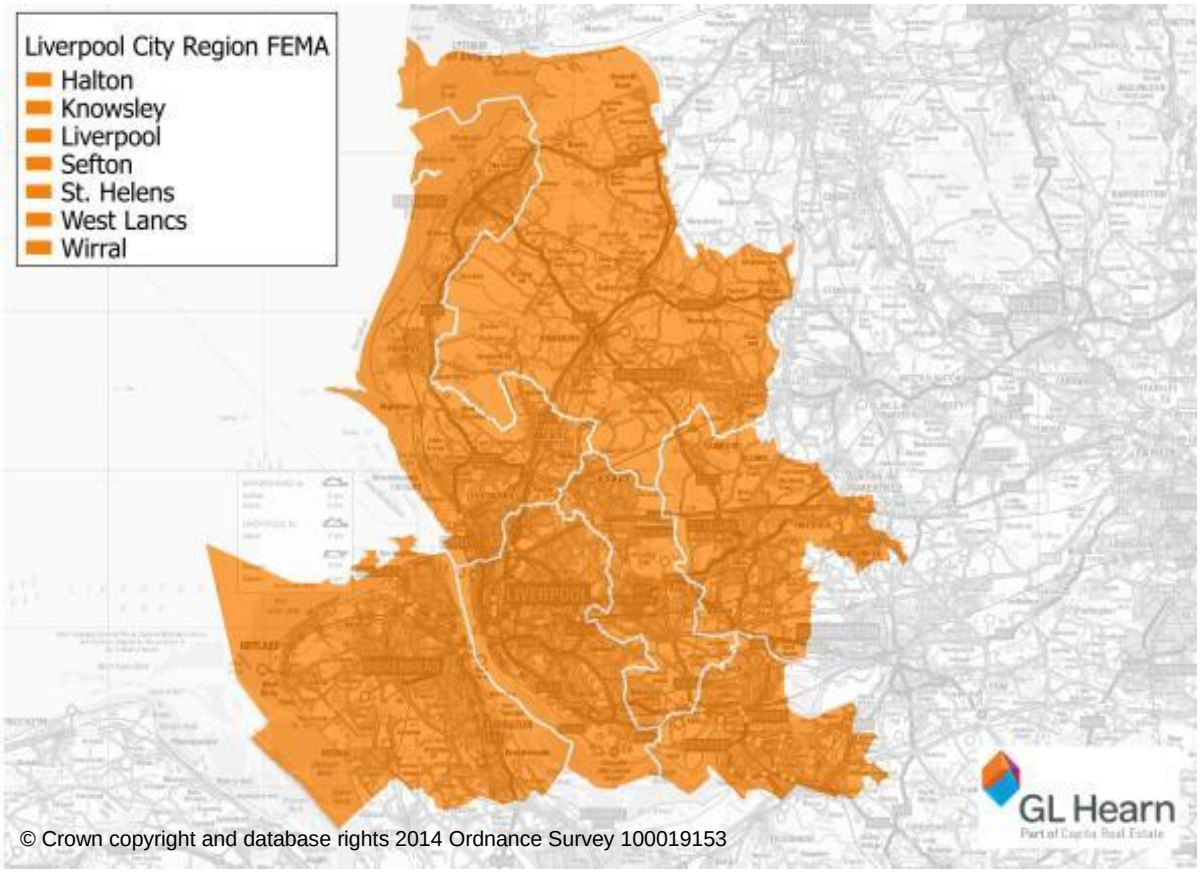
3.25 In considering suitable FEMA boundaries, the wider criteria set out in PPG has been taken into account. The evidence suggests the following conclusions:

- The City of Liverpool is of major importance as a retail, cultural, and leisure destination. The City has large catchment area extending across the LCR, covering an area which extends beyond the Liverpool HMA.
- The LCR has a complex transportation network with a network of motorways and major A-roads which extends beyond the Liverpool HMA. The strategic road network does not provide a distinction between the two identified HMAs or justification for two separate FEMAs. The public transport network is broadly focussed around the City of Liverpool with Liverpool City Centre the hub for a number of public transport routes. Again, the public transport network extends across the wider City Region and does not justify multiple FEMAs.
- Key sectors, particularly the warehouse / distribution sector, operate across a wide geographic area. The 'area of search' for such uses is at a sub-regional or regional scale and relies on good links to the strategic transport network, good access to the labour force, and in the case of LCR good links to the Port of Liverpool. For the automotive manufacturing sector, analysis of the JLR supply chain shows nationwide activity reliant on good access to the motorway network rather than a particularly localised activity.
- A key consideration for defining the FEMA and for policies for employment land is the potential growth of the Port of Liverpool and the SuperPort proposals and the need for additional warehouse and distribution floorspace to support this. Analysis of the transportation network and drive time from the port highlights that this has economic implications which span the sub-region

and mean that it would be unsuitable to identify two separate FEMAs in the same way we have with the HMAs.

3.26 On the balance of evidence, our analysis suggests the definition of a Functional Economic Market Area (FEMA) which covers Halton, Knowsley, Liverpool, Sefton, St Helens, West Lancashire, and Wirral. This is shown in Figure 2.

Figure 2: The Identified Functional Economic Market Area



3.27 Inevitably, when defining economic areas the precise boundaries are hard to define with the edges of such areas blurring and overlapping neighbouring areas. In addition, different definitions can be due to the criteria considered and the weight given to each criterion in the assessment. This depends on the purposes of the study and its intended use.

3.28 The FEMA definition shown above is intended to be used principally to inform further analysis of economic and housing market dynamics at a sub-regional level, in order to enable the preparation of this SHELMA, to enable the identification of housing and employment land needs across the Liverpool City Region, and to inform the development of the LCR Spatial Plan and Local Plans.

3.29 Work conducted by Merseytravel and other bodies has produced separate analysis defining the wider functional economic area of the Liverpool City Region. This has used ONS TTW and other

data to identify wider definition of the Liverpool City Region is comprised of Halton, Knowsley, Liverpool, Sefton, St.Helens, Wirral, West Lancs, Warrington and Cheshire West & Chester. Taking into account key businesses, the wider functional economic area also includes Flintshire and Wrexham. These broader economic –relationships into Cheshire and North-East Wales may be relevant to some extent in Duty to Cooperate negotiations, however in some duty to cooperate discussions. In preparing the SHELMA, GL Hearn has engaged with Cheshire West and Chester and Warrington Councils, who consider themselves aligned to a Cheshire and Warrington LEP geography. Nonetheless it is important to recognise economic interactions between these areas, including in particular with Ellesmere Port and Chester, and with Warrington.

Housing and Functional Economic Market Areas – Key Points

- The SHELMA defines two housing market areas which cover parts of the Liverpool City Region: a Liverpool HMA which includes the local authorities of Knowsley, Liverpool, Sefton, Wirral and West Lancashire; and a Mid Mersey HMA which includes Halton, St Helens and Warrington.

- A single Functional Economic Markt Area is identified which includes Halton, Knowsley, Liverpool, Sefton, St. Helens, West Lancashire and Wirral. There are broader economic inter-relationships with adjoining areas in particular with Warrington, and through into North Cheshire and North-East Wales.

4 LIVERPOOL CITY REGION'S ECONOMY

4.1 In this section we move on to consider the economic characteristics of the Liverpool City Region FEMA, considering characteristics of its economy; followed by that of the labour market.

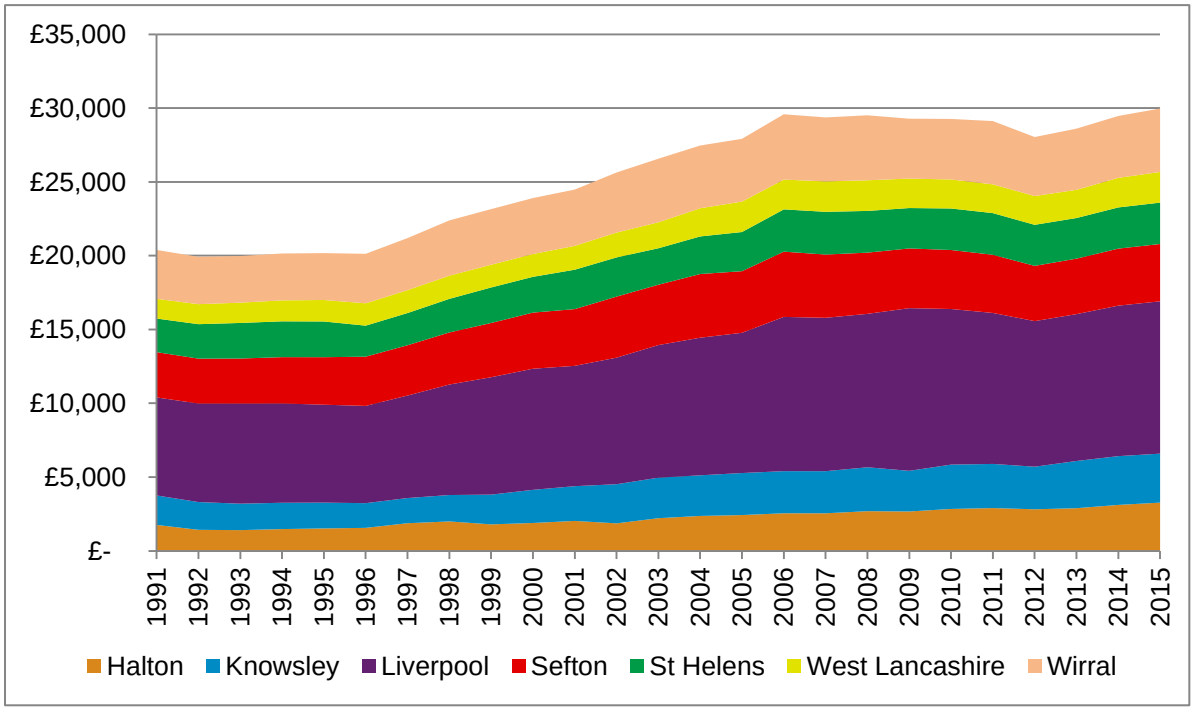
The City Region's Economy

4.2 The Liverpool FEMA is a £30 billion economy[2] and contributes about a fifth of the North West's Gross Value Added (GVA). GVA per capita is around three quarters of the national figure, and the second lowest of the 11 second-tier city regions.[3]

4.3 Across the FEMA, GVA grew consistently from the mid-1990s to the mid-2000s. However between 2006 and 2010, GVA growth plateaued, and fell between 2011-12 driven by a notable drop in manufacturing output. Since 2012, growth has resumed. This trend broadly reflects the macro-economic circumstances which saw strong growth (in a historical context) over the decade to 2007, tempered by the 'credit crunch' and following recession from 2008 onwards.

4.4 More recent growth reflected improving confidence and sentiment in the market. However, following the EU referendum in June 2016, the economic climate has worsened and this is expected to negatively impact on short-term economic growth. It also heightens longer-term uncertainty.

Figure 3: GVA (£million, 2012 prices)

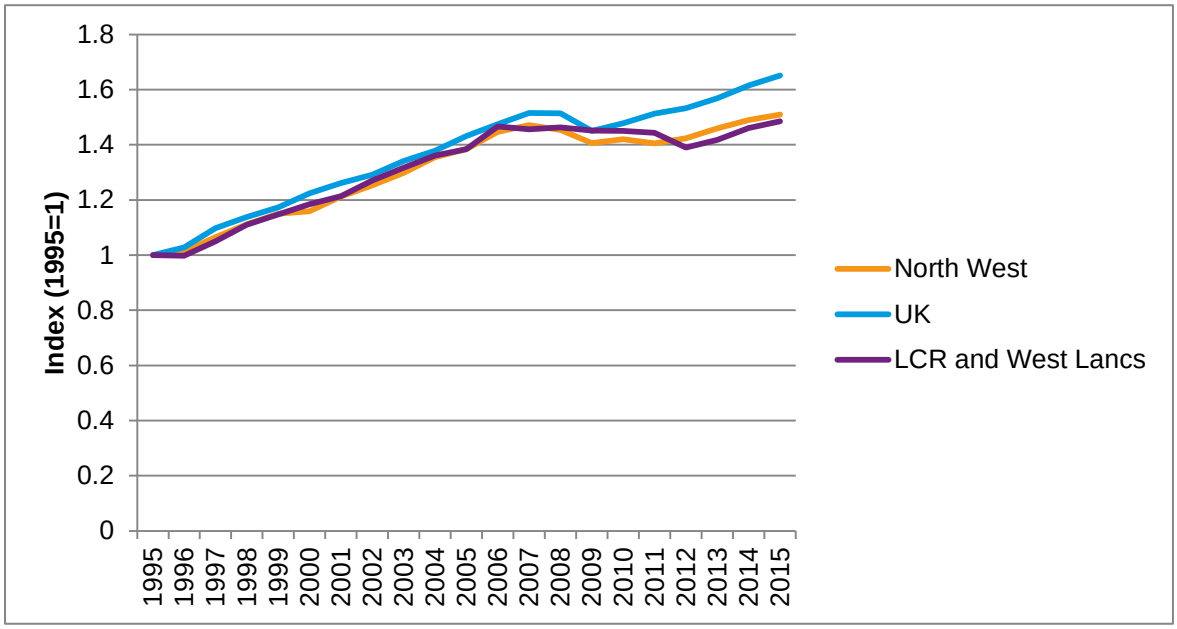


Source: Oxford Economics

[2] Based on Annual Gross Value Added (GVA), 2015. This relates to the value of goods and services produced in the area
[3] This relates to regional cities

4.5 Over the last twenty years, the FEMA's economy has grown by an average of 2.0% per annum, in line with that seen across the North West region, but some way below the 2.5% pa growth seen nationally. Growth rates were similar to national trends over the period to 2006; however the City Region's economy did not really grow between 2006-11. Manufacturing output contracted in 2012 resulting in a fall in GVA. Since 2012 the City Region's economy has seen a return to growth, with growth roughly in line with the North West trend.

Figure 4: Indexed GVA Growth, 1995-2015



Source: GLH Analysis of OE data

4.6 Data on GVA, as a measure of the total value of goods and services produced, can be used to provide an indication of the relative size of economy in different local authority areas. Liverpool is the largest economy within the LCR FEMA and contributes 34% of GVA. This is followed by Wirral at 14%. The smallest economies within the FEMA are those of St Helens and West Lancashire.

Table 3: Size of Economies at Local Authority Level – GVA, 2015

	GVA, 2015 (£ '000)	% FEMA GVA
Halton	3270	11%
Knowsley	3317	11%
Liverpool	10323	34%
Sefton	3884	13%
St Helens	2802	9%
Wirral	4298	14%
West Lancashire	2078	7%
FEMA	29972	100%

Source: GLH Analysis of OE data

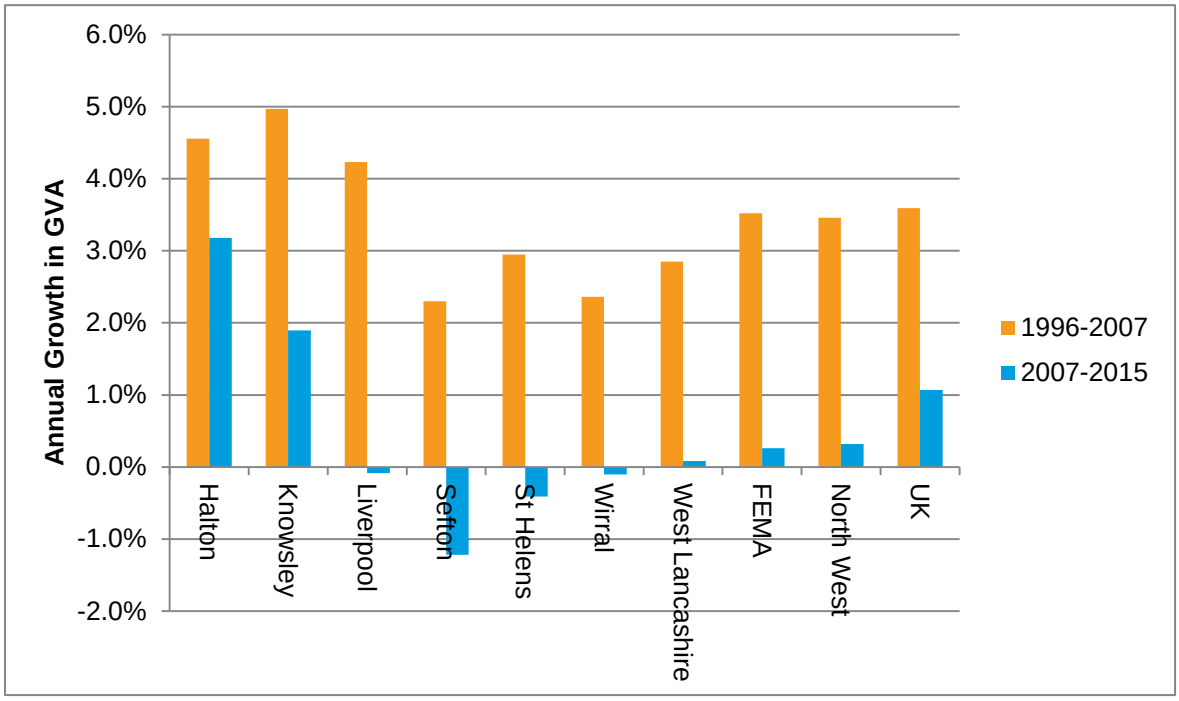
4.7 Over the 1996-2007 period, prior to the recession, Knowsley, Halton and Liverpool saw the strongest economic growth, in each case with growth in GVA of over 4% pa. Given Liverpool's economic size, it is clear that growth in the City's economy was a key driver of performance across the FEMA as a whole. Strong growth rates in Knowsley and Halton are in part a reflection of their relative smaller economic size. Other parts of the City Region saw slower economic growth relative to regional and national benchmarks.

4.8 All local areas have seen a decline in the pace of growth post-recession, as has been the case nationally. The national economy over the period since 2007 has grown by an average of 1.1% pa influenced by the economic recession and weak global growth since 2013 reflecting disappointing performance in the US, Japan and Eurozone and a notable slowing of the Chinese economy.

4.9 Liverpool, the largest economy, has failed to recover to its pre-recession output, and weighed down growth across the FEMA as a whole. Sefton, St Helens and Wirral's economies are also still smaller in 2015 than they were in 2007.

4.10 In contrast, as Figure 5 shows, there has been a strong level of growth in economic output in Halton and Knowsley, growing on average by 3.6% and 3.0% respectively and continuing to out-perform wider benchmarks. This has been influenced by concentrations of economic activity in high value sectors such as manufacturing and information and communications.

Figure 5: GVA Growth over last two Economic Cycles

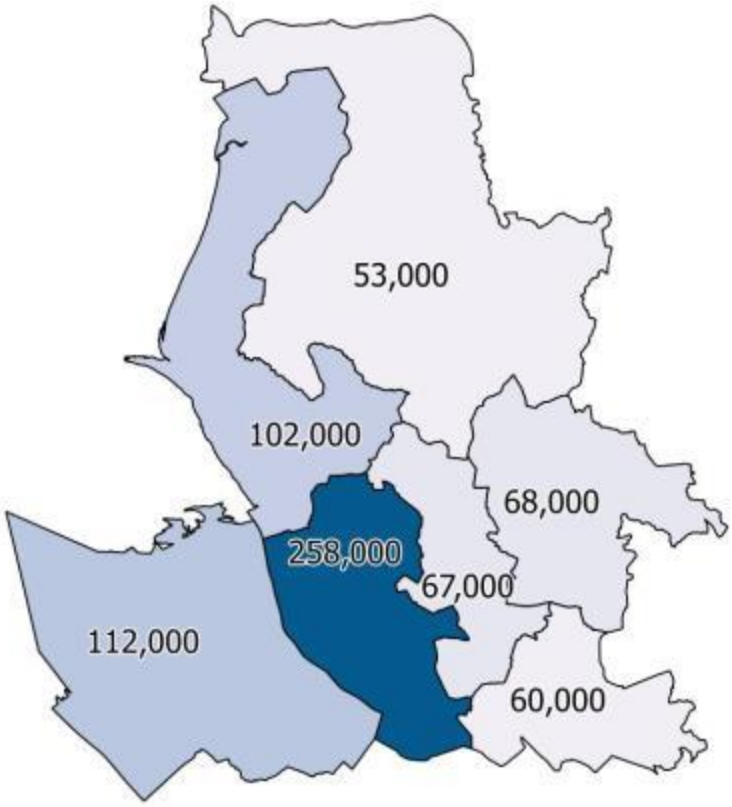


Source: GLH Analysis of OE data

4.11 Across the Liverpool Functional Economic Market Area there were a total of 720,000 jobs in 2014. The local authority with the greatest number of total jobs is Liverpool with 258,000 – equivalent to 36% of the FEMA total, and considerably more than any other single authority area. This highlights the City's role as an economic centre for the wider FEMA.

4.12 Wirral and Sefton are the authorities with the next highest number of jobs with 112,000 (16%) and 102,000 (14%) jobs respectively. The remaining four local authorities all have lower numbers of jobs: 68,000 jobs (9%) in St. Helens; 67,000 jobs (9%) in Knowsley; 60,000 jobs (8%) in Halton; and 53,000 jobs (7%) in West Lancashire.

Figure 6: Total Jobs

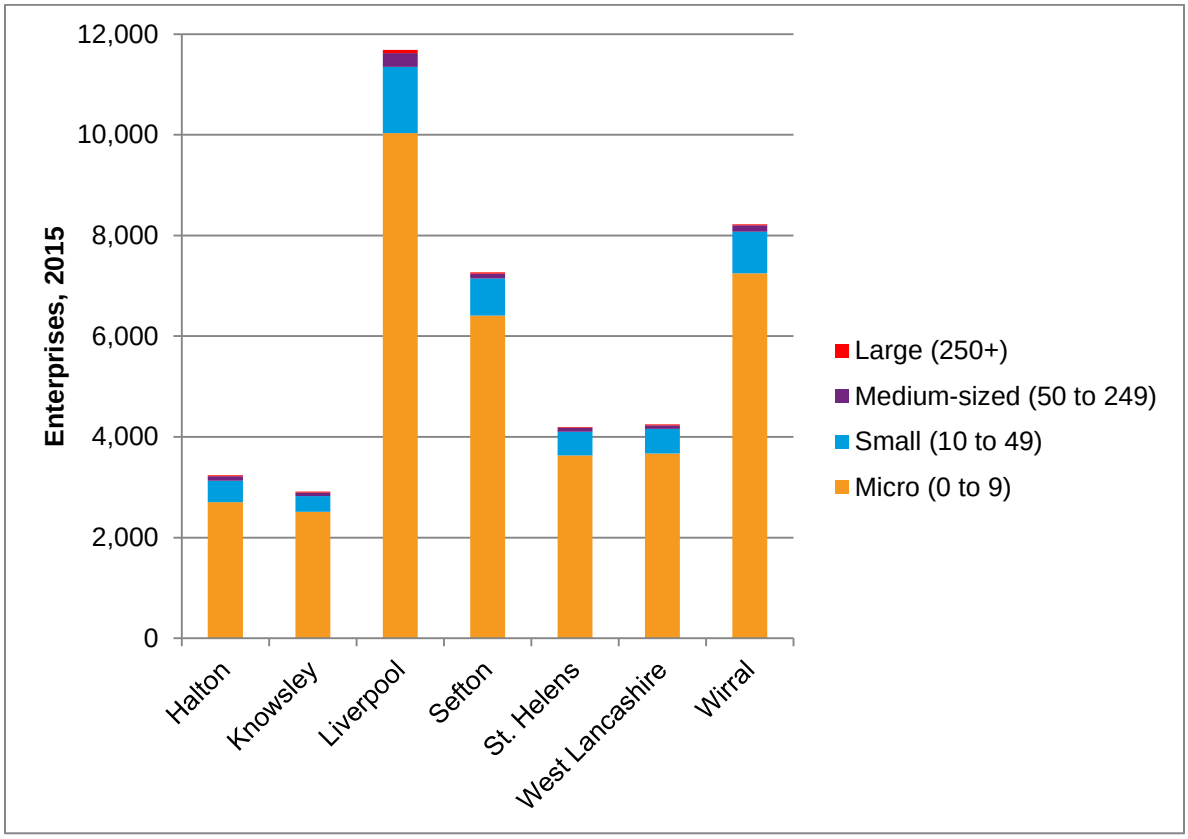


Source: ONS, 2014

4.13 In 2015 ONS recorded a total of 41,800 enterprises in the Liverpool FEMA. 11,700 (28%) of these were in Liverpool local authority area; 8,200 (20%) were in Wirral; 7,300 (17%) were in Sefton; there were 4,200 (10%) in both West Lancashire and St. Helens; while there were 3,200 (8%) in Halton; and 2,900 (7%) in Knowsley.

4.14 Across the FEMA, 87% of enterprises are micro-enterprises – meaning they have between 0 and 9 employees. This is slightly lower than the regional rate of 88% and the national rate of 89%. There is a greater proportion of small enterprises – 10 to 49 employees – in the FEMA (11%) than regionally (10%) or nationally (9%). The proportion of medium-sized and large enterprises in the FEMA is broadly in line with regional and national rates – 2% and 0.4% respectively. Within the FEMA the greatest numbers of medium-sized and large enterprises are located in Liverpool – reflecting its status as the area's primary City Centre.

Figure 7: Business Counts – Enterprises



Source: UK Business Counts, 2015

4.15 Jobs density is the ratio of jobs to residents aged 16-64 in an area. This provides a broad measure of how the number of jobs in an area relates to an area's resident population. Across the FEMA as a whole the jobs density is 0.69 meaning there are 0.69 jobs for every resident of working age. This compares to a North West figure of 0.78 and a UK figure of 0.82.

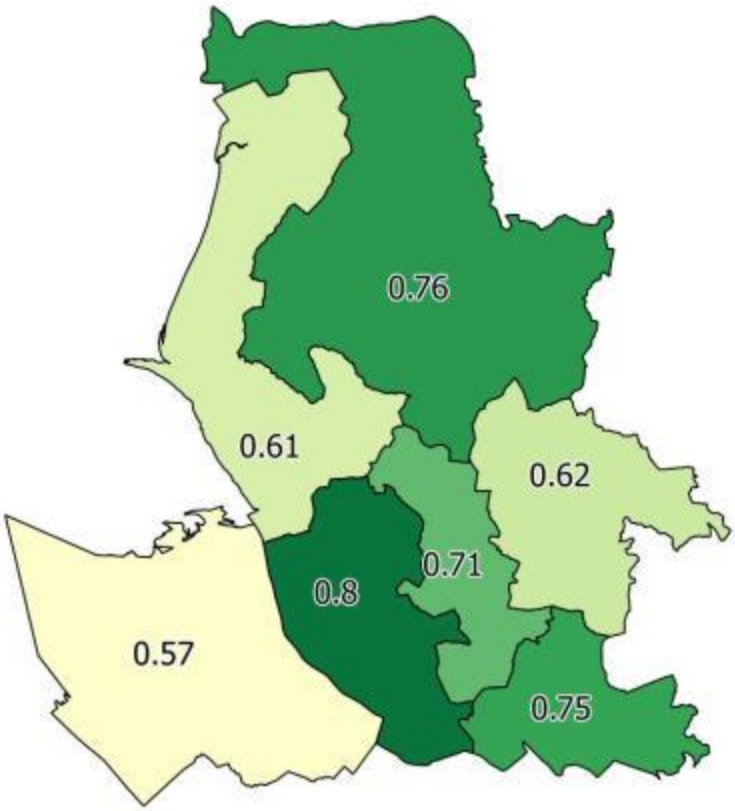
4.16 The jobs density data in effect points to a lower level of jobs than we might expect. If the jobs density was to equal the national average, the FEMA would contain 133,000 (18%) more jobs than it does. This is a function principally of the characteristics/ strength of the economy, albeit influenced in part by workforce participation and skill levels.

4.17 Within the Liverpool FEMA the area with the highest jobs density is Liverpool itself with a density of 0.80. The jobs density in Liverpool should arguably be higher as cities are typically hubs for jobs and draw people in from surrounding areas. This partly reflects above average worklessness.

4.18 West Lancashire and Halton have the next highest jobs densities of 0.76 and 0.75 respectively, while Knowsley is slightly lower at 0.71. St. Helens, Sefton, and Wirral have lower levels of jobs densities still with 0.62, 0.61, and 0.57 respectively, showing lower numbers of jobs in these

authorities relative to their working age populations. It is notable that the jobs density in all of the FEMA local authorities falls below national benchmarks – pointing to potential to support jobs growth through increasing economic participation.

Figure 8: Jobs Density



Source: ONS, 2014

4.19 Table 4 shows the total number of jobs in the FEMA divided by broad sector. The sector with the most jobs is Human health and social work with 124,700 jobs. The Wholesale and retail trade sector constitutes the second most jobs in the FEMA with 108,900. There are also a considerable number of jobs in Education (66,500 jobs), Manufacturing (62,000), Administration and support services (52,400), Professional, scientific and technical activities (50,000), and accommodation and food services (49,100).

4.20 Table 4 also shows the jobs growth (or losses) in each sector since 1991. Total jobs growth over this period has increased relatively modestly – by 23,600. Table 4 shows stronger relative growth in Human health and social work which has grown by 36,500 jobs over this period. Other sectors which have seen growth include Professional, scientific and technical (23,700 jobs), Administrative and support services (19,800), and Education (14,100). Service-based sectors have driven employment growth.

4.21 There have been substantial job losses in the Manufacturing sector, where there has been a net reduction of 54,800 jobs over the period 1991-2015. Employment in the sector has dropped substantially by 47% over this period.

4.22 The Financial and insurance sector has also seen considerable losses of 13,800 jobs. Public administration and defence has seen 8,500 job losses; and Construction has seen 6,300 job losses over this period.

Table 4: Total Jobs and Jobs Growth by Sector, FEMA

Sector	Total Jobs 2015	Jobs Growth 1991-2015
Agriculture, forestry and fishing	5,300	-1,000
Mining and quarrying	200	-1,200
Manufacturing	62,000	-54,800
Utilities	5,200	2,700
Construction	41,300	-6,300
Wholesale and retail trade	108,900	-3,200
Transportation and storage	37,200	1,900
Accommodation and food service	49,100	11,700
Information and communication	16,600	-400
Financial and insurance	17,500	-13,800
Real estate	10,600	3,100
Professional, scientific and technical	50,000	23,700
Administrative and support service	52,400	19,800
Public administration and defence	38,800	-8,500
Education	66,500	14,100
Human health and social work	124,700	36,500
Arts, entertainment and recreation	18,300	-200
Other service activities	20,500	-500
Total	725,200	23,600

Source: Oxford Economics

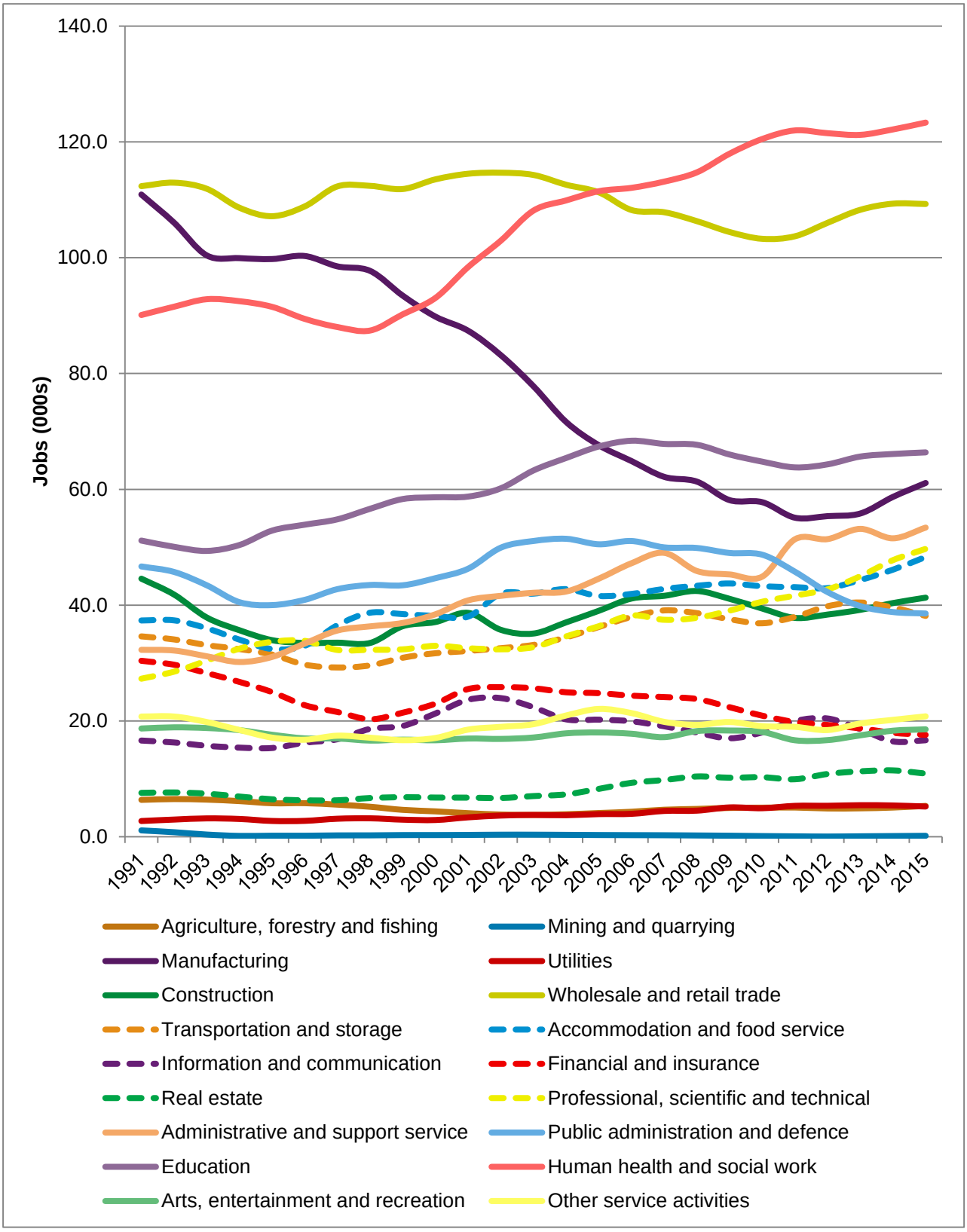
4.23 The sectoral growth trend for the FEMA is shown in Figure 9 overleaf. This shows sectoral performance, in terms of the number of jobs, over the period from 1991 to 2015. Figures are based on a rolling three year average[4].

4.24 Figure 9 shows the strong continued growth in the Human health and social care sector since 1998 which continued to see steady growth throughout the post-recession period from 2008 to 2012.

4.25 The other most obvious change shown in Figure 9 is the decline in manufacturing jobs from the mid-1990s through to 2011.

[4] This smooths out year-on-year variations which in some instances reflect data anomalies

Figure 9: Jobs Growth by Sector (3 Year Rolling Average), 1991-2015

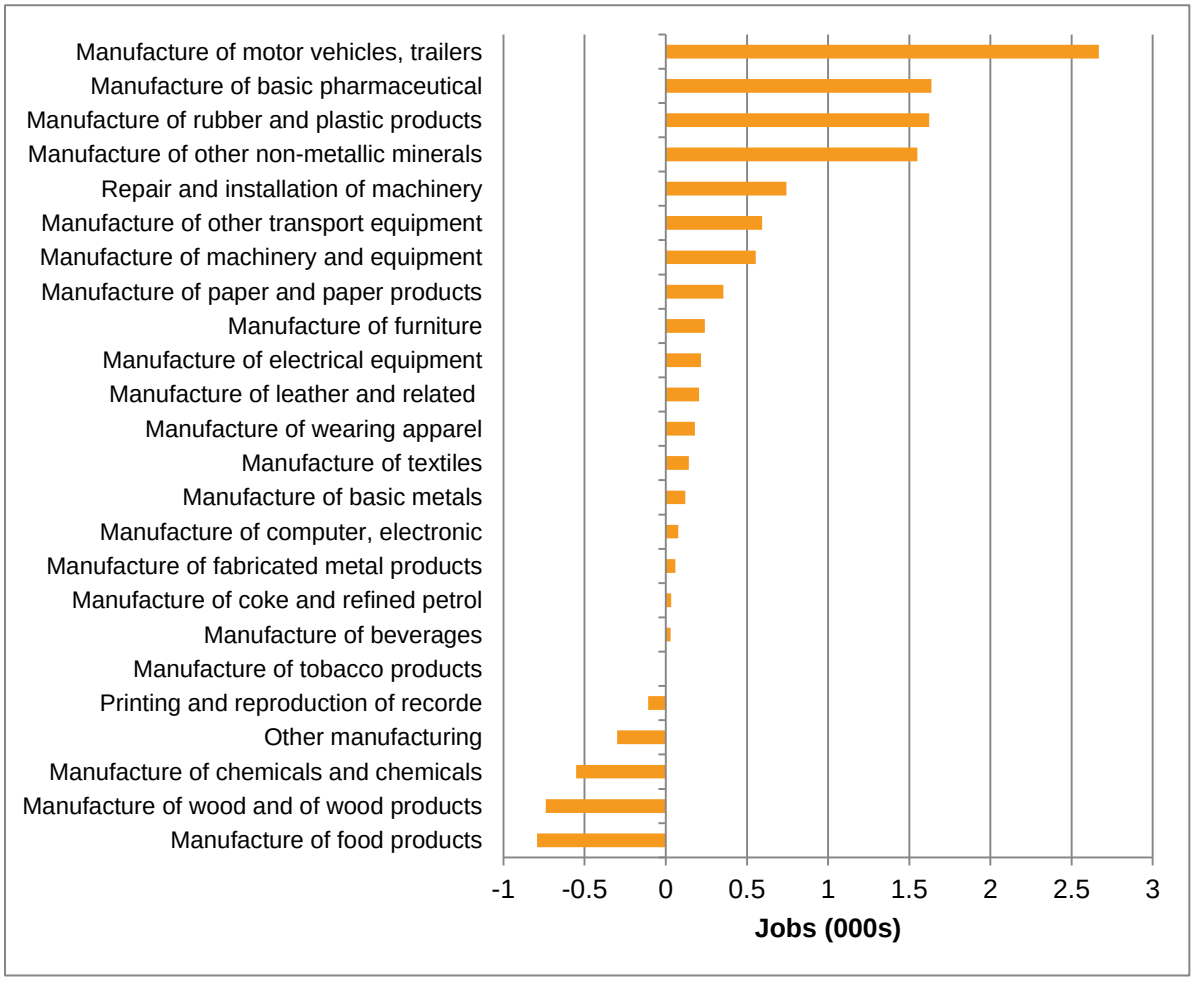


Source: Oxford Economics

4.26 As shown in Figure 9, the FEMA has seen a major decline in manufacturing jobs since the early 1990s. Since 2011 this declining trend has reversed and there has been a modest growth. Looking at the Manufacturing sector in more detail allows to identify a number of sub-sectors which have seen strong levels of growth over the most recent 5 years.

4.27 Figure 10 sets out the growth in Manufacturing jobs by sub-sector over the period 2010-2015. During this period certain sub-sectors have seen considerable growth: Manufacture of motor vehicles and trailers has seen a growth of 2,700 jobs, while Manufacture of other transport equipment saw a further growth of 600 jobs. The Manufacture of pharmaceuticals, rubber and plastic products, and other non-metallic minerals sub-sectors all saw growth of 1,600 jobs.

Figure 10: Growth in Manufacturing Jobs, 2010-2015



Source: GLH analysis of Oxford Economics

4.28 It is important to assess the relative concentration of employment in different sectors (compared to wider benchmarks) in order to understand the growth potential of the FEMA's economy. An area with a strong concentration and competitive advantage in higher value sectors which are expected

to grow can be expected to post stronger relative economic growth compared to an area which has an over-dependence on sectors which are expected to perform comparatively more weakly.

4.29 We can use a location quotient to assess how similar the FEMA's jobs structure is to other areas. Table 5 sets out the location quotient of the FEMA compared to the North West and the UK. A location quotient of 1.00 for a particular sector means that the comparison areas have the same proportion of jobs in that sector. A location quotient of greater than 1.00 means that there is a relatively large proportion of jobs in that sector, while a location quotient of less than 1.00 means fewer jobs.

4.30 Comparing the FEMA's job structure to that of the North West and the UK shows that the FEMA has a relatively high number of jobs in the public sector – with a strong representation of employment in Public administration and defence as well as in Human health and social work, but also to a lesser extent in Education.[5] The FEMA also has a higher proportion of jobs in Transport and storage than the regional or national figures. The location quotient analysis shows that compared to the UK, the FEMA has a higher proportion of Manufacturing jobs, however the proportion is lower than the North West level.

Table 5: Location Quotient, FEMA vs North West and UK

	FEMA vs North West	FEMA vs UK
Agriculture, forestry and fishing	0.84	0.62
Mining and quarrying	0.48	0.12
Manufacturing	0.87	1.08
Utilities	0.79	0.74
Construction	0.91	0.87
Wholesale and retail trade	1.00	1.02
Transportation and storage	1.12	1.13
Accommodation and food service	0.96	1.02
Information and communication	0.82	0.57
Financial and insurance	0.89	0.71
Real estate	0.95	0.93
Professional, scientific and technical	0.82	0.80
Administrative and support service	0.95	0.86
Public administration and defence	1.25	1.22
Education	1.08	1.06
Human health and social work	1.20	1.37
Arts, entertainment and recreation	0.99	0.87
Other service activities	1.01	1.01

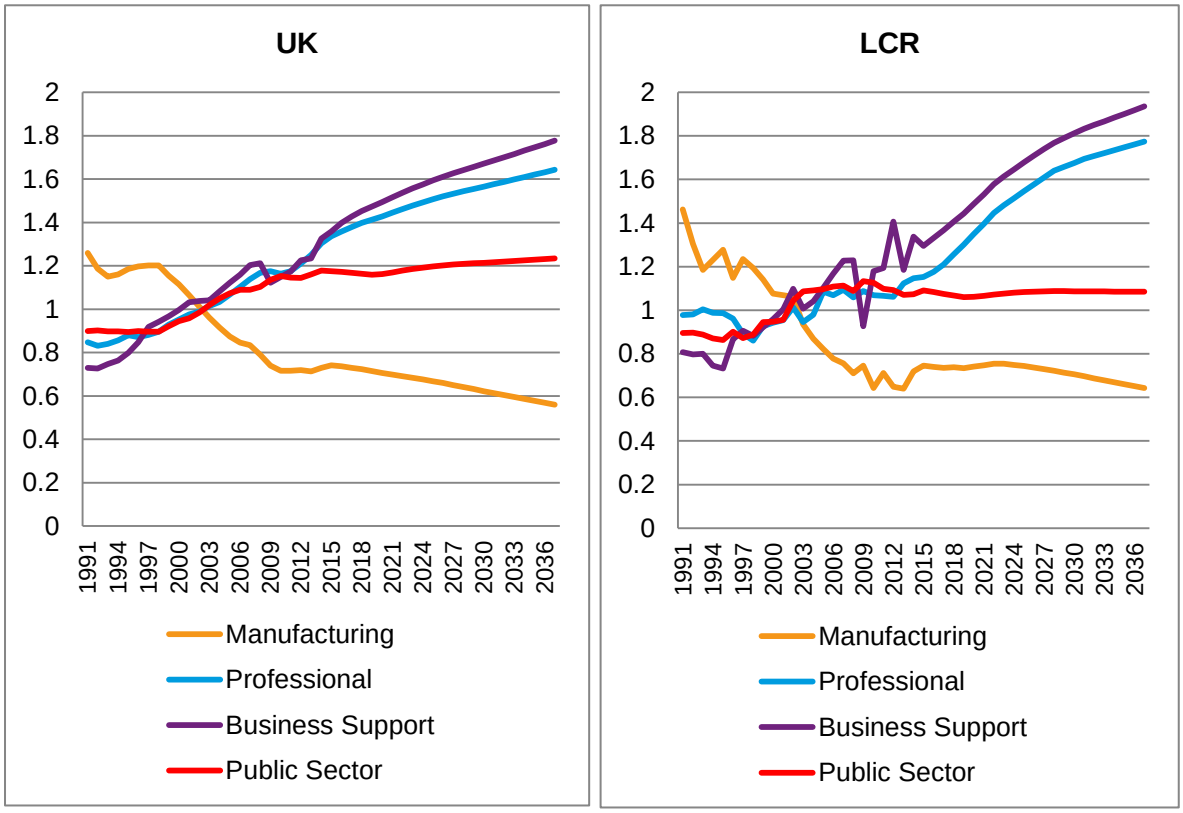
Source: GLH analysis of Oxford Economics

[5] These sectors include public and private sector jobs. However they contain significant levels of public sector employment and growth potential is influenced by public spending.

4.31 Employment in the FEMA is particularly dependent on sectors dominated by the public sector, where growth will be influenced by spending restraints, and in the Manufacturing sector which has historically seen long-term decline in net employment figures, although in recent years this trend has abated. In contrast there is a relatively low concentration of employment in those sectors which are expected to be key drivers of growth looking forwards such as professional, scientific and technical activities; and to a lesser extent administration and support services. These are structural issues which may affect the ability of the FEMA to match national economic performance in these sectors in the short/ medium-term.

4.32 This is illustrated in the graphs below which show the past and projected future performance in these sectors in the LCR compared to the UK. This shows the Professional and Business Support sectors are forecast a higher growth rate in LCR than across the UK as a whole. Conversely, the Public Sector is forecast modest growth at a national level but roughly zero growth in the LCR. Manufacturing is forecast to decline in both areas although the forecast decline is less in the LCR than nationally.

Figure 11: Selected Sectors Jobs Growth, LCR vs UK (Index: 1.00 = 1991-2012 Average)



Source: GLH analysis of Oxford Economics

4.33 There are considerable variances in the employment structure of the FEMA authorities. Table 6 provides location quotient analysis for each of the FEMA authorities compared to the FEMA as a whole, the North West, and the UK. Broad outcomes for each authority are set out below:

- Halton
  - Strengths in Manufacturing, Transport and storage, Information and communication, and Administrative and support service sectors compared to all wider areas.
  - Relative strength in Professional, scientific and technical activities compared to the FEMA but broadly in line with NW and UK levels.
  - The data in Table 6 shows a very high location quotient in Mining and quarrying in Halton, however this is skewed by the low proportion of jobs in this sector across all areas and should be disregarded.
  - Lower numbers of jobs in the public sector compared to all comparator geographies.
  - Low representation of Financial and insurance services.
- Knowsley
  - Particularly high proportion of Manufacturing jobs compared to the FEMA as a whole as well as wider geographies.
  - Also significant jobs in Human health and social care – even compared to FEMAs high rate – and Administrative and support services.
  - Low representation in professional services (Information and communication, Financial and insurance, Real estate, Professional, scientific and technical sectors).
  - Low number of jobs in Public administration and defence.
- Liverpool
  - Highest proportion of jobs in professional services in the FEMA. However, Information and communication and Professional, scientific and technical sectors still lower than UK average.
  - High proportion of public sector jobs – particularly in Public administration and defence – when compared to FEMA, regional, and national proportions.
  - High number of jobs in Accommodation and food service.
  - Lower representation of manufacturing and construction jobs compared to all comparator areas.
- Sefton
  - High proportion of public sector jobs when compared to FEMA, regional, and national trends, particularly in Public administration and defence and Human health and social work.
  - High proportion of Financial and insurance jobs compared to FEMA and North West levels and broadly in line with UK.

- All other Professional service sectors less well represented.
- Lower representation of manufacturing and construction jobs compared to all comparator areas.

- St. Helens
  - Particularly high proportion of jobs in the Transportation and storage sector compared to all wider geographies.
  - High proportion of jobs in Manufacturing sector, particularly compared to the FEMA and UK
  - Low representation in professional services (Information and communication, Financial and insurance, Real estate, Professional, scientific and technical sectors), although the Real Estate sector bucks this trend.
  - Lower proportion of jobs in the Public sector, especially compared to elsewhere in the FEMA. Education and Human health and social care jobs in line with UK average while Public administration and defence below national rate.
- West Lancashire
  - High proportion of Manufacturing jobs compared to the FEMA as a whole as well as wider geographies.
  - Other sectors with high location quotients compared to wider areas are Transportation and storage and Accommodation and food services.
  - Very strong in Agriculture, forestry and fishing, however this is skewed by the low proportion of jobs in this sector in all areas.
  - Low representation in professional services (Information and communication, Financial and insurance, Real estate, Professional, scientific and technical sectors).
  - Public administration and defence jobs well below all wider geographies. Education and Human health and social care below FEMA levels but broadly in line with UK.
- Wirral
  - Particularly high proportion of jobs in Human health and social care: above the FEMA level which is itself higher than regional and national levels.
  - Higher proportion of jobs in Public administration and defence than North West or UK.
  - Manufacturing jobs slightly above FEMA and UK levels but below North West average.
  - Low number of jobs in Information and communication and Financial and insurance sectors.
  - Relative strength in Professional, scientific and technical activities compared to the FEMA and broadly in line with national levels.

Table 6: Location Quotient, Local Authorities vs FEMA, North West, and UK

	Halton			Knowsley			Liverpool			Sefton			St. Helens			West Lancashire			Wirral		
	vs FEMA	vs NW	vs UK	vs FEMA	vs NW	vs UK	vs FEMA	vs NW	vs UK	vs FEMA	vs NW	vs UK	vs FEMA	vs NW	Vs UK	vs FEMA	vs NW	vs UK	vs FEMA	vs NW	vs UK
Agr	0.77	0.64	0.48	0.38	0.32	0.23	0.20	0.17	0.12	0.75	0.63	0.47	0.93	0.78	0.58	7.01	5.87	4.36	0.73	0.61	0.45
Min	7.25	3.51	0.90	0.46	0.22	0.06	0.30	0.14	0.04	0.74	0.36	0.09	0.33	0.16	0.04	0.17	0.08	0.02	0.00	0.00	0.00
Man	1.68	1.47	1.82	2.30	2.01	2.49	0.44	0.39	0.48	0.52	0.45	0.56	1.31	1.15	1.42	1.57	1.37	1.70	1.06	0.93	1.15
Uti	0.08	0.07	0.06	1.08	0.85	0.80	0.56	0.44	0.41	0.49	0.39	0.36	1.55	1.22	1.14	1.24	0.98	0.91	1.34	1.05	0.99
Con	1.16	1.06	1.01	1.24	1.14	1.09	0.69	0.63	0.60	1.14	1.04	1.00	1.18	1.08	1.03	1.26	1.15	1.10	1.10	1.01	0.96
Who	1.02	1.02	1.04	0.75	0.75	0.76	1.02	1.02	1.04	1.10	1.10	1.12	1.16	1.16	1.18	1.00	1.00	1.02	0.92	0.92	0.94
Tra	1.42	1.59	1.60	1.06	1.19	1.19	0.95	1.07	1.07	0.81	0.91	0.92	1.53	1.72	1.73	1.18	1.32	1.33	0.62	0.70	0.70
Acc	0.73	0.71	0.75	0.46	0.44	0.47	1.21	1.17	1.24	1.06	1.03	1.09	0.83	0.81	0.85	1.24	1.20	1.27	0.92	0.89	0.94
Inf	2.41	1.97	1.37	0.51	0.42	0.29	1.25	1.02	0.71	0.66	0.54	0.37	0.69	0.56	0.39	0.57	0.46	0.32	0.69	0.57	0.39
Fin	0.40	0.35	0.28	0.88	0.78	0.62	1.46	1.30	1.04	1.43	1.27	1.01	0.40	0.36	0.29	0.86	0.77	0.61	0.40	0.36	0.28
Rea	0.87	0.83	0.81	0.45	0.43	0.42	1.34	1.26	1.24	0.80	0.76	0.74	1.15	1.08	1.06	0.45	0.43	0.42	1.03	0.98	0.96
Pro	1.27	1.04	1.02	0.51	0.42	0.41	1.09	0.90	0.87	0.84	0.69	0.68	0.73	0.60	0.58	1.12	0.92	0.89	1.19	0.98	0.96
Adm	1.37	1.30	1.18	1.40	1.33	1.20	0.99	0.94	0.85	0.74	0.70	0.63	1.30	1.24	1.12	0.62	0.59	0.53	0.82	0.78	0.70
Pub	0.62	0.78	0.76	0.48	0.60	0.58	1.23	1.53	1.50	1.57	1.95	1.91	0.70	0.87	0.85	0.34	0.42	0.41	1.00	1.24	1.21
Edu	0.74	0.80	0.78	0.79	0.85	0.84	1.15	1.24	1.21	1.14	1.23	1.21	0.94	1.01	0.99	0.98	1.05	1.03	0.85	0.92	0.90
Hum	0.49	0.59	0.68	1.22	1.46	1.67	1.03	1.23	1.41	1.06	1.27	1.45	0.74	0.88	1.01	0.77	0.92	1.06	1.30	1.56	1.79
Art	0.81	0.80	0.71	0.85	0.84	0.74	1.11	1.10	0.97	1.07	1.06	0.93	1.07	1.06	0.93	0.55	0.55	0.48	1.08	1.07	0.94
Oth	0.78	0.79	0.79	0.70	0.70	0.71	1.00	1.00	1.01	1.15	1.16	1.17	1.06	1.07	1.08	0.83	0.84	0.85	1.22	1.23	1.23

Source: GLH analysis of Oxford Economics, 2016

4.34 The above analysis provides a snapshot of the FEMA's existing economic structure and past economic performance. These trends will, inevitably, be a large influencing factor on the FEMA's future economic performance. In addition to past trends and the current economic circumstances, future economic performance will be influenced by policy intervention, infrastructure development and investment opportunities.

4.35 Liverpool Local Enterprise Partnership (LEP) published the Liverpool City Region Growth Strategy in 2016. This sets out a number of Growth Sectors which the LEP has identified have particular opportunity to grow and increase productivity. The LEP's stated ambition is for *'each sector to become a beacon of excellence, productivity and accelerated growth, through investment in facilities, infrastructure, networks, people and innovation, creating more and higher skilled jobs and more growth businesses throughout our economy'*.

4.36 The LEP Growth Sectors are:

- Advanced manufacturing – particularly automotive, consumer goods, chemicals, and rail manufacturing.
- Digital and creative – focussing in all sub-sectors but particularly in high performance and cognitive computing and sensor technology;
- Financial and professional services – with particular strengths in private clients, maritime and business services;
- Health and life sciences – focussing on precision medicine, infectious disease, children's health, independent living and eHealth;
- Low carbon energy and marine energy;
- Maritime and logistics;
- Visitor economy – including high-value activities such as conferences and business visits; the cruise market; special sporting and other events.

4.37 The Growth Strategy expects these sectors to be the catalysts to provide a powerful engine for increased productivity and the sustained growth of the City Region's economy over the coming decades. As such, these sectors will be the focus of strategic sector-based interventions to accelerate growth.

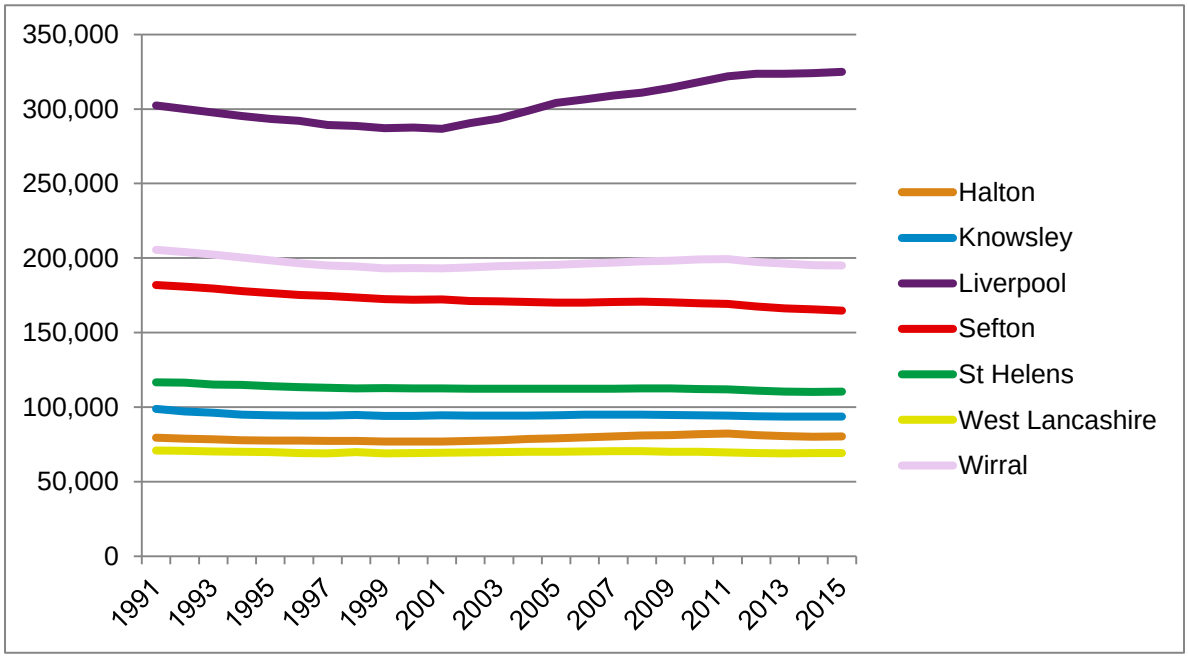
4.38 In considering the influence of these on future economic performance, it should be borne in mind that past performance will have been affected by policies/ investment, and thus consideration needs to be given as to how the future may differ from the past. Public sector spending restraints are relevant in this respect.

Labour Market Characteristics

4.39 In 2015 the working age population aged 16-64 of the FEMA was 1,038,000. The population trend of each of the local authorities in the FEMA is shown in Figure 12. The working age population in the FEMA is 17,700 lower than in 1991: this is in part a symptom of relative economic performance.

4.40 The decade from 1991 to 2000 saw the working age population drop by 50,100. This trend then reversed between 2000 and 2008 growing by 32,800. This was driven in particular by strong population growth in Liverpool during this period, as shown in Figure 12 below. Since 2011, Sefton and Wirral have witnessed a slight decline in their working age populations. Following the economic down turn in 2008, the working age population across the FEMA as a whole has remained relatively stable.

Figure 12: Working Age Population (aged 16-64)

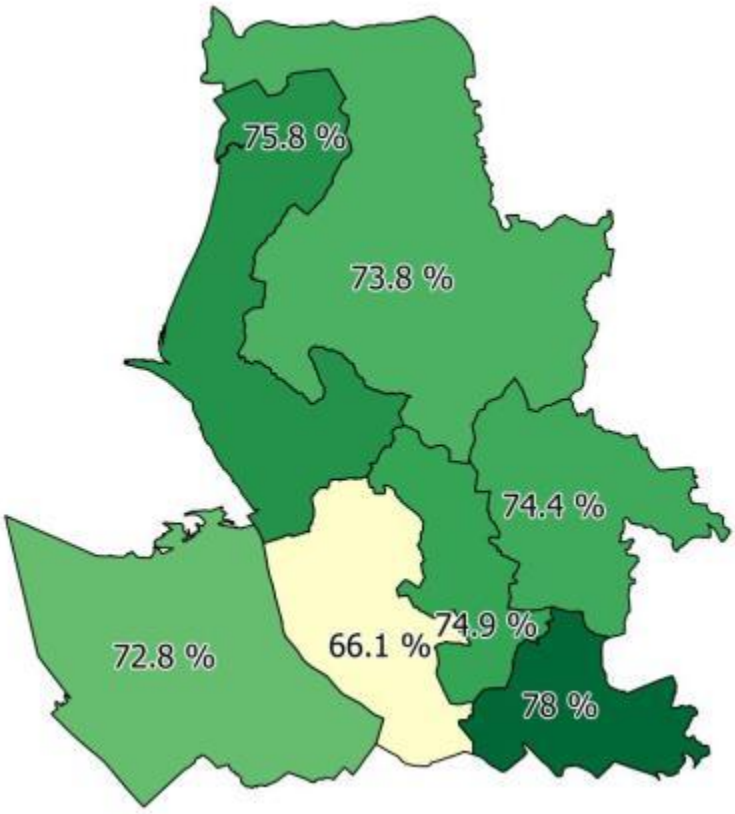


Source: Oxford Economics, 2016

4.41 Within the FEMA, 72.0% of the working age population (aged 16 to 64) is economically active. Economically active persons include those currently in employment (as an employee or self-employed); those not currently in employment but who are seeking work and are ready to start work within two weeks; or those who are not currently in employment, but waiting to start a job already obtained and available.

4.42 The economic activity rate[6] is shown in Figure 13. Across the FEMA as a whole the economic activity rate is lower than the North West rate of 75.5% and the national rate of 77.7%. Within the FEMA, Halton has the highest economic activity rate at 78.0% while the lowest rate is in Liverpool with 66.1%.

Figure 13: Economic Activity Rate – Aged 16-64



Source: Annual Population Survey, March 2016

4.43 Across the FEMA, the employment rate among working age persons (aged 16 to 64), the proportion of those in work, is 68%. This is below the North West rate of 71% and the national rate of 74%. Within the FEMA, Halton has the highest employment rate at 75%. Sefton (73%) and West Lancashire (72%) also have employment rates marginally above the North West average. The lowest employment rates in the FEMA are in Liverpool (61%).

4.44 It is clear that the employment rate in all authorities within the FEMA is below the national average, with a 12 percentage point (pp) difference evident in Liverpool and substantial 6 pp difference across the FEMA based on averages recorded over the last three years.

[6] This is the proportion of all economically active people regardless of their current employment status.

Table 7: Employment Rates: Differential to UK

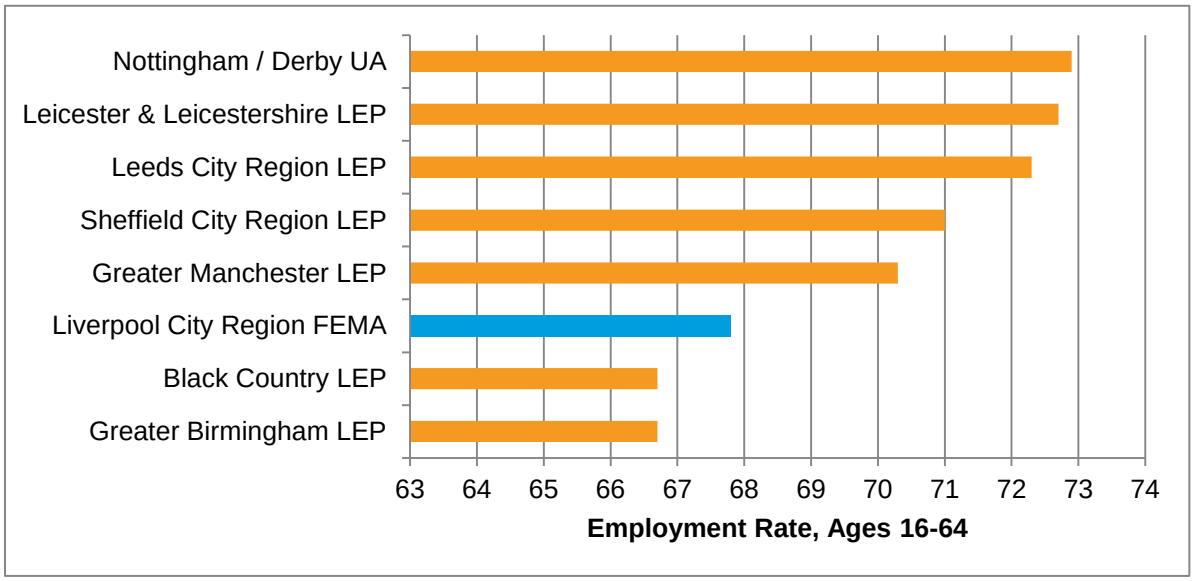
	Employment Rate, % 16-64 (2014-16)	PP Difference to National
Halton	71.3%	-1.4%
Knowsley	66.8%	-5.9%
Liverpool	60.7%	-12.0%
Sefton	72.6%	-0.1%
St Helens	68.6%	-4.1%
West Lancashire	70.7%	-2.0%
Wirral	68.5%	-4.2%
Liverpool City Region FEMA	66.7%	-6.0%
North West	70.1%	-2.6%
England & Wales	72.7%	0.0%

Source: GLH Analysis of Annual Population Survey Data, 3 Year Average

4.45 Whilst GL Hearn would expect some difference in employment rates between more urban and rural areas, a comparison with LEP areas focused on metropolitan areas in the North and Midlands points to a clear potential for higher employment rates to be supported. The analysis indicates that:

- If the employment rate across the FEMA was to match that in the Nottingham/Derby Metropolitan Area, there would need to be 52,000 more jobs;
- If the employment rate was to match that in the Leeds City Region LEP, there would need to be 46,000 more jobs;
- Even relative to Greater Manchester, there is a shortfall of 25,500 jobs within the Liverpool City Region FEMA.

Figure 14: Comparative Analysis of Employment Rates compared to similar LEP/ Metropolitan Areas, 2015/16



Source: GLH Analysis of Annual Population Survey Data

4.46 GL Hearn's analysis would suggest that there is potential for the employment rate to increase in all of the local authorities in the City Region through increasing both the number of available jobs and the density of employment (and before any allowance is made for pensionable age changes and wider trends towards increased economic participation).

4.47 An analysis of the employment rate in Liverpool relative to other cities in the North and Midlands is shown in Table 8. Each of these cities includes a significant student population, which will influence employment rates. Nonetheless, Liverpool has an employment rate at the lower end of the spectrum pointing to significant levels of worklessness, and the potential to improve employment rates – be it through bringing people back into work, or due to growing the labour force through increased in-migration. There is a 3 pp difference to Manchester, 5.0 pp difference to Coventry and substantial 13.4 pp difference to Leeds.

Table 8: Employment Rates in Cities in North and Midlands

	Employment Rate 16-64	PP Difference to Liverpool
Birmingham	60.4	-0.4
Liverpool	60.8	0.0
Leicester	63.3	2.5
Manchester	63.8	3.0
Nottingham	65.2	4.4
Coventry	65.8	5.0
Sheffield	68.3	7.5
Leeds	74.2	13.4

Source: GLH Analysis of Annual Population Survey data

4.48 Similarly an analysis of employment rates indicates that there is potential for the rate to improve in all of the local authorities within the FEMA. Halton has the highest employment rate in the Liverpool City Region, but this is 9.3 pp below that in Erewash and 8.3 pp below that in North West Leicestershire (the local authorities with the highest employment rates shown in the table below).

Table 9: Comparison of Strongest Employment Rates by LA in City Regions Considered, 2015-16

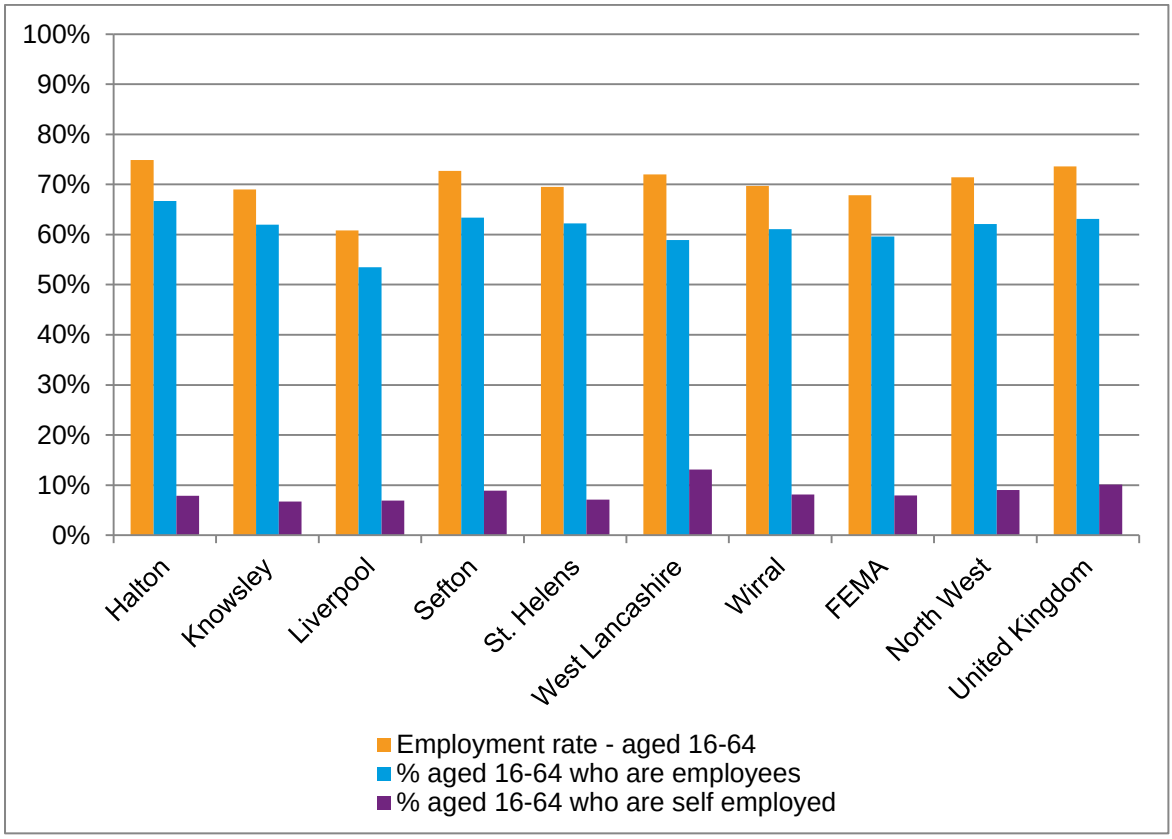
	Employment Rate % 16-64) Highest LA	Local Authority
Liverpool FEMA	74.9	Halton
Sheffield	77.3	NE Derbyshire
Greater Manchester	79	Trafford
Leeds	80	Selby
Birmingham & Black Country	81.7	East Staffordshire
Leicestershire	83.2	NW Leicestershire
Nottingham/Derby	84.2	Erewash

Source: GLH Analysis of Annual Population Survey data

4.49 The vast majority of employed persons are employees. Across the FEMA as a whole, 88% of people in employment count as employees – slightly higher than regional (87%) and national (86%) rates. Self-employment accounts for 12% of those who are in employment – 9% of the working age population. This indicates that levels of enterprise are below average.

4.50 West Lancashire has the highest level of self-employment with 13% of the working age population self-employed. West Lancashire is the only authority in the FEMA with a higher self-employment rate than the regional (9%) or national rates (10%).

Figure 15: Employment Rate – Aged 16-64

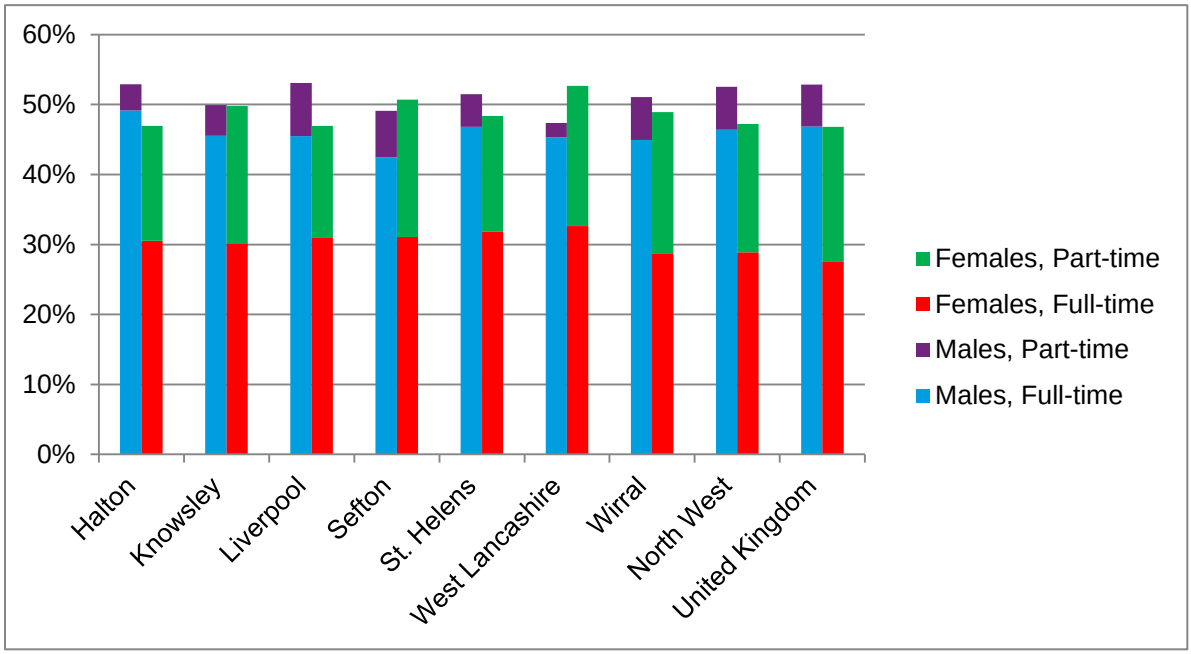


Source: Annual Population Survey, March 2016

4.51 Across the FEMA as a whole, 76% of workers currently in employment are in full-time employment while 24% are in part-time jobs. The FEMA's full-time employment rate is slightly higher than the North West average of 75% and the national average of 74%.

4.52 There is a greater proportion of working males in full-time employment than for working females. Across the FEMA, the proportion of working males in full-time work is 89% compared to 63% of females. The FEMA's male full-time working proportion is similar to that of the North West and nationally (both 88%), while the FEMA's proportion of full-time working females is higher than the rates for the North West (61%) or the UK (59%).

Figure 16: Full-Time and Part-Time Employment



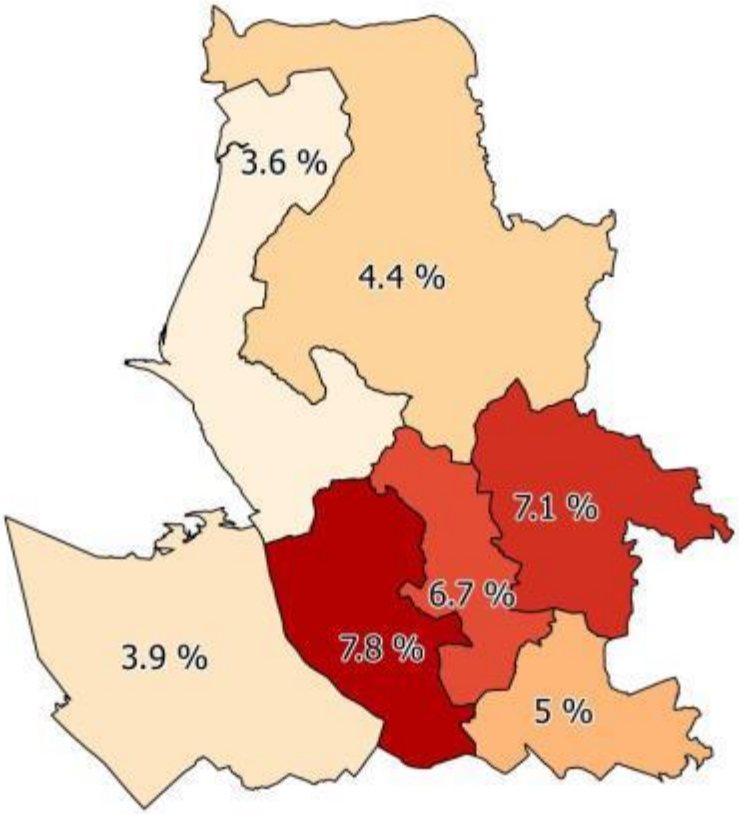
Source: Annual Population Survey, March 2016

4.53 Figure 17 shows the unemployment rate across the FEMA[7]. Across the FEMA as a whole, the unemployment rate was 5.7%. This is higher than both the North West and national rates – both 5.4%. Unemployment is particularly high for the younger age groups.

4.54 Within the FEMA, Liverpool has the highest rate of unemployment at 7.8%. St. Helens (7.1%) and Knowsley (6.7%) are the next highest. The other FEMA authorities all have unemployment rates below the regional and national averages (both 5.4%).

[7] A person is classified as unemployed if they are not currently in employment, are available to start work in the next two weeks, and have either looked for work in the last four weeks or are waiting to start a new job.

Figure 17: Unemployment Rate – Aged 16-64



Source: Annual Population Survey, December 2015

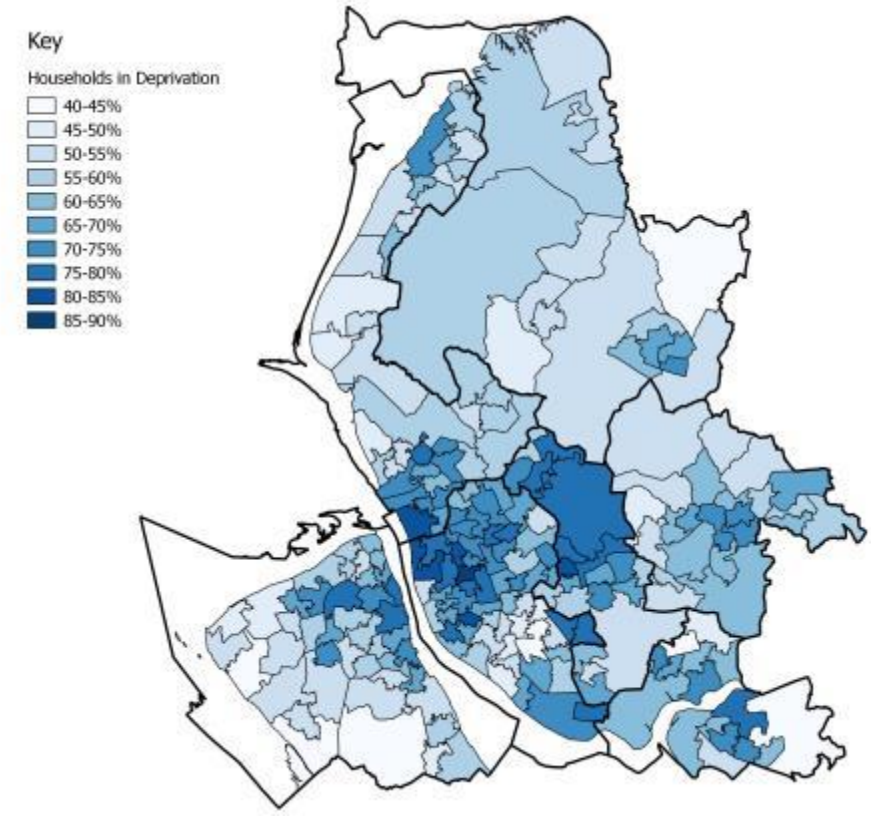
4.55 Parts of the City Region have relatively high levels of deprivation. ONS ranks local authorities on indices of deprivation. Nationally, Knowsley is ranked as the 5th most deprived authority, while Liverpool is ranked 7th, indicating considerable challenges in these authorities. Halton is ranked 36th most deprived nationally, with St. Helens 52nd; Sefton 102nd, Wirral 106th, and West Lancashire 164th. South Sefton and the north-eastern part of the Wirral are however also relatively deprived.

4.56 Figure 18 shows levels of deprivation across the FEMA. It shows (at a Mid-Super Output Area level) the percentage of households which are classed as deprived in one or more dimension of deprivation. ONS measures four dimensions of deprivation:

- Employment – any member of a household not a full-time student is either unemployed or long-term sick;
- Education – no person in the household has at least level 2 education, and no person aged 16-18 is a full-time student;
- Health and disability – any person in the household has general health 'bad or very bad' or has a long term health problem; and
- Housing – the household's accommodation is either overcrowded, with an occupancy rating -1 or less, or is in a shared dwelling, or has no central heating.

4.57 This shows that there is considerable deprivation across much of Liverpool – particularly across the north and north-east parts of the authority and spreading into much of the northern half of Knowsley and South Sefton. It also shows deprivation around the towns of Birkenhead and Wallasey in Wirral, Runcorn and Widnes in Halton, some wards in Southport in Sefton, Skelmersdale in West Lancashire, and St. Helens.

Figure 18: Households Deprived in One or More Dimensions of Deprivation



Source: ONS, 2011

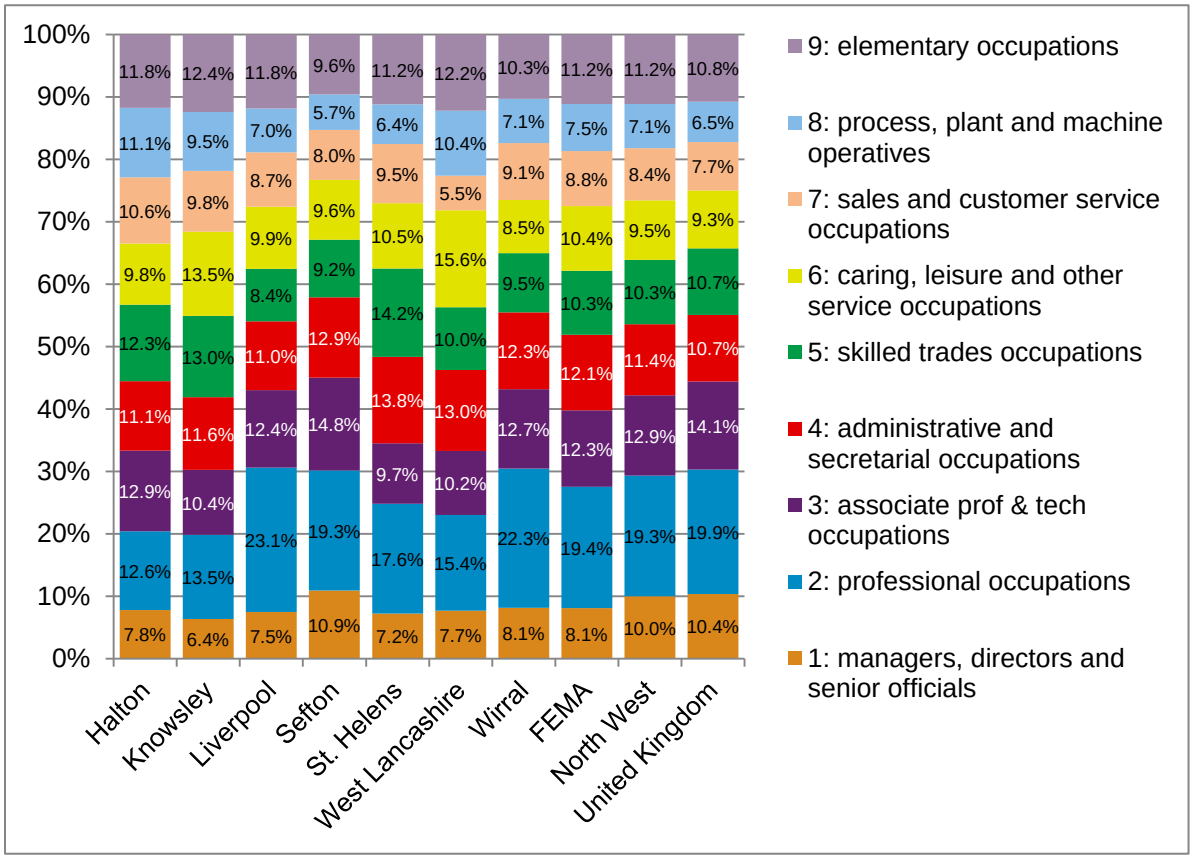
4.58 Figure 19 shows the level of employment in each area by occupation group. The occupation groups range from Group 1: Managers, directors and senior officials to Group 9: Elementary occupations. Across the FEMA as a whole there is a smaller proportion of working residents working in Group 1 professions than there are in the North West or UK. The proportion of persons in Group 3 professions (associate professional and technical occupations) is also lower in the FEMA than the North West or UK.

4.59 The proportion of workers in the FEMA in Group 2 professions (professional occupations) and Group 5 professions (skilled trades) is broadly in line with the regional and national rates, as is those in Group 9 (elementary occupations).

4.60 Group 4 (administrative and secretarial occupations), Group 6 (caring, leisure and other service occupations), Group 7 (sales and customer service occupations), and Group 8 (process, plant and machine operatives) are all over represented in the FEMA compared to regional and national rates.

4.61 There is considerable variation in occupational employment across the FEMA authorities. Sefton has the highest proportion of residents in Group 1 and Group 4 occupations, with both figures higher than the North West or UK equivalents. Liverpool and Wirral have notably higher levels of workers in Group 2 occupations – both well above the regional and national figures. Halton, Knowsley, St. Helens, and West Lancashire have greater proportions of residents employed in Groups 4-9.

Figure 19: Employment by Occupation

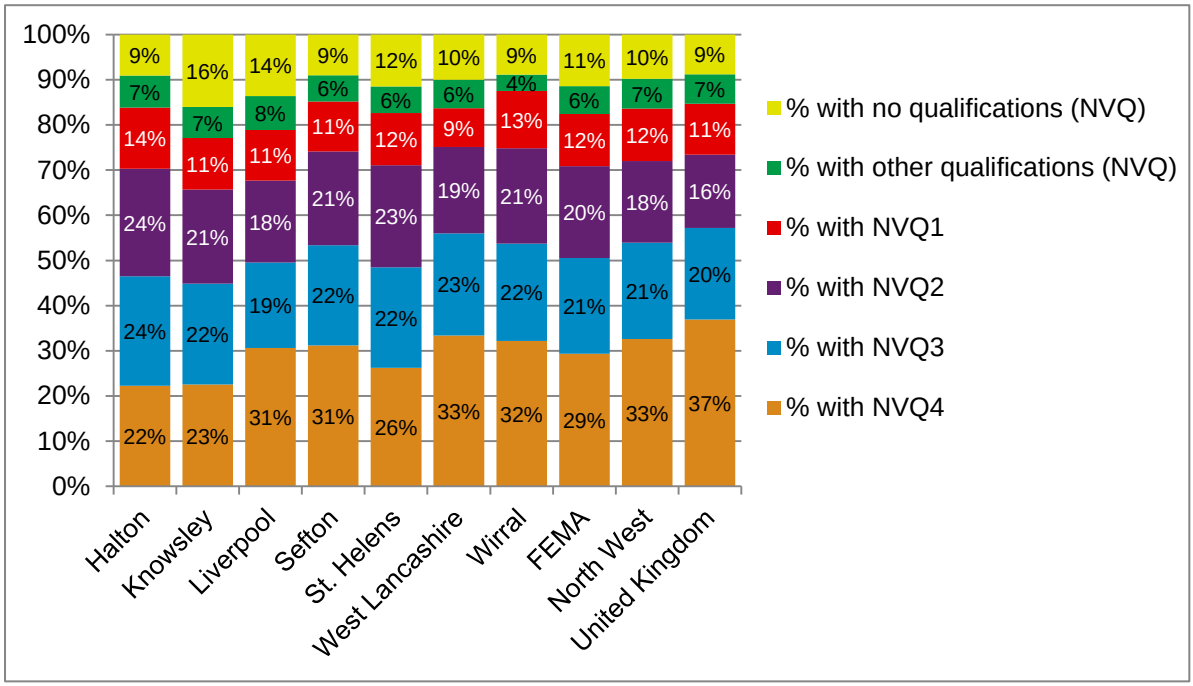


Source: Annual Population Survey, March 2016

4.62 Figure 20 shows the qualification profile of the FEMA authorities. This shows the highest qualification level of residents in each area. Across the FEMA, the proportion of people with NVQ4 level qualifications (equivalent to a bachelor's degree) is 29%. This is lower than the North West (33%) and UK (37%). West Lancashire has the highest with 33%, while Wirral, Liverpool, and Sefton have similar levels.

4.63 The proportion of people in the FEMA with no qualifications is 11%. This is slightly higher than regional and national averages. The highest levels are seen in Knowsley (16%), Liverpool (14%), and St. Helens (12%). Halton, Sefton, and Wirral have the lowest levels (9%).

Figure 20: Qualifications Profile, 2015



Source: Annual Population Survey, December 2015

4.64 Table 10 shows the percentage point change in the qualifications profile since 2005. This shows that across the FEMA, generally the levels of qualifications are rising. The proportions of the population with NVQ4 (Bachelor's degree), NVQ3 (A level), and NVQ2 (GCSE grade A*-C) has grown while the number with NVQ1 (GCSE grade D-G) and no qualifications have fallen.

4.65 In the FEMA, the proportion of people with NVQ4 level qualifications has grown by 7.6 percentage points since 2005. This is lower than the North West (8.5%) and UK (10.4%) growth. However, in Liverpool growth exceeded the UK level (10.7%).

4.66 The FEMA also saw a 1.3 percentage point growth in the level of persons with NVQ3 level qualifications, while the regional and national trends were negative. For NVQ2 level qualifications, the FEMA saw a growth of 3.5 percentage points compared to more modest growth regionally (1.8 percentage points) and nationally (0.4 percentage points).

4.67 Across the FEMA there has been a decline in the number of people whose highest qualification is NVQ1, with the percentage dropping by 3.2 percentage points – higher than the North West or the

UK. The proportion of people with no qualifications in the FEMA dropped by 9.3 percentage points – a notably larger drop than seen across the North West or the UK.

Table 10: Highest Qualifications, Change 2005-2015

	% with NVQ4	% with NVQ3	% with NVQ2	% with NVQ1	% with other qualifications	% with no qualifications
Halton	3.6%	4.9%	6.8%	-5.9%	1.4%	-10.8%
Knowsley	8.4%	0.7%	4.3%	-5.4%	0.5%	-8.6%
Liverpool	10.7%	1.1%	2.0%	-2.4%	0.5%	-12.0%
Sefton	6.5%	0.7%	3.3%	-3.0%	-0.3%	-7.2%
St. Helens	4.7%	2.7%	7.2%	-4.2%	-1.0%	-9.4%
West Lancs	1.6%	3.7%	0.9%	-5.6%	2.5%	-3.1%
Wirral	8.6%	-0.2%	3.1%	-1.1%	-1.2%	-9.2%
FEMA	7.6%	1.3%	3.5%	-3.2%	0.1%	-9.3%
North West	8.5%	-0.2%	1.8%	-3.1%	0.3%	-7.4%
UK	10.4%	-0.3%	0.4%	-2.8%	-1.9%	-5.8%

Source: Annual Population Survey, December 2015

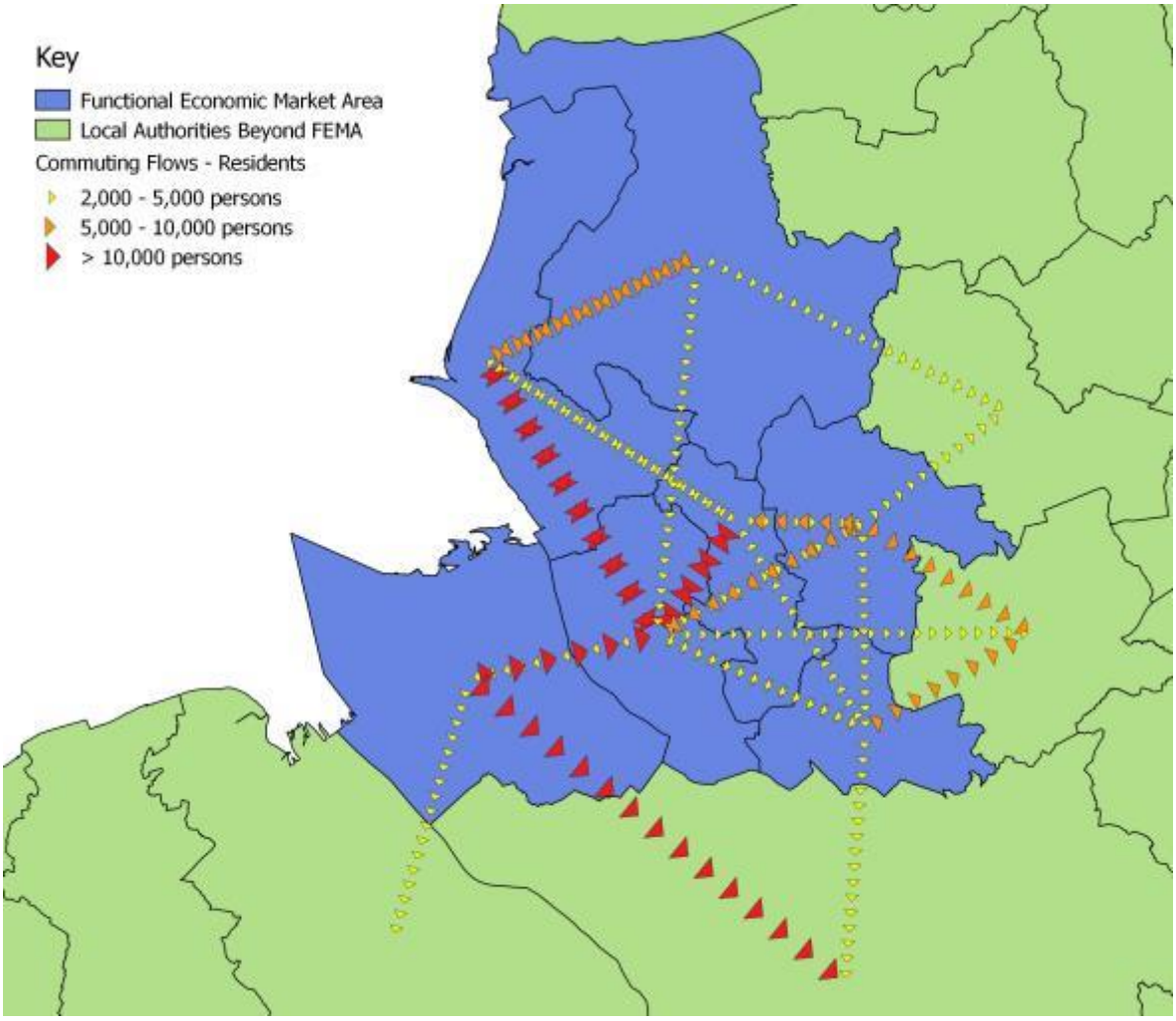
4.68 Analysis of the commuting flows across the City Region[8], at local authority level, is shown in Figures 21 and 22. Figure 21 shows the residents commuter analysis. This shows the main destinations of commuters for each local authority who live in that area but whose main workplace is in another authority. This shows a complex commuting pattern across the City Region. The biggest flows (shown in red in Figure 21) are:

- Sefton to Liverpool – with a flow of 24,200 persons;
- Knowsley to Liverpool – 19,700 persons;
- Wirral to Liverpool – 18,100 persons;
- Liverpool to Knowsley – 11,500 persons;
- Liverpool to Sefton – 11,500 persons;
- Wirral to Cheshire West and Chester – 10,200 persons.

4.69 The flows clearly point to the City's economic influence stretching beyond its boundaries into surrounding areas. The majority of the flows are between the authorities within the FEMA, however Figure 21 also shows outflow to authorities beyond the FEMA, most notably: Wirral to Cheshire West and Chester (10,200 persons); St. Helens to Warrington (6,800 persons); and Halton to Warrington (5,800 persons).

[8] Further analysis of commuting patterns is included in the Defining the HMA and FEMA Report.

Figure 21: Travel to Work Data – Residents Analysis

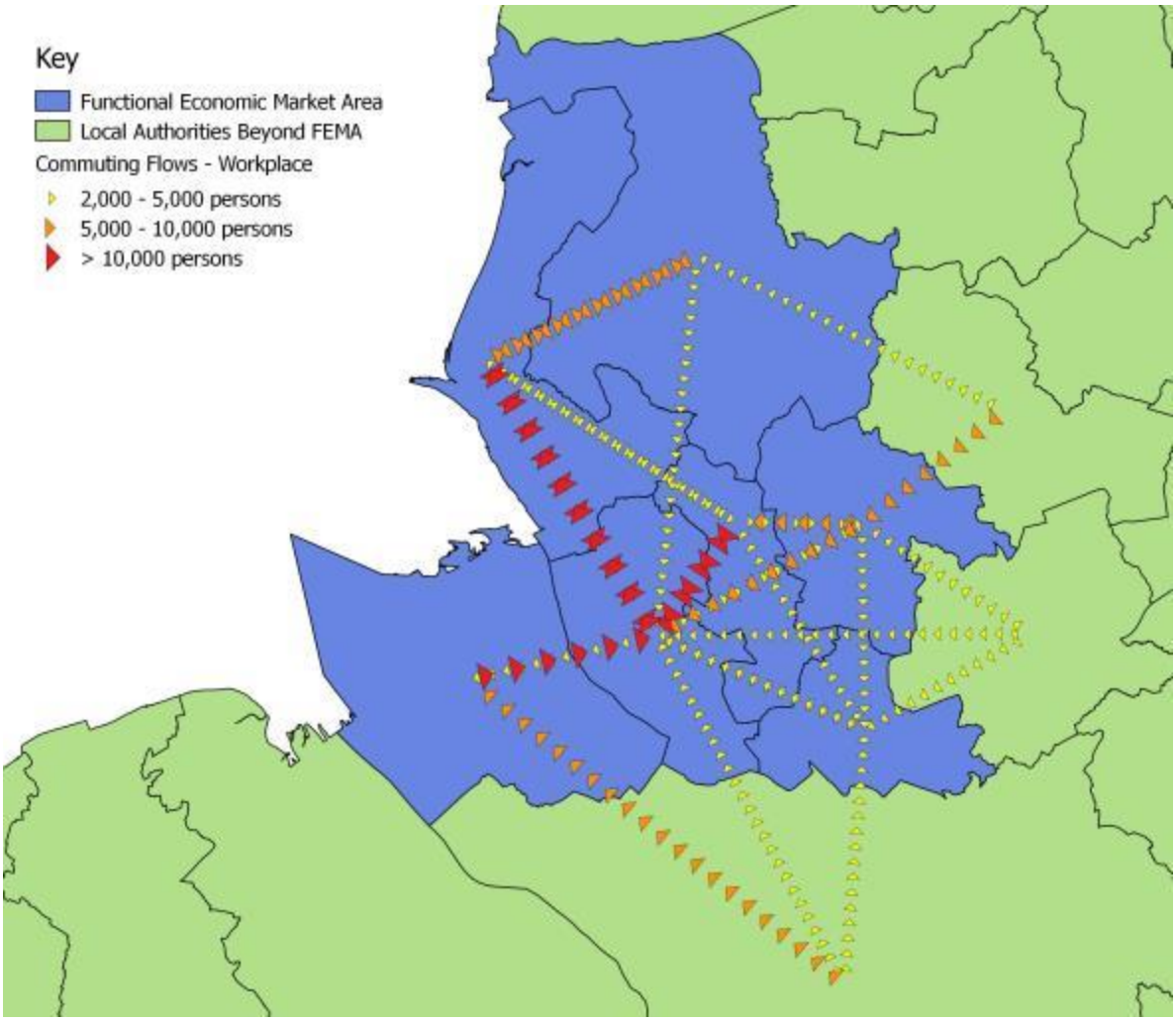


Source: 2011 Census

4.70 Figure 22 shows the workplace commuter analysis. This shows the main origins for commuters who work in each local authority but who live in another authority. As with the residents' commuter analysis, the workplace analysis shows the strong flows between Liverpool and Sefton, Liverpool and Knowsley, and Liverpool and Wirral.

4.71 In addition to the flows within the FEMA, Figure 22 also shows inflow from authorities beyond the FEMA, most notably: Cheshire West and Chester to Wirral (6,100 persons); and Wigan to St. Helens (5,800 persons).

Figure 22: Travel to Work Data – Workplace Analysis



Source: 2011 Census

The City Region's Economy – Key Points

- The FEMA's economy is significant in size, accounting for annual output of £30 billion and a fifth of the North's West's GVA. Historically it has grown in size by 2.0% pa. Employment growth historically has been relatively modest, increasing by just 23,600 since 1991.

- Growth in jobs has been driven in particular by increasing employment in the health; professional, scientific and technical, admin and support, and education sectors. However the overall rate of employment growth has been moderated by sectors which have historically seen contracting employment – particularly manufacturing, but also finance and insurance; public administration; and construction.

- There are some structural challenges relating in particular to high public sector employment, an overall deficit of jobs and a weaker (but improving) skills profile relative to other parts of the country. If the jobs density across the FEMA was to match the national average, there would need to be 133,000 more jobs. Public sector employment is particularly high in Liverpool, Sefton and Wirral.

- Manufacturing employment, which has declined significantly over recent decades, appears to have turned a corner with recent growth in a number of sectors including automotive; pharmaceuticals; rubber and plastics; and non-metallic minerals. However productivity improvements moving forwards are likely to limit overall jobs growth in the sector. The manufacturing sector is largest in comparative terms in Halton, Knowsley, St Helens and West Lancashire.

- Economic participation is influenced by a range of factors, including the availability of employment. Across the FEMA the employment rate is a substantial 6 percentage points below that nationally (and 3.4 pp below the North West). The highest unemployment is in Liverpool, St Helens and Knowsley. There is considerable potential to improve economic participation.

- Enterprise, measured by the density of small businesses and self-employment, could be stronger. Only West Lancashire has a level of self-employment which exceeds the national average.

- Liverpool, at the heart of the City Region, in particular offers the potential for higher value-added service sector growth. It functions now as the economic heart of the FEMA, and supports significant in-commuting to work (as do most successful cities).

5 COMMERCIAL PROPERTY MARKET

5.1 This section provides an assessment of the office and industrial property market in the FEMA. This assessment has been undertaken using a variety of sources including take-up and availability data from Estate Gazette's EGi database and CoStar commercial property database, a review of the latest commercial property literature and stakeholder/property agents' consultation.

National Economic Conditions

5.2 The Office for Budget Responsibility (OBR) published its Economic and Fiscal Outlook in March 2016. In the short time since the November 2015 forecast, economic developments have disappointed and the outlook for the economy and the public finances looks materially weaker. It should be noted that the March 2016 forecasts predated the Brexit vote.

5.3 Commodity prices, stock markets, and bond yields have fallen sharply. The oil price assumption is 36% lower in dollar terms than OBR's previous forecast (published November 2015) and equity prices are almost 8% lower. The economy is now shown to have lost momentum through 2015, despite the boost from the fall in the oil price since late 2014. Nationally, GDP growth in 2015 (full year estimate) is now estimated at 2.2%, while GDP Growth in 2016 is forecast at 2.1%.

5.4 Whole economy prices (as measured by growth in the GDP deflator) have also been much weaker than expected. As a result, nominal GDP growth in the third and fourth quarters of 2015 was significantly lower than expected: just 0.4%, against OBR's forecast of 1.8%. This was due to net trade and private investment being weaker than expected.

5.5 With real GDP only growing modestly at the end of last year, but employment and total hours growing strongly, productivity fell sharply. Output per hour fell by 1.2% in the fourth quarter. That fall has reversed almost all the productivity growth seen in the first three quarters of 2015.

5.6 OBR's latest forecasts also saw them revise down their estimates of potential productivity growth, which in turn reduces the sustainable level of GDP and the forecast for GDP growth over the next five years. The outlook for productivity growth is both the most important and the most uncertain judgement in most economic forecasts. The pick-up in productivity growth in mid-2015 seemed to corroborate the expectation that the post-crisis drag on productivity growth would ease as the financial system returned to full health. However, the fall in output in the fourth quarter of 2015 has resulted in the OBR revising down the estimate of productivity growth so that it remains somewhat below its pre-crisis average.

5.7 OBR estimates that the UK economy was running about 0.3% below potential in the final quarter of 2015. Taken together with lower potential output growth, that has led to the real GDP growth

downwards. OBR expected in March 2016 growth to average 2.1% a year over the next five years, down from 2.4% in their previous forecast.

The Impact of Brexit

5.8 This report was under preparation at the time of the Brexit referendum. GL Hearn's experience is that the impacts of the Brexit vote in May 2016 were felt before this date, including in respect of weaker investment. Clearly the result itself will have an impact on the national and local economies. However, the full impact will only be fully understood once the negotiated position of the UK and EU relationship is finalised.

5.9 In the short term, the weakening of the pound could result in benefits for the manufacturing industry (especially those looking to export). However this is potentially outweighed by restricted investment within commercial enterprises caused by the wider uncertainty.

5.10 Oxford Economics have undertaken some research as to what the potential impacts could be (prior to the exit vote). This work looked at nine different scenarios based on alternative assumptions about the trade relationship that could be eventually negotiated between the UK and the EU (for example deals similar to the Norway option, Swiss option, or Turkish option). Moreover consideration was given to the UK Government's potential reaction to the new-found policy freedom – taking account of the impact of regulatory, migration and fiscal policy choices on economic conditions.

5.11 The best case scenario still sees a 0.1% decline in GDP in real terms compared to a baseline of continued EU membership. The worst-case scenario is associated with a decline of almost 4% in real time GDP compared to a baseline of continued EU membership.

5.12 In summary, the Oxford Economics scenarios all have a number of commonalities:

- Whichever trade settlement is adopted and whichever scenario comes to pass, there will be a long-term structural impact on the UK and EU economies.
- Across the board, all scenarios show a degree of trade reduction in which UK trade volumes fall as a share of GDP. This reflects the increased cost of trade between the UK and the EU, which encourages firms in both the UK and the rest of the EU towards domestically-produced goods.
- The boost to net trade from a weaker pound is expected to be more than offset by a slowdown in consumer spending growth and a decline in business investment.
- Employment levels fall as cautious firms cut back on hiring. Employment levels are 1.3% below the base case by the end of the 2022.
- The post-referendum forecast shows a strong increase in GDP growth after 2019. This assumes aggressive action from the Bank of England's Monetary Policy Committee and fiscal support aided by the scrapping of the current goal of a budget surplus by 2019-20 – an approach supported by the Prime Minister.

5.13 In general, the industrial sectors (excluding mining and quarrying) are at greatest risk. This is particularly the case in relation to the manufacturing and construction sectors who are expecting to face the largest impact. The service sector is also likely to be impacted with the financial services industry most at risk.

5.14 It should however be noted that while none of the scenarios provide positive news for post-Brexit economic growth, the forecast impacts currently are relatively modest compared to the previous recession following the 'credit crunch' in 2008.

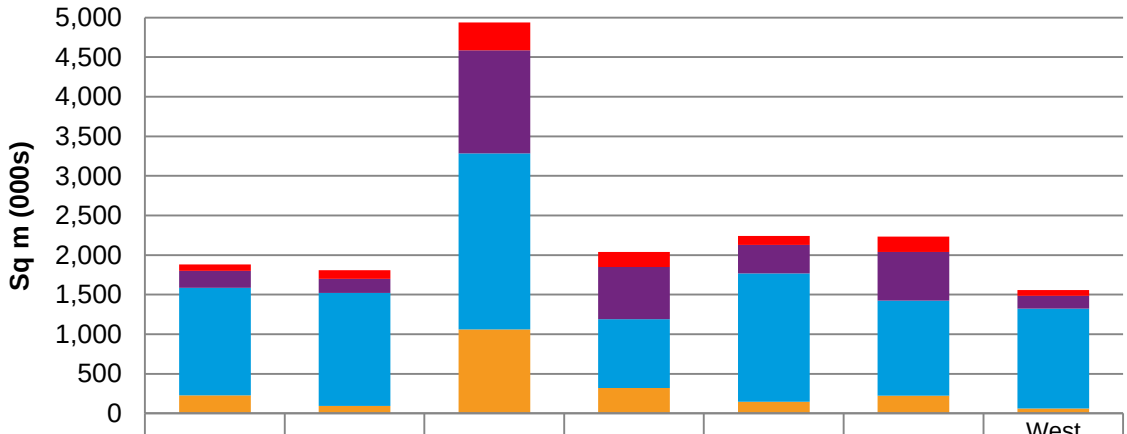
Commercial Floorspace

5.15 The latest Valuation Office Agency data (from 2012) shows that there is a total of 16,700,000 sq m of business floorspace across the FEMA. This is broken down as 2,100,000 sq m of office space, 10,000,000 sq m of industrial space, 3,500,000 sq m of retail space, and 1,100,000 sq m of 'other' space.

5.16 The authority with the largest quantum of business floorspace is Liverpool with 4,900,000 sq m. Liverpool has the highest amount of floorspace for each type: 50% of the FEMA's office floorspace; 22% of total industrial space; 37% of retail space; and 32% of other business space is in Liverpool.

5.17 Beyond Liverpool, there is most office space in Sefton (15% of FEMA total), followed by Halton (11%) and Wirral (10%). For industrial space, St. Helens has the greatest quantum with 16% while Halton and Knowsley have 14% and West Lancashire has 13%.

Figure 23: Total Business Floorspace



	Halton	Knowsley	Liverpool	Sefton	St. Helens	Wirral	West Lancashire
Other	78	108	350	188	112	195	73
Retail	218	178	1,302	661	360	614	160
Industrial	1,357	1,427	2,227	869	1,620	1,201	1,262
Office	227	95	1,059	319	148	222	62

Source: Valuation Office Agency, 2012

Office Market Review

5.18 At national level, the office market performed strongly in 2015. According to Knight Frank, the total take-up for the top ten cities in the country at the end of October 2015 accounted for 460,000 sq m, which is the highest total figure since 2010. The rental level remained stable during the last quarter across the country.

5.19 Nationally, the office market was expected to continue the strong performance of 2015 into 2016, and the main regional cities are expected to exceed their long-term average take-up at the end of 2016, according to Savills' Regional Office Market Spotlight (February 2016).

5.20 Cushman & Wakefield's Office Market Snapshot for the first quarter of 2016 suggests that despite the uncertainty surrounding the EU referendum, solid economic growth was anticipated for 2016 as a whole. A number of factors support this outlook, including consumer demand, improvement in income levels, wage growth and further expansion in the labour market. The property market remains generally positive, albeit that sentiment has moderated.

5.21 Occupier demand may fall modestly in the short-term as a result of the Brexit vote and occupiers putting back investment decisions, however there is limited hard evidence as of yet.

Office Market Review in Liverpool City Region FEMA

5.22 This section provides an assessment of the office market in the FEMA. This information is taken from EGi and CoStar databases (quantitative analysis) which collate information provided by commercial agents as well as by contacting commercial property agents (qualitative analysis).

5.23 With regards to the quantitative data it should be noted that although these are the most comprehensive lists available, some transactions may not have been recorded. However this is unlikely to impact on the overall picture or conclusions drawn from this. GL Hearn used the Geographic Information System analysis to accurately present the analysis at a local authority level.

5.24 For the qualitative analysis, GL Hearn have also consulted commercial agents operating within the FEMA authorities. This analysis is presented in the last subsection of this chapter and should be read alongside the quantitative analysis.

5.25 Figure 24 provides an overview of the location of take-up activity over the period of 2000-2016. In total 2,625 deals were listed for the FEMA covering 1,700,000 sq m floorspace. The authority with the largest total quantum of transacted space was Liverpool which totalled around 1.4 million sq m since 2000; followed by Sefton at 116,000 sq m.

Figure 24: Office Floorspace take-up, 2000-2016

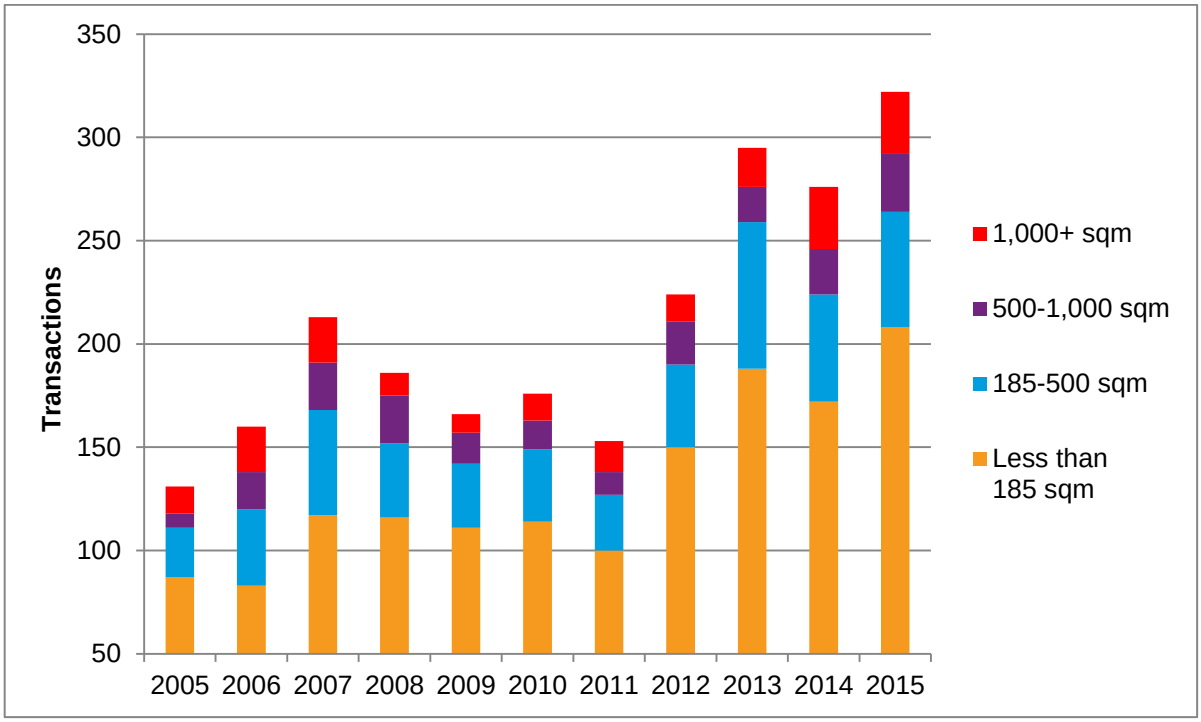
Source: GL Hearn Analysis of EGi & CoStar Data

5.26 Figure 25 shows the number of deals by authority over the 10 year period to 2015. In total 2,211 deals have been recorded in the FEMA over the period 2005-15. An average of over 200 office deals have been recorded each year, with the strongest activity in 2015.

5.27 Liverpool saw the highest office floorspace take-up with an annual average take-up of 84,000 sq.m. By comparison, the other authorities' combined annual average take-up was 34,500 sq m.

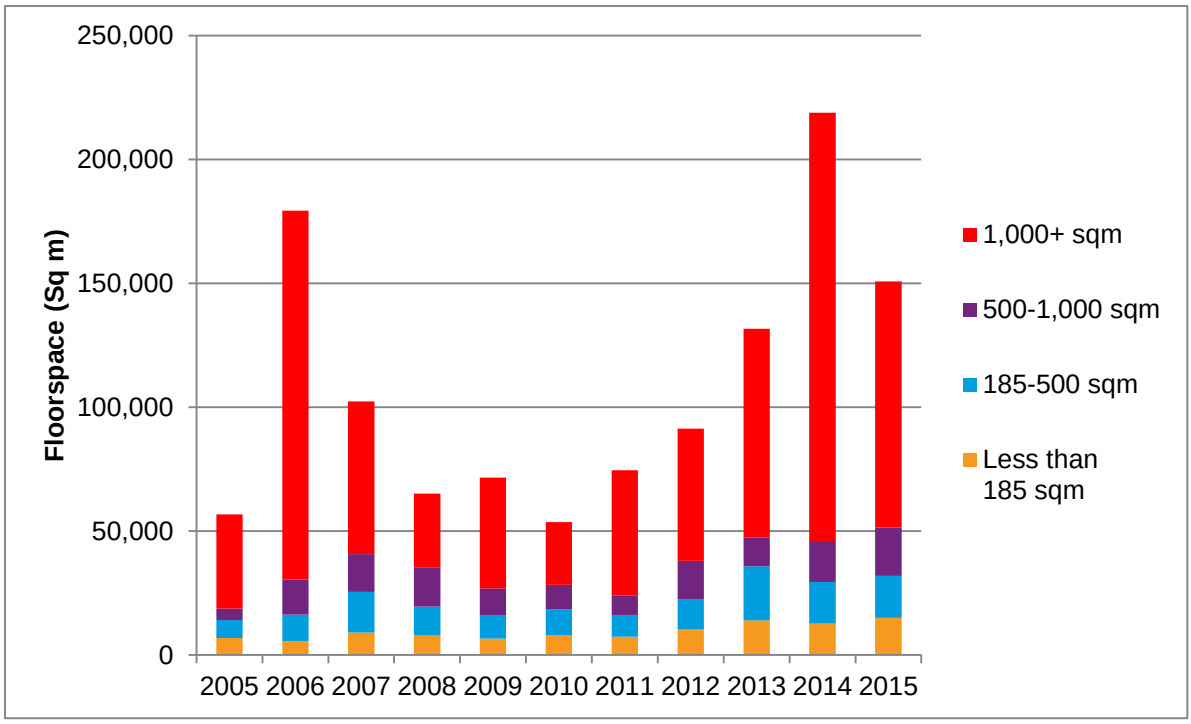
5.28 Figure 25 shows the trend in office deals by size band over the period 2005 to 2015. This shows a notable increase in overall transactions since 2012. The majority of transactions (63%) involved trading smaller office spaces, usually below 185 sq m in area. An increase in take-up since 2012 has been seen across a range of different size bands, however overall take-up growth has been driven by rising take-up of larger units of over 1,000 sq m as Figure 25 shows.

Figure 25: Profile of Office Deals by Size, 2005-2015



Source: GL Hearn Analysis of EGi & CoStar Data

Figure 26: Take-Up of Office Floorspace by Size across FEMA, 2005-15



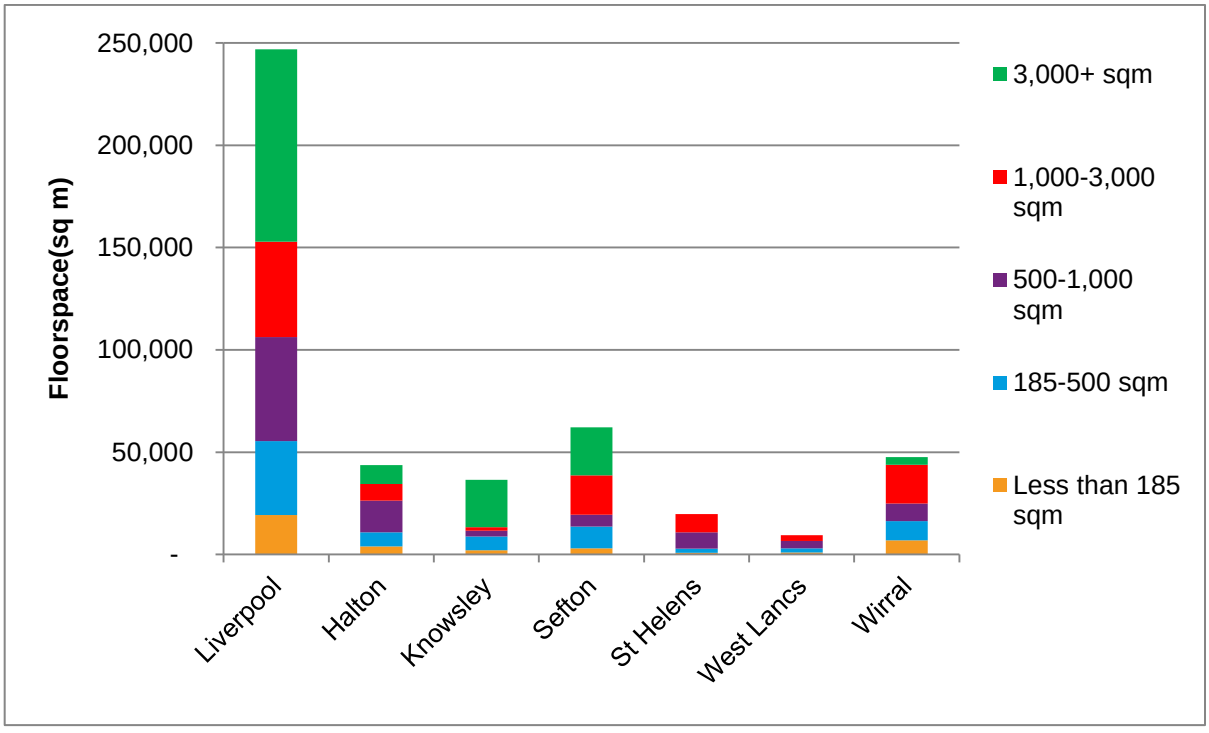
Source: GL Hearn Analysis of EGi & CoStar Data

Office Availability

5.29 There is around a total of 470,000 sq m office space advertised in the area across 910 properties. More than the half (53%) is located within Liverpool City. Figure 28 illustrates the location of available office space across the FEMA as advertised on the EGi and CoStar databases in August 2016. This includes new builds (or new refurbishments), properties under construction, proposed spaces that are currently in design process and existing office spaces[9].

5.30 Figure 27 sets out the distribution of the advertised space across the seven authorities. The majority is concentrated in Liverpool followed by Sefton (13%), Wirral (10%), Halton (9%) and Knowsley (8%). In West Lancashire the advertised space is around 9,000 sq m (2%)

Figure 27: Office Availability (July 2016)

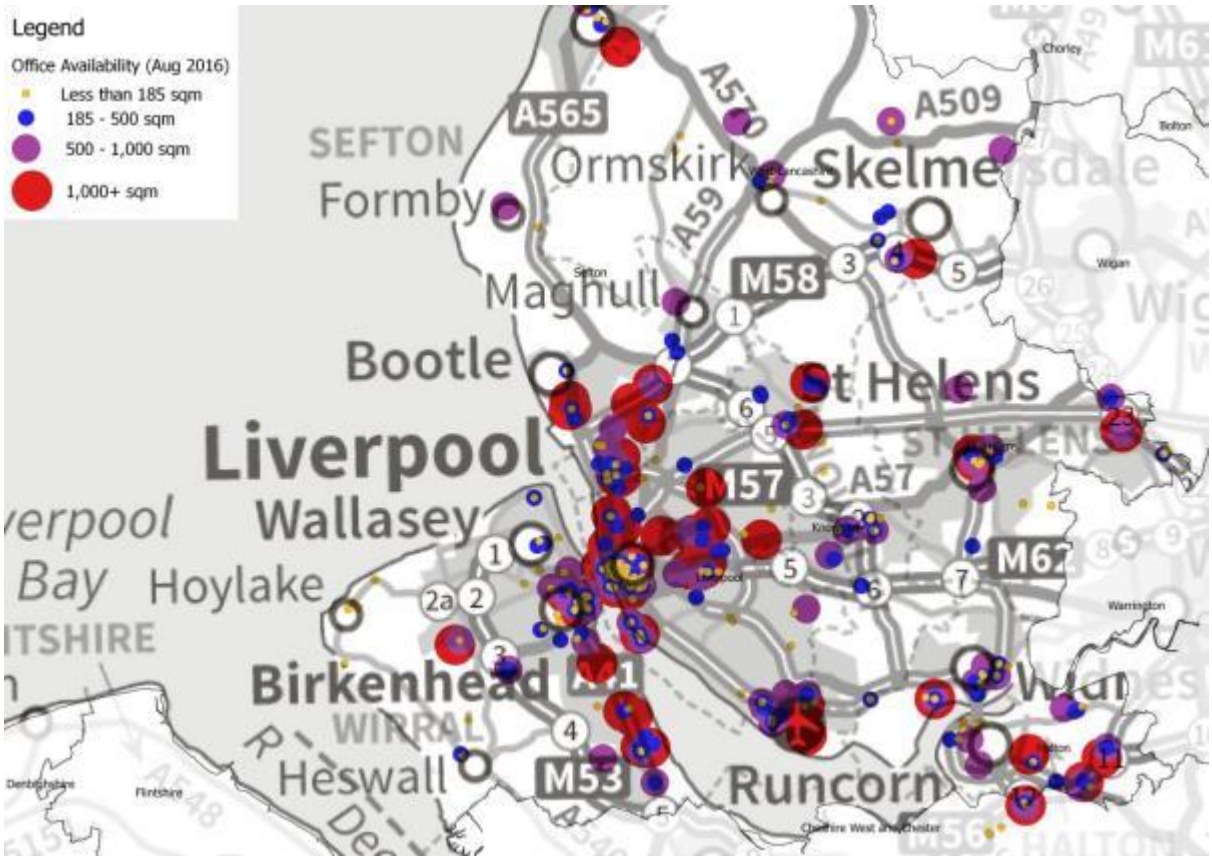


Source: GL Hearn Analysis of EGi & CoStar Data

5.31 Figure 28 overleaf shows the location of available office floorspace across the FEMA.

[9] This data is not directly comparable with the office floorspace data shown in Figure 23 which includes only built floorspace.

Figure 28: Office Availability – July 2016



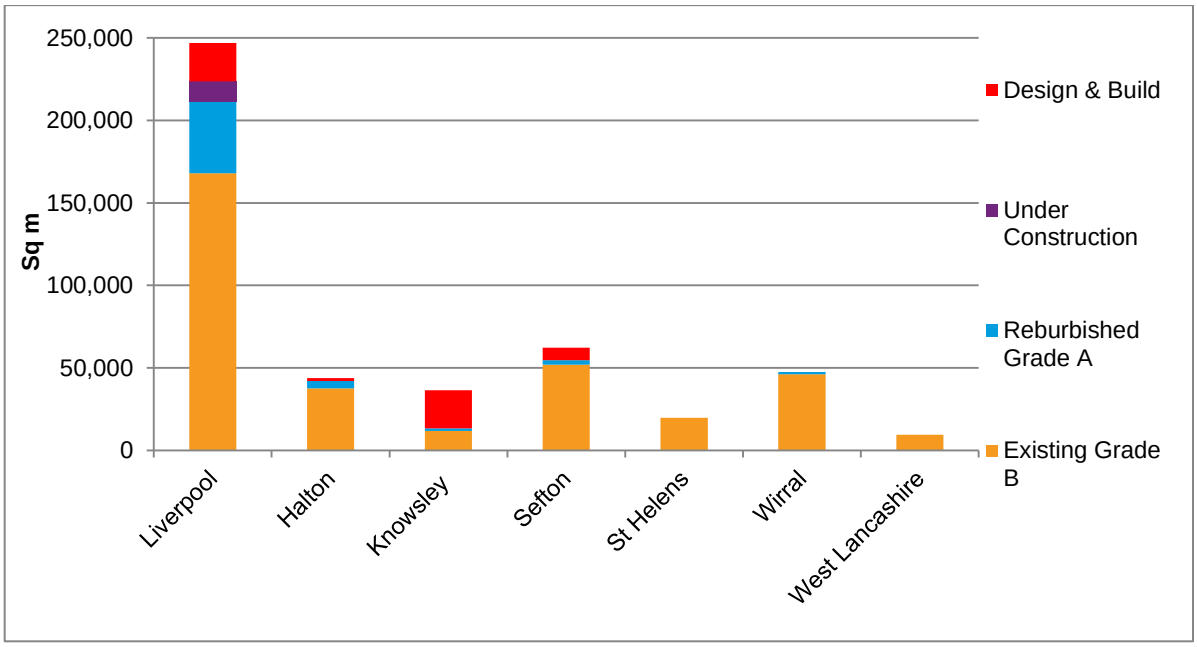
Source: GL Hearn Analysis of EGi & CoStar Data

5.32 Three quarters of the advertised stock relates to existing/ second-hand premises. There is 53,500 sq m of space which is either refurbished or under-construction; together with 56,000 sq m available on a design and build basis.

5.33 In Liverpool where the majority of the office stock is concentrated, the new-build or recently refurbished space relates to 18% of the City's advertised stock. The vast majority (68%) of the space is second-hand, while around 10% relates to proposed space (on a design and build basis).

5.34 Figure 29 shows the status of the proposed stock for each authority. Around 64% of Knowsley's advertised stock is on a design and build basis. It should be noted that this space is related to Coopers Point, Coopers Lane scheme with an opportunity up to 23,000 sq m (250,000 sq ft).

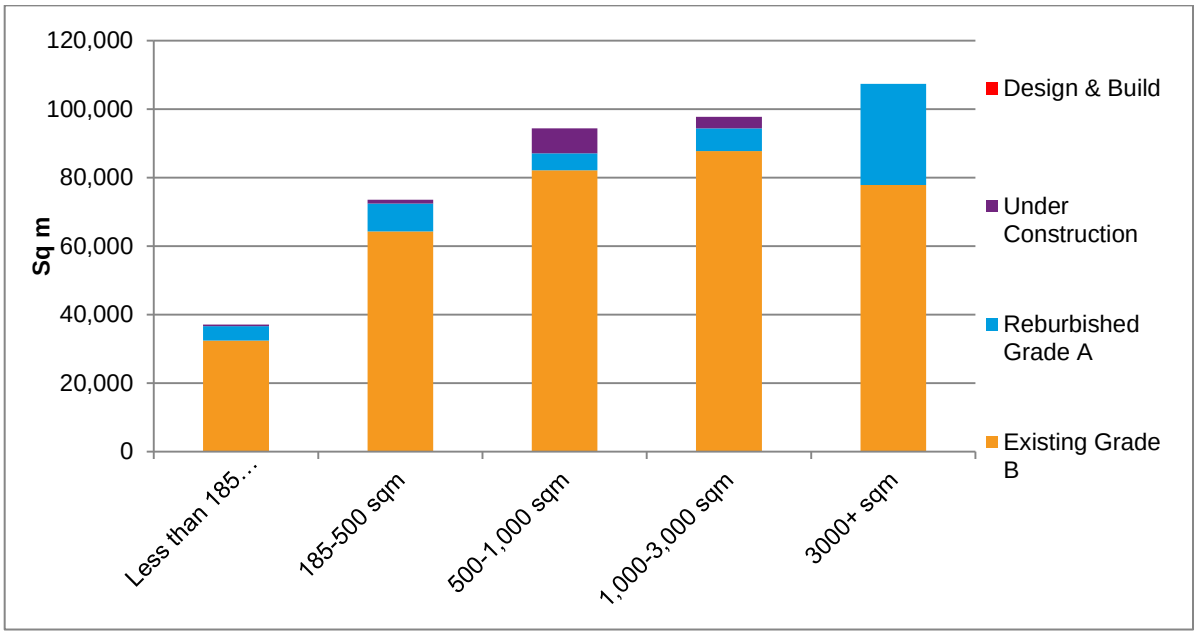
Figure 29: Office availability by type and location (July 2016)



Source: GL Hearn Analysis of EGi & CoStar Data

5.35 More than a quarter of the advertised stock relates to premises above 3,000 sq m, followed closely by premises between 1,000 and 3,000 sq m. Figure 30 shows the availability categorised by size band and status. Small units, below 185 sq m, equates to only 9% of the total available floorspace.

Figure 30: Floorspace availability by office status (July 2016)



Source: GL Hearn Analysis of EGi & CoStar Data

5.36 The large second hand office floorspace in Liverpool is a major component of the available supply.

5.37 The total available floorspace equates to 4.2 years' supply across the FEMA. This is calculated by using notional year's supply, which is the sum of the total available office space divided by the average annual take-up. Availability is significant in Knowsley, but this is influenced by design & build opportunities (which will create Grade A floorspace). The tight supply of office spec in Liverpool is evident.

Table 11: Notional Years' Supply of Office Floorspace

	Notional Years' Supply
Liverpool	3.1
Halton	4.9
Knowsley	10.6
Sefton	6.3
St. Helens	6.6
Wirral	10.1
West Lancs	7.5
FEMA	4.2

Source: GL Hearn Analysis of EGi & CoStar Data

Industrial Market Review

5.38 Nationally, the industrial market continues to perform well with year-on-year increases in the take-up of floorspace, although the latest full year figures for the UK show that total take-up in 2015 was down 11% on 2014 figures. Typically industrial floorspace includes both B2 and B8 use classes.

5.39 The industrial sector continues to be dominated by the warehouse and distribution uses. There is a growing demand for large scale logistics/ distribution warehouses nationally. This is, in part, driven by the continuing growth of the on-line retail sector and increasing customer expectations for same- or next-day delivery.

5.40 At a national level, Jones Lang LaSalle (JLL) statistics for the big box logistics sector indicate aggregate take-up across the UK of 7.7m sq m (89.3m sq ft) of which 5.7m sq m (61.5m sq ft) were in units of a size 90 to 9,000 sq m (1,000 to 99,999 sq ft). The composition of demand by sector for the first half of the year (nationally) was:

- Retailers: 49%
- Logistics Companies: 28%
- Manufacturers: 12%
- Other: 11%

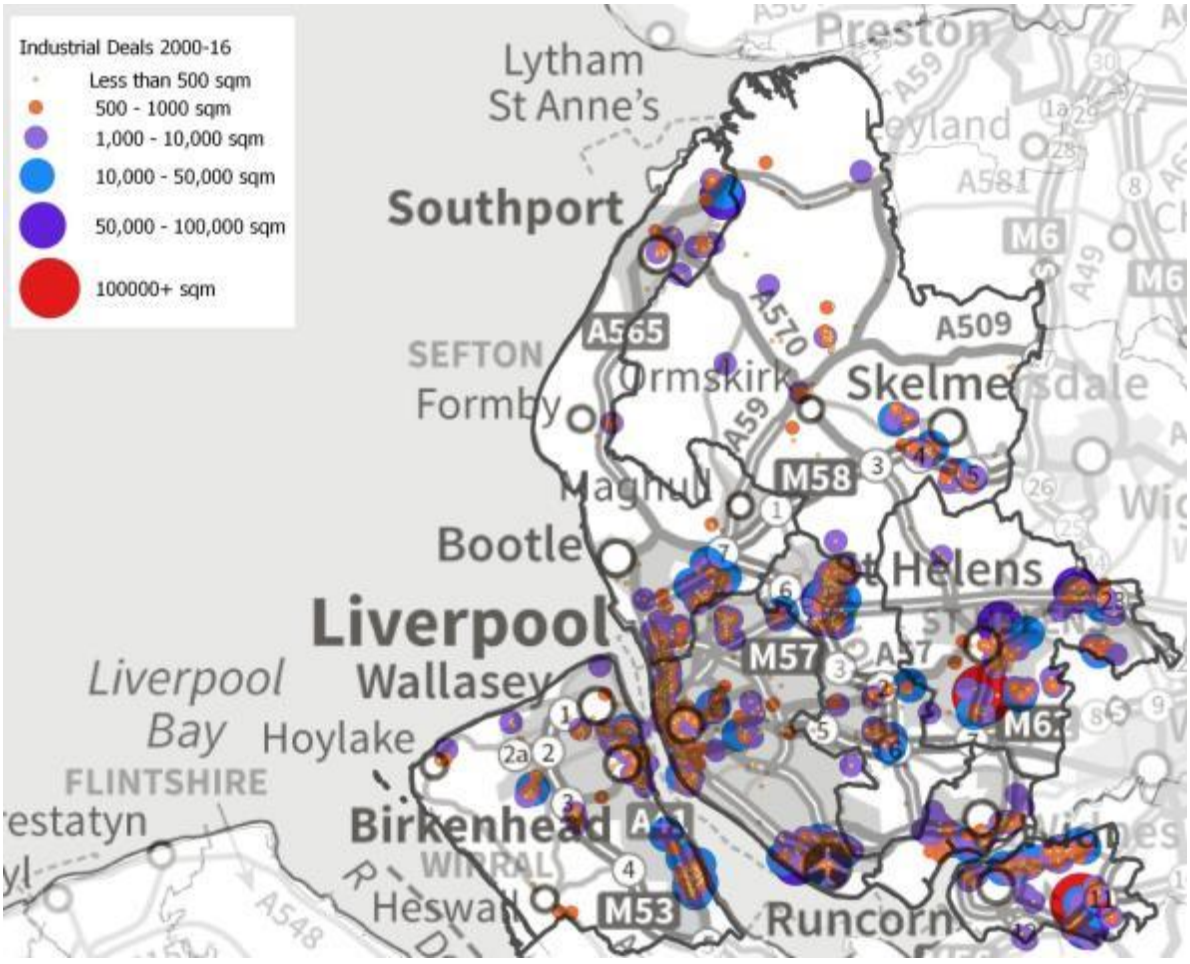
5.41 At the national level, JLL's research points to a current supply of 18.5m sq m (198.2m sq ft) at the end of 2015 – a low level equivalent to just under one years' worth of stock. This is partly a reflection of a lack of development over recent years, related to the wider economic conditions.

Industrial market in the FEMA

5.42 Figure 31 profiles the spatial distribution of the industrial transactions across FEMA since 2000. Since 2000 there have been recorded 4,032 industrial deals relating to 5.8 million sq m floorspace. Our analysis focuses on trends over the last decade (since 2005), for which more reliable data is available.

5.43 Over the last decade (2005-2015) there have been 3,629 industrial deals recorded across the FEMA relating to 4.6 million sq m of industrial floorspace.

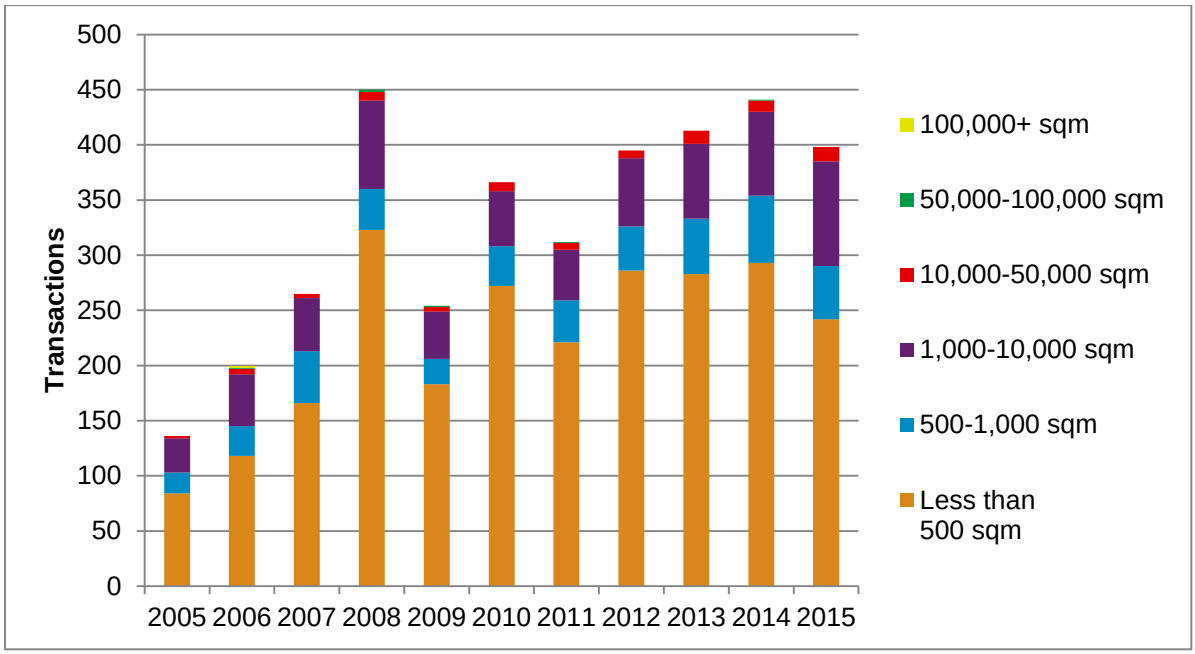
Figure 31: Industrial transactions 2000-2016



Source: GL Hearn Analysis of EGi & CoStar Data

5.44 The highest concentration of industrial transactions has been recorded in Liverpool City (943 deals) followed by Wirral (731 deals). Floorspace take-up was highest in Halton, at over 1 million sq.m over the 2005-15 period, followed by Knowsley (957,000 sq m) and Liverpool (941,000 sq m). Halton in particular has seen a higher number of deals for larger units.

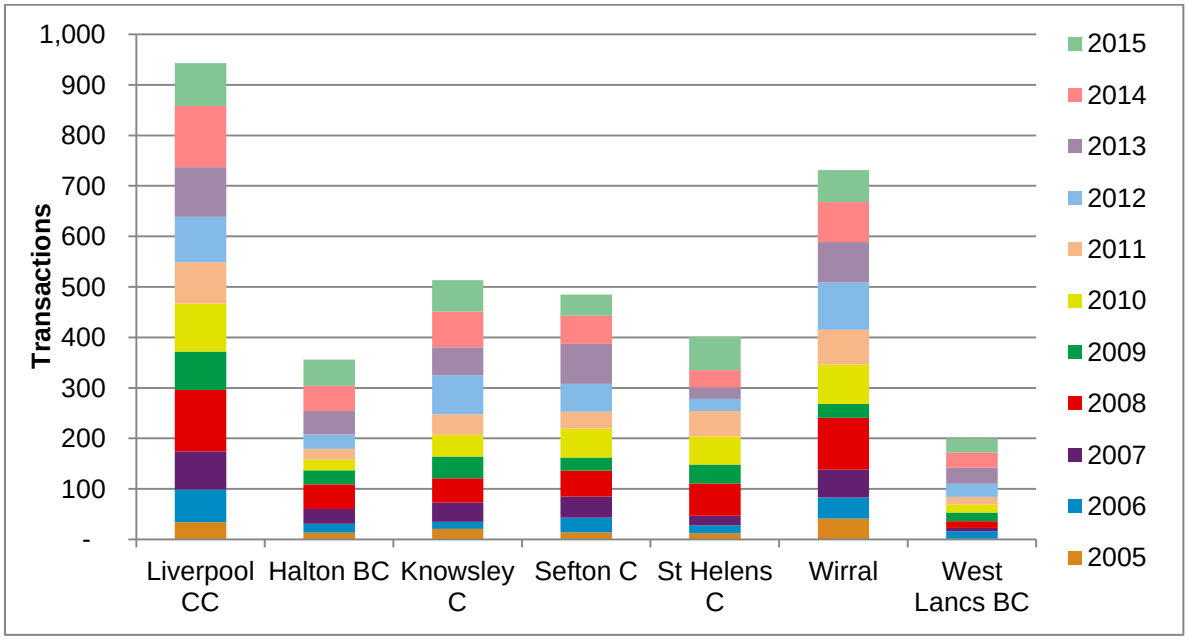
Figure 32: Industrial deals in FEMA by size and year, 2005-15



Source: GL Hearn Analysis of EGi & CoStar Data

5.45 Figure 33 presents the number of industrial deals by size and year. On average 330 deals were recorded per annum in FEMA. In total 68% of all the deals related to less than 500 sq m unit floorspace between 2005 and 2015, while 12% related to 500-1,000 sq m units and 18% to 1,000-10,000 sq m/unit. Deals for units above 10,000 sq m equal 2% of the total.

Figure 33: Industrial deals in FEMA by year and local authority, 2005-15

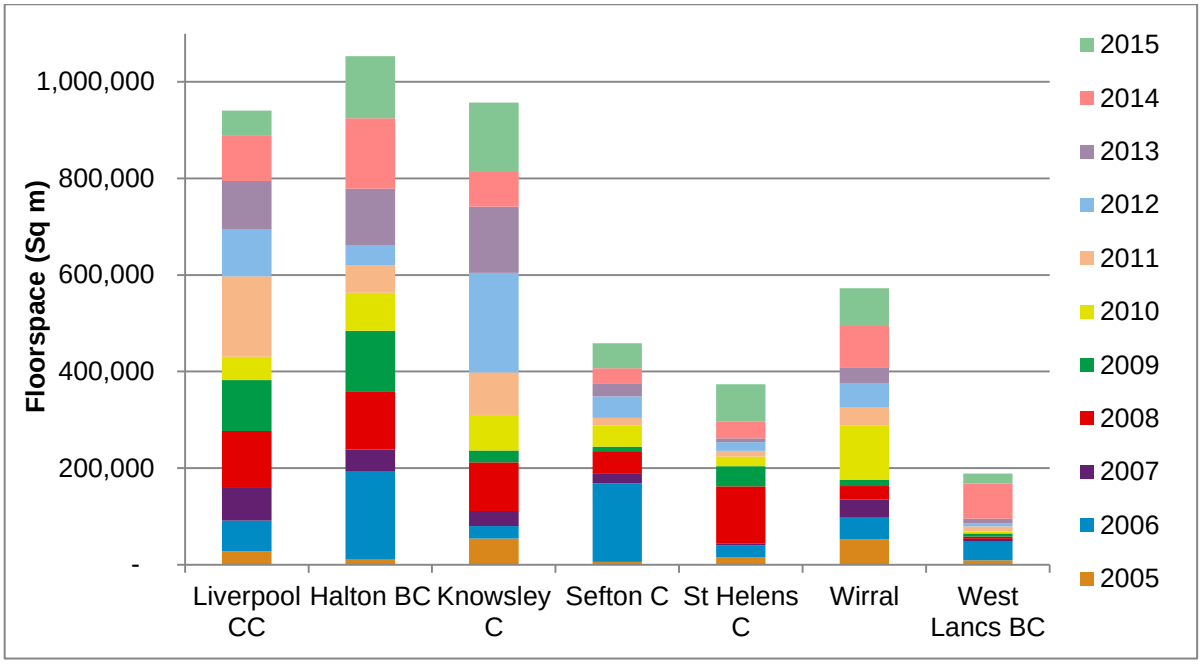


Source: GL Hearn Analysis of EGi & CoStar Data

5.46 Figure 34 presents the deal numbers broken down by year and local authority for the period between 2005 and 2015. Liverpool City accommodated the highest proportion of industrial transactions (26%), followed by Wirral (20%). The lowest number of transactions was recorded in West Lancashire (6%) and Halton (10%).

5.47 Figure 34 presents the industrial floorspace take-up by year for the same period. Halton Borough saw the highest volume of floorspace take-up in the FEMA (23%), followed by Liverpool and Knowsley (21% for both authorities). A lower proportion of floorspace was taken-up in West Lancashire (4%) and St Helens (8%).

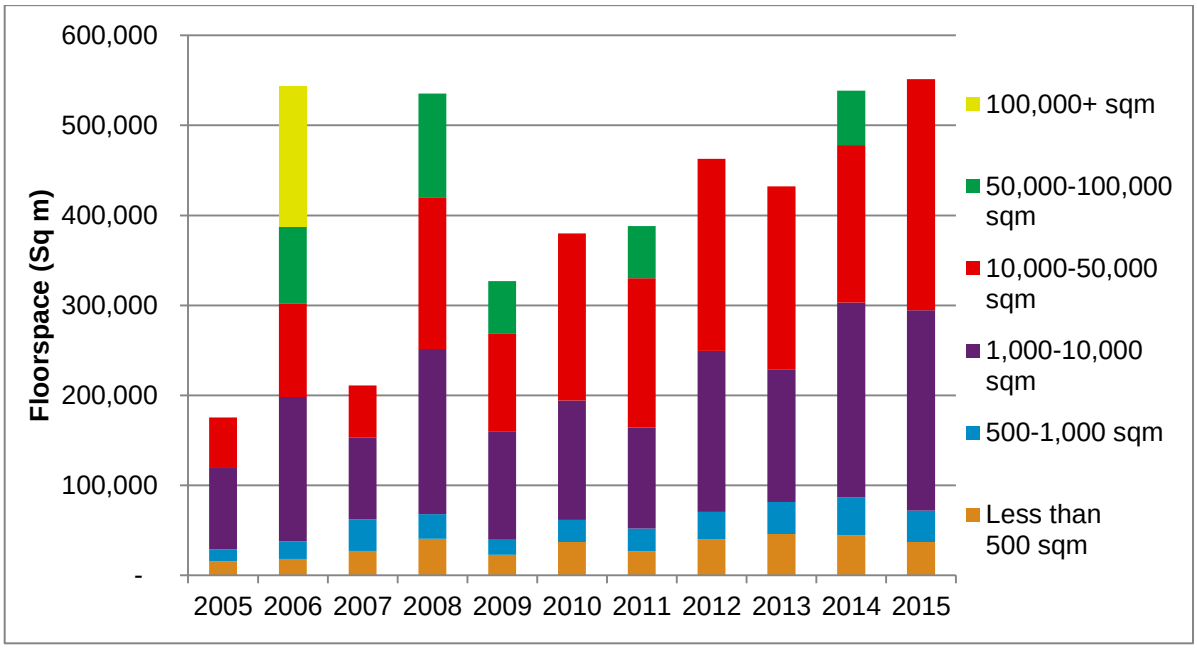
Figure 34: Take-up of Industrial floorspace by year and local authority, 2005-15



Source: GL Hearn Analysis of EGi & CoStar Data

5.48 Figure 35 presents the industrial floorspace purchased per annum and size. 37% of the total floorspace purchased the last decade were related to units of 10,000-50,000 sq m in size, followed by 36% of units sized between 1,000 and 10,000 sq m. Units above 100,000sq m equated to only to 3% of the transacted floorspace. Other size bands vary between 7% and 8% of transactions.

Figure 35: Take-up of Industrial floorspace by year and size, 2005-15



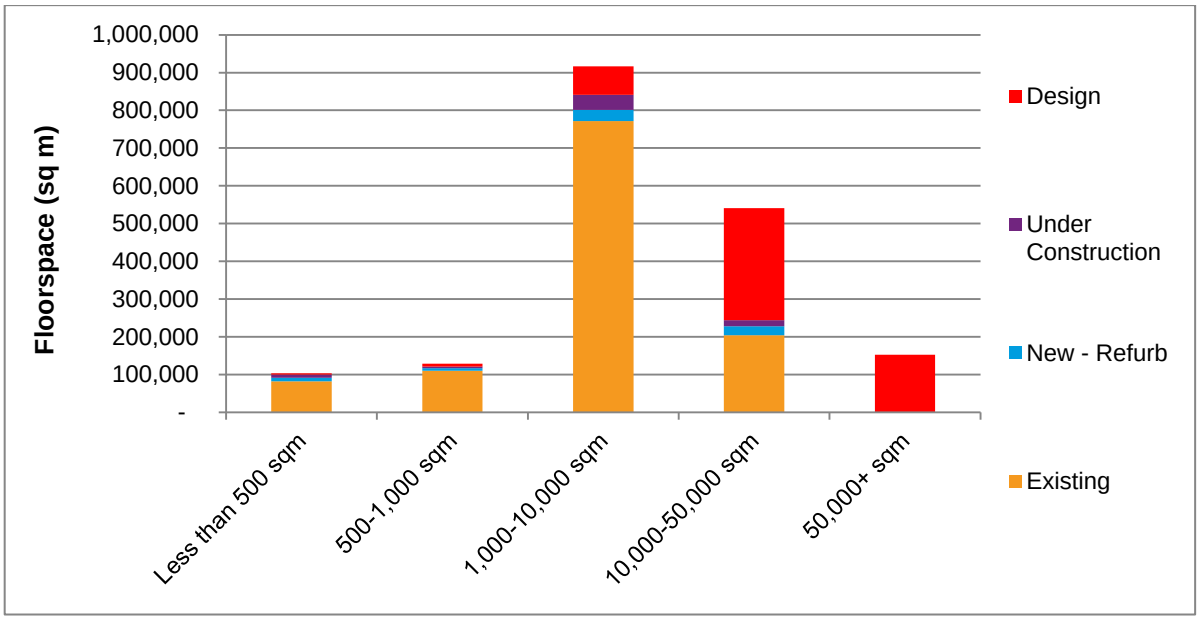
Source: GL Hearn Analysis of EGi & CoStar Data

5.49 The highest industrial take-up was recorded in 2015 at above 550,000 sq m, followed by 2006 with approximately 544,000 sq m and 2014 with 540,000sq m.

Industrial Floorspace Availability

5.50 As of August 2016, there was 1.9 million sq m industrial floorspace available and 926 properties being actively marketed on either EGi or CoStar across the FEMA. More than 10% of the advertised stock relates to units above 50,000 sq m. Almost half of the advertised properties have a space between 1,000 and 10,000 sq m. Finally one third relates to stock with 10,000-50,000 sq m floorspace (Figure 36).

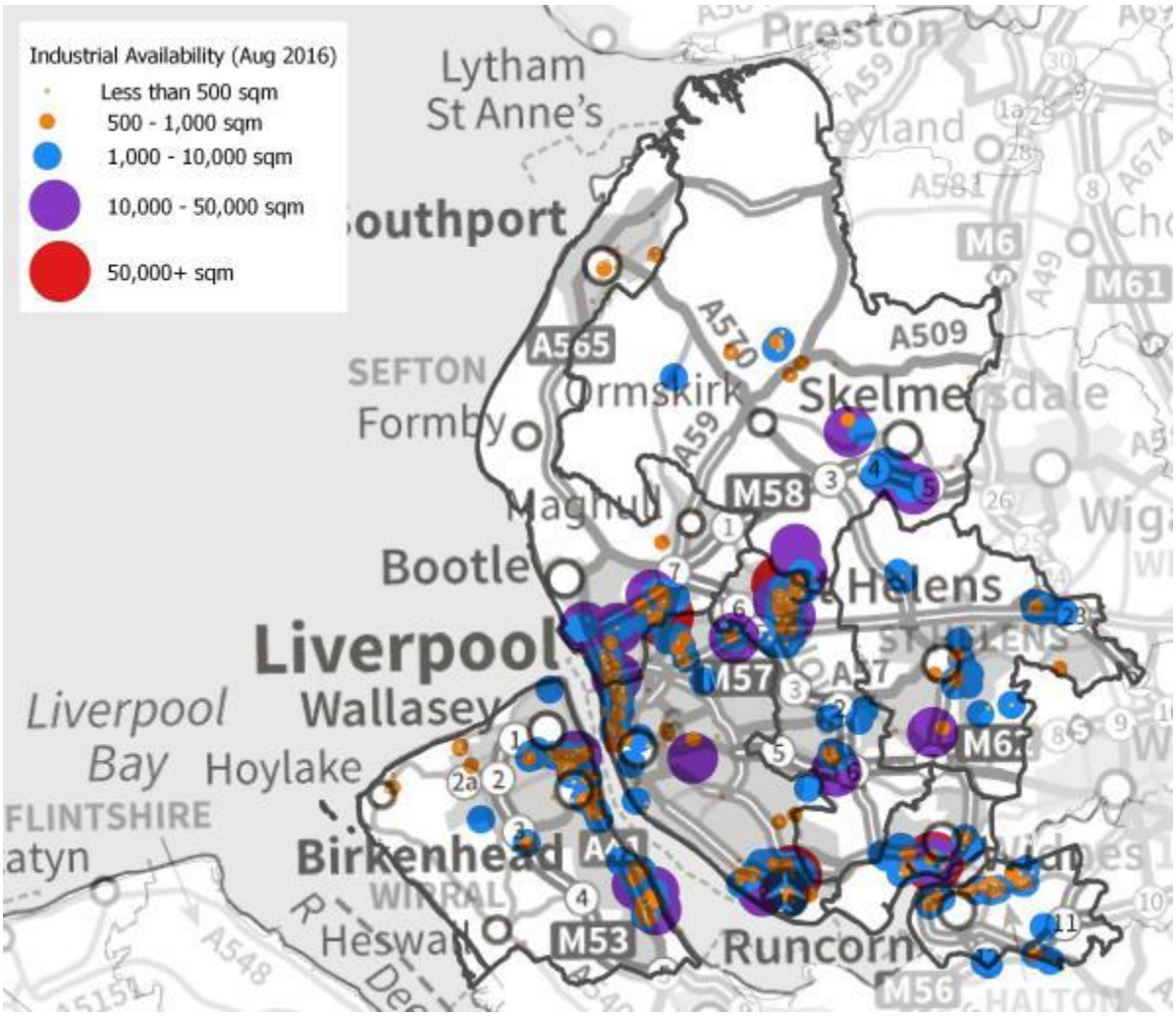
Figure 36: Industrial floorspace availability by unit size and status (July 2016)



Source: GL Hearn Analysis of EGi & CoStar Data

5.51 The map in Figure 37 shows the spatial distribution of the advertised industrial floorspace across the FEMA as registered on EGi and CoStar databases in August 2016. The highest concentration of the available floorspace can be observed in Liverpool (337,000 sq m) followed closely by Halton (336,000 sq m), Knowsley (312,000 sq m) and Wirral (288,000 sq m). The availability in Sefton and West Lancashire is around 12% while the advertised stock in St Helens represents 6% of the total availability.

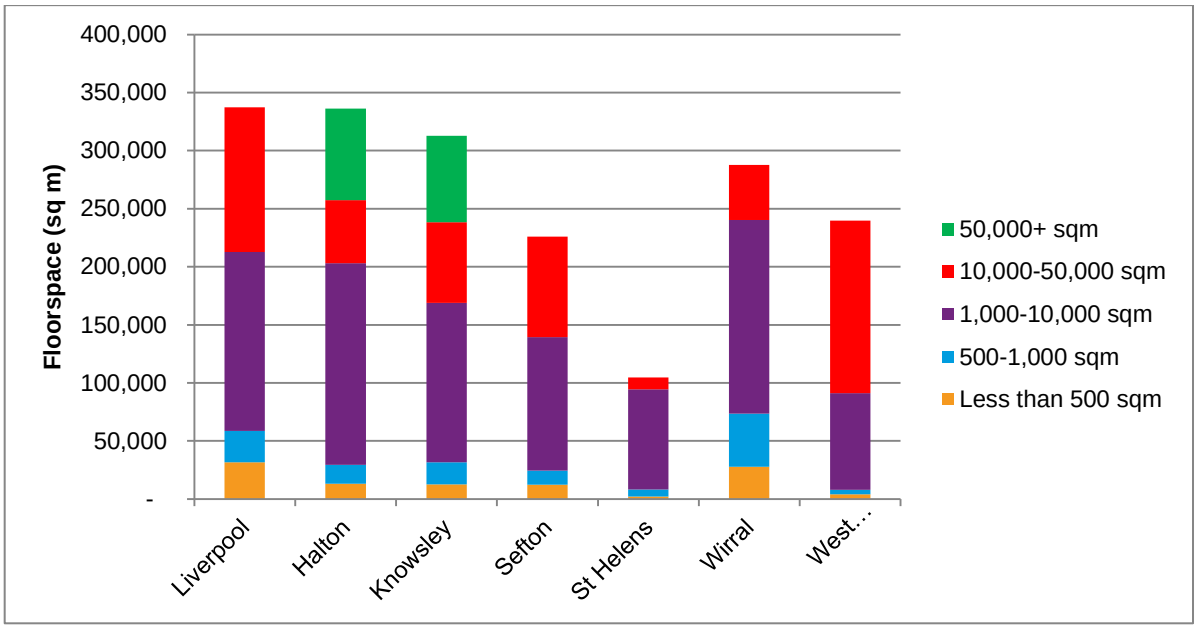
Figure 37: Industrial floorspace availability by size in FEMA, July 2016



Source: GL Hearn Analysis of EGi & CoStar Data

5.52 Around a quarter of the advertised properties in Halton and Knowsley related to space above 50,000 sq m. 46% of the availability in Liverpool relates to premises between 1,000 sq m and 10,000 sq m space, followed by 37% of premises with 10,000-50,000 sq m floorspace as illustrated in Figure 38. 62% of the advertised stock in West Lancashire relates to properties above 10,000 sq m floorspace.

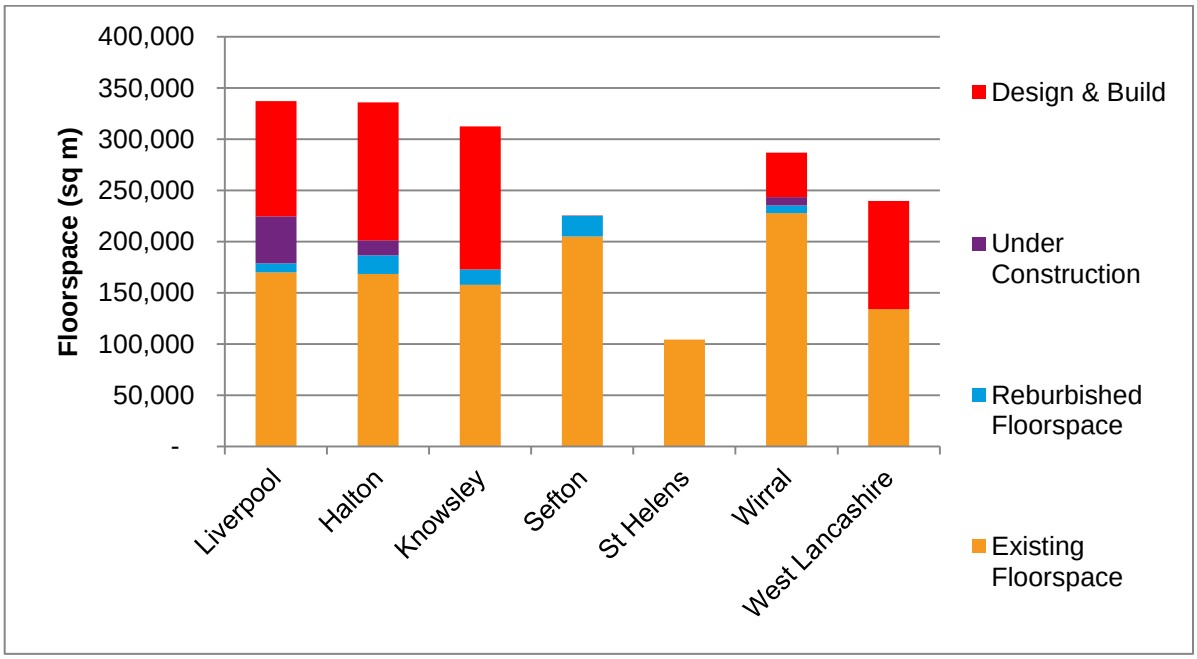
Figure 38: Industrial floorspace availability by size band, August 2016



Source: GL Hearn Analysis of EGi & CoStar Data

5.53 Figure 39 presents the available industrial floorspace by status and local authority. As at August 2016, a third of the available stock was available on a design and build basis and 63% (1.2 million sq m) was existing units. In addition 4% (69,000 sq m) was under construction and 4% (approx. 70,000 sq m) was newly built or refurbished.

Figure 39: Available Industrial floorspace by status and local authority (August 2016)



Source: GL Hearn Analysis of EGi & CoStar Data

5.54 The largest advertised industrial floorspace was the built to suit opportunity in Viking Park (formerly 3MG), Halton with 79,000 sq m available space. The largest existing advertised space was a unit in Hawthorne Road, Sefton of 39,000 sq m. There are 53,000 sq m new or refurbished floorspace across 13 units above 1,000 sq m. Design and build opportunities are available for up to 537,000 sq.m of industrial floorspace of which there is capacity for up to 450,000 sq m in units of over 10,000 sq m and153,000 sq m in units of over 50,000 sq m.

Property Agents' Consultation

5.55 As part of the commercial property market assessment, GL Hearn contacted property agents active within the FEMA. Consultation was undertaken in August 2016. The responses and key findings of those discussions are summarised below. The purpose of this is to complement the findings of the quantitative analysis.

Office Market

5.56 According to the agents' consultation, Liverpool City is the main market for office activity in the FEMA. Demand varies across Liverpool, with most popular locations being the City Centre and City Fringe, along the waterfront, as well as out of town locations in Speke and around Liverpool Airport. The majority of the transactions and floorspace take-up in recent years has been focussed in the 'Commercial District' – comprising central Liverpool and the Waterfront.

5.57 Agents' consultation revealed moderate activity across the office market over the past few months. The majority of the transactions (60-70%) involved letting small office spaces (with a total floorspace below 250 sq m).

5.58 The level of rental values varies across the area and relates to the type of the office space. In general, the values were quite consistent over the last few years, with figures across the Commercial District of around £20 per sq ft for a Grade A office space and £15- £16 for a Grade B unit. This can be compared to around £11 per sq ft outside the Commercial District, with the highest values achieved in Wavertree (£13.00 per sq ft). North of Liverpool is quite consistent, with Grade B office space transacted around £11- £11.50 per sq ft.

5.59 The majority of the stock transacted over the last year was Grade B office space, with almost 50% being related to professional and finance/ banking industry. New offices accounted for a very small proportion of the stock transacted over the past year.

5.60 Almost half of the last year's total take-up of in the City Centre areas accounts for public sector, driven by Liverpool City Council occupying 85,000 sq ft in the Cunard Building.

5.61 Further to that, a significant number of recognised City Centre office buildings have been sold within the last 18 months for residential conversions and several for hotel conversions. This has resulted in a shortage of Grade B offices in the City Centre.

Industrial/Warehouse Market

5.62 According to the agents' consultation the industrial demand is high, with the most popular locations being in locations with good access to the strategic road network and in proximity to the Port. In particular, properties with a good road network access, parking facilities and loading/unloading facilities are considered to be the most desirable across the existing industrial stock.

5.63 Rental activity remained stable over the past few months with the average values across Merseyside around £5- £6 per sq ft. An average time to let the property is approximately 10-12 months, but with potentially longer void periods for larger units.

5.64 The demand for large industrial warehouses or storage facilities is driven by expansion or relocation of existing local occupiers, together with inward investment. Inward investment mainly involves units above 3,000 sq m. Local companies usually target units below 3,000 sq m while larger companies have a recently raised interest in the last few months to establish their operating bases in the area. There is a recognised shortage of land capable of accommodating larger warehouses.

5.65 There is recognition that the opening of Liverpool2 and other developments related to the SuperPort concept will drive increased demand for warehouse and distribution space across the City Region. In particular, this will likely drive demand for large scale units in locations with good access to the port and to the motorway network. Agents reported that there is currently a limited supply of such sites across the City Region.

5.66 With limited development over recent years, availability has fallen reducing the choice of premises for occupiers. Available stock has also been influenced by residential redevelopment of some sites. Most new development now takes place on a design and build or pre-let basis.

5.67 Industrial development across the FEMA has historically been supported by European Grants and external funding. In the wake of the referendum to leave the European Union, agents indicated that an additional layer of uncertainty has been added to the market.

5.68 Jaguar Land Rover, located at Halewood, has increasing land requirements and this has knock on effects on the company's supply chain – companies such as Johnson Controls, Plastics Omnium and other big suppliers. There is demand for large sites in proximity to JLR's Halewood site but the lack of land has driven potential occupiers to look further afield – for example, to Warrington.

5.69 Agents report that in Halton, Knowsley, South Sefton, and St Helens there is similar activity in the industrial market to the levels seen in Liverpool. These areas benefit from relatively close proximity to the Port and good access to the motorway network. The rental values in these areas are between £5 to £6 per sq ft. Wirral has also increased activity mainly because of its proximity to the port and the good links with both the City and the Motorway network.

5.70 Areas like North Sefton and West Lancashire are slightly further from strategic transport accessibility – these areas are outside the 1 hour travel time from the port – and as such the demand for industrial/logistics activity in the area is more limited and focussed on smaller local needs. This is reflected in rental values and development activity in these areas.

Property Market – Key Points

- The property market analysis particularly highlights that the office market is dominated by Liverpool, and that supply is tight for both Grade A and B space at the time of writing.
- There is a broader distribution of industrial demand, with the largest levels of stock being in St. Helens, followed by Knowsley and West Lancashire. Within the industrial sector there is a shortage of larger warehousing/ storage units, with demand for large sites to accommodate demand arising from the expansion of the Port and for large site close to or accessible from Jaguar Land Rover's Halewood Plant.

6 FUTURE ECONOMIC GROWTH POTENTIAL

6.1 To estimate the future economic growth potential in the FEMA we have drawn on economic forecasts produced by Oxford Economics and the Liverpool City Region Local Enterprise Partnership (LEP). We consider two scenarios:

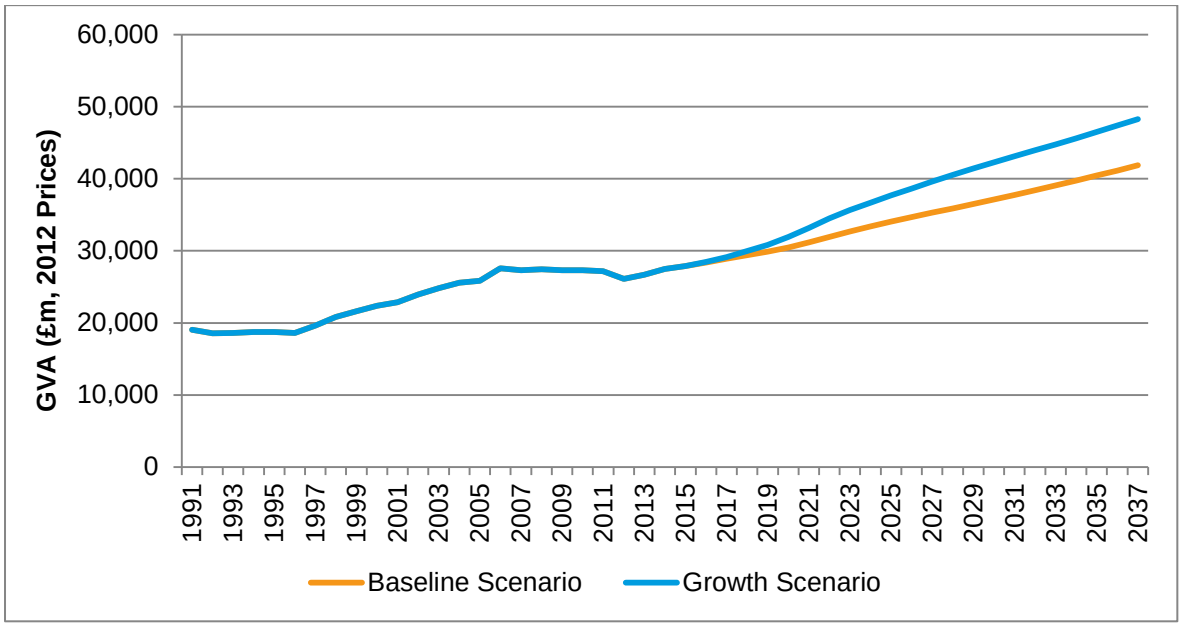
- A Baseline Scenario; and
- A Growth Scenario.

6.2 The Baseline Scenario is based on Oxford Economics' baseline model. It takes account of the structure of local economies by sector, past sectoral performance and the outlook for different economic sectors in 2016. The Growth Scenario is based on additional information provided by the Liverpool City Region LEP and each of the FEMA local authorities. Liverpool City Region LEP provided Oxford Economics with a set of growth ambitions and targets, centred on a number of sectors that have been identified as having significant growth potential. In addition, local authority officials responsible for regeneration in each local authority provided details on future development projects and proposals for each respective area. This included information on time scales, likely levels of employment, and the type of employment (office, retail, leisure, etc.) to be generated. Using this information, the LEP and Oxford Economics have modelled a growth scenario which assesses the potential economic impact. This is modelled on a sector by sector basis.

6.3 The Growth Scenario shows the FEMA's economy growing substantially faster than the Baseline forecast. GVA measures the size of a local economy in terms of the value of goods and services produced. The Baseline shows an annual growth rate of 1.9%[10] in GVA over the period 2012 to 2037. For the Growth Scenario this figure is 2.5% per annum. This compares to 2.0% pa GVA growth historically in the City Region; and forecasts for 2.3% pa growth nationally and 2.0% pa for the North West. Clearly, the Growth Scenario is considerably more optimistic than the Baseline.

[10] Compound Annual Growth Rate (CAGR)

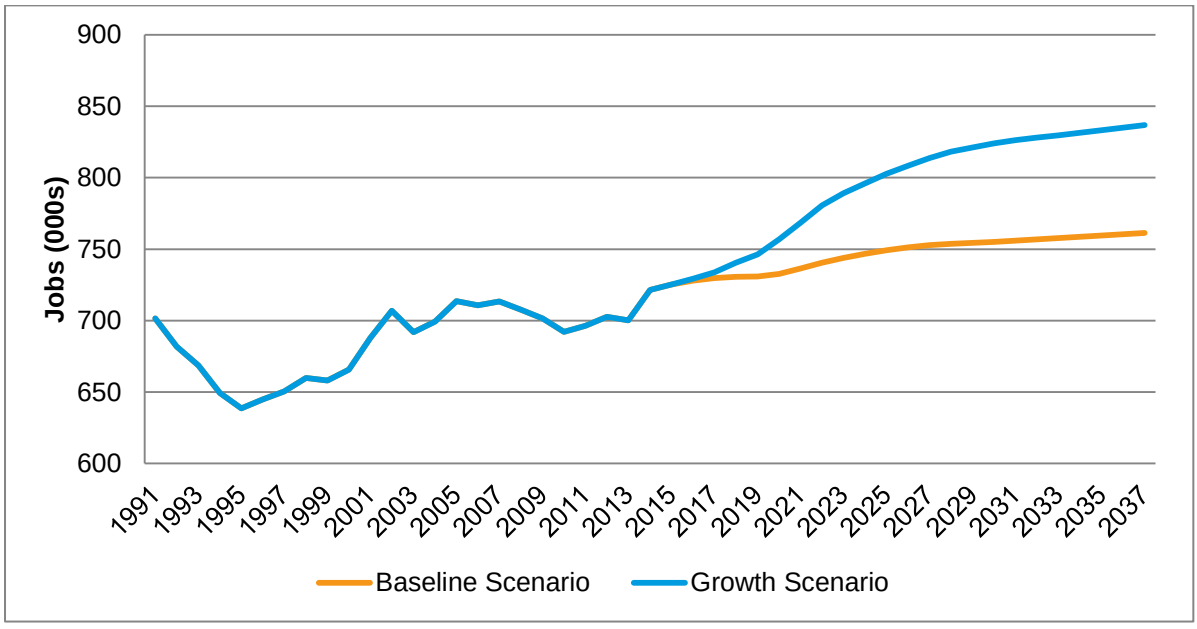
Figure 40: GVA – Baseline vs Growth Scenario



Source: Oxford Economics

6.4 The Baseline Scenario shows a total employment growth of 58,900 over the period 2012-37. The Growth Scenario shows a higher growth of 134,100 jobs over this period together with a marked improvement in productivity due to stronger growth in higher value-added sectors. The stronger employment growth in the Growth Scenario is driven by a stronger performance over the period from 2018 to 2025 than shown in the Baseline Scenario.

Figure 41: Total Employment – Baseline vs Growth Scenario



Source: Oxford Economics

6.5 The Growth Scenario sees an extremely fast rate of jobs growth in the first ten years of the forecast (1.1% growth pa), more than three times the pace of employment growth in the Baseline Scenario and twice that expected across the North West. From 2026 onwards, the pace of growth slows to 0.3% pa but growth remains stronger than shown in the Baseline Scenario.

6.6 The Growth Scenario assumes the planned transformational investments are delivered and importantly occupied. It builds in an assumed vacancy rate and account for some displacement, but the planned developments clearly generate a considerable amount of net additional benefits to the City Region.

6.7 The Growth Scenario assumes that the majority of these investments will be delivered over the first half of the study period, hence stronger jobs growth over this period, as shown in Figure 41. This reflects the current evidence regarding delivery of known developments. The Scenario models the multiplier effects arising from developments due to the positive impacts on related sectors, supply chain jobs, and increased retail and leisure expenditure.

6.8 Table 12 shows the total forecast employment growth of the two scenarios at local authority level. This shows a considerably higher level of growth in Liverpool (which sees the strongest absolute increase in jobs) as well as strong growth in St. Helens, and Halton. Knowsley and West Lancashire show the smallest difference in total employment growth between the two scenarios. However, it should be noted that these two authorities were forecast the second and third highest growth in the Baseline scenario.

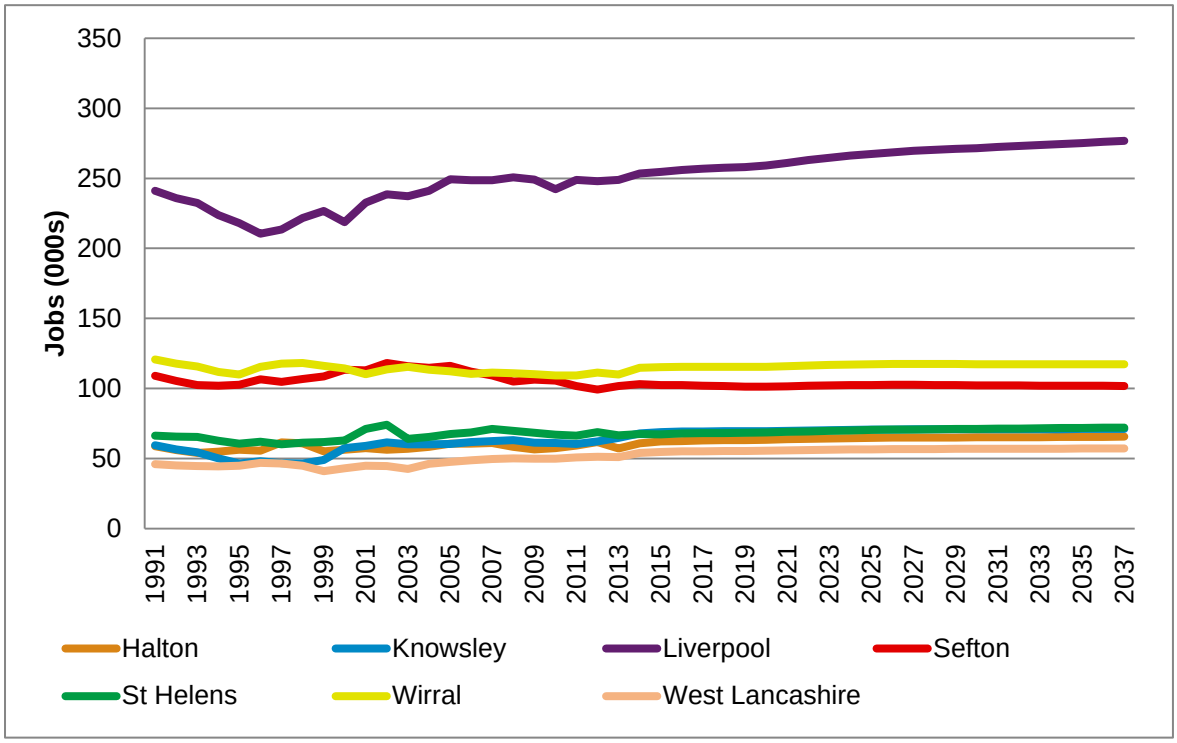
Table 12: Total Employment Growth – 2012-37

	Baseline Scenario	Growth Scenario	Difference
Halton	3,800	12,400	8,600
Knowsley	9,000	12,300	3,300
Liverpool	28,700	67,600	38,900
Sefton	2,500	6,500	4,000
St. Helens	3,200	17,100	13,900
Wirral	5,800	11,400	5,600
West Lancashire	6,000	6,800	800
FEMA	58,900	134,100	75,200

Source: Oxford Economics

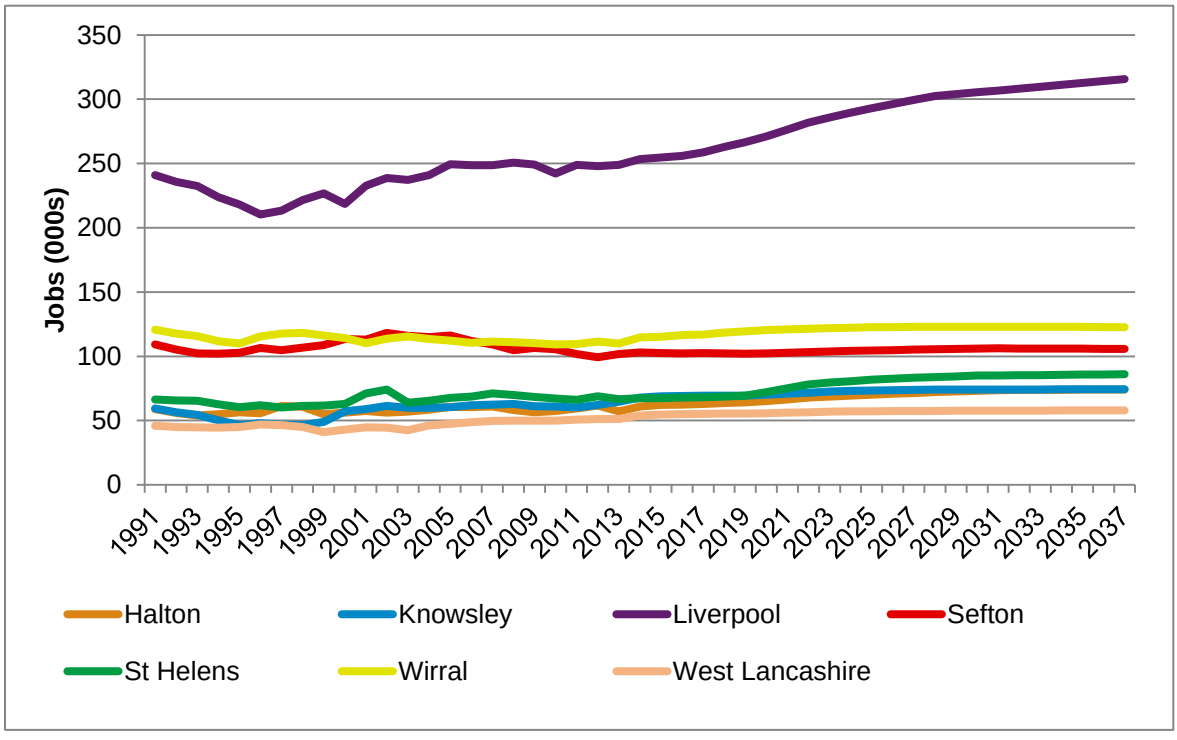
6.9 Figures 42 and 43 show the total jobs growth in the Baseline and the Growth Scenario by authority.

Figure 42: Total Employment Growth by Authority – Baseline



Source: Oxford Economics

Figure 43: Total Employment Growth by Authority – Growth Scenario



Source: Oxford Economics

6.10 Employment growth in the two scenarios, expressed as a Compound Annual Growth Rate, is shown in the table below. This shows that in the Baseline Scenario, the FEMA's economy is expected to grow by an average of 0.3% pa compared to 0.5% across the North West and 0.6% nationally (2012-37). In the Growth Scenario, substantially stronger employment growth of 0.7% pa is expected, out-performing the rate of growth envisaged at either a regional or national level. In the Growth Scenario, the strongest comparative employment growth rates are expected in Liverpool and St Helens. For these authorities in particular, the Growth Scenario is quite aspirational in nature.

Table 13: Compound Annual Employment Growth Forecast, 2012-37

	Baseline Scenario	Growth Scenario
Halton	0.0%	0.7%
Knowsley	0.5%	0.7%
Liverpool	0.4%	1.0%
Sefton	0.1%	0.3%
St Helens	0.2%	0.9%
Wirral	0.2%	0.4%
West Lancs	0.4%	0.5%
FEMA	0.3%	0.7%
North West	0.5%	
UK	0.6%	

Source: Oxford Economics

6.11 The above figures are for total employment and include both full-time and part-time jobs (both are treated equally in the analysis). Different sectors will have different levels of full-time and part-time employment. For the sectoral analysis, in order to ensure we are considering comparable data, we convert the total jobs growth to Full-Time Equivalent (FTE) jobs. The FTE jobs growth for each authority is shown in the table below[11].

Table 14: Full-Time Equivalent (FTE) Jobs Growth – 2012-37

	Baseline Scenario	Growth Scenario	Difference
Halton	3,500	11,200	7,700
Knowsley	8,900	11,900	3,000
Liverpool	23,600	57,600	34,000
Sefton	2,200	5,700	3,500
St. Helens	2,700	15,800	13,100
Wirral	6,600	11,500	4,900
West Lancashire	5,300	6,000	700
FEMA	**52,800**	**119,700**	**66,900**

Source: Oxford Economics

[11] Note: In some instances the FTE growth is higher than the total employment growth due to structural changes to the economy over the period. FTE jobs are an output of the Oxford Economics model.

6.12 Tables 15 and 16 on the following pages show the FTE jobs growth over the period 2012-37 by broad sector and authority. In terms of sectoral growth, at the FEMA level the Baseline Scenario shows the biggest growth in the following sectors:

- Professional and scientific services (19,400 FTE jobs growth);
- Construction (13,300 FTE jobs growth);
- Health (9,900 FTE jobs growth);
- Business Support Services (9,000 FTE jobs growth);
- Accommodation and Food Services (7,100 FTE jobs growth).

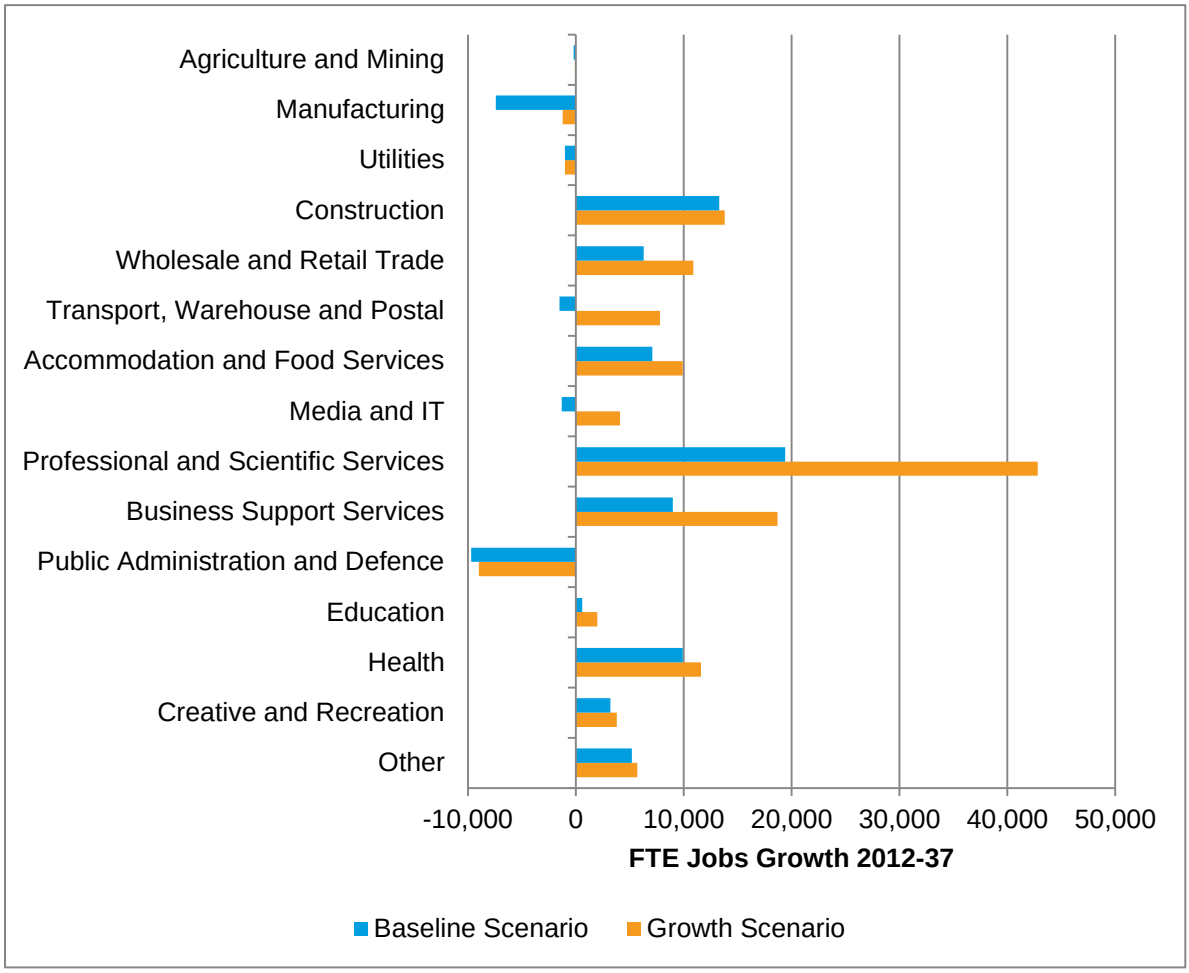
6.13 Conversely, the Baseline Scenario shows large losses in Public administration and defence (-9,700 FTE jobs loss) and Manufacturing (-7,400 FTE jobs loss) as well as smaller net losses in Utilities; Transport, warehouse and postal; and Media and IT.

6.14 The Growth Scenario shows strong growth in the same growth sectors listed above as well as strong performance in the Wholesale and retail trade sector. Professional and scientific services (42,800 FTE jobs growth) is still considered to see the largest growth, together with Construction (13,800 FTE jobs growth) and Business Support Services (18,700 FTE jobs growth) forecast the largest growth at FEMA level.

6.15 The Growth Scenario shows fewer sectors with net losses of FTE jobs over the period – only the Public Administration and Defence (-9,000 FTE jobs loss), Utilities (-1,000 FTE jobs loss), and the Manufacturing (-1,200) sectors are forecasts net losses. The manufacturing sector is however expected to perform substantially better than it has historically, or in the Baseline Scenario.

6.16 The Growth Scenario shows considerably stronger growth in a number of sectors, most notably in the Professional and Scientific Service sector which is forecast to see the largest level of growth (42,800 FTE jobs) which is 121% more than the Baseline Scenario. The other sector to see the biggest increase in the Growth Scenario is Business Support Services which is shown more than twice the growth of the Baseline Scenario. This will support demand for B1 employment space.

Figure 44: FTE Jobs Growth by Broad Sector, FEMA – Baseline vs Growth Scenario



Source: Oxford Economics

Table 15: Full-Time Equivalent (FTE) Jobs Growth by Broad Sector, 2012-37 – Baseline Scenario

	Halton	Knowsley	Liverpool	Sefton	St Helens	Wirral	West Lancs	FEMA
Agriculture and Mining	0	0	0	0	0	-100	-100	-200
Manufacturing	-1,700	-300	-1,500	-1,000	-1,700	0	-1,300	-7,400
Utilities	0	-200	-300	0	-100	-200	-300	-1,000
Construction	1,300	900	4,300	1,500	1,200	2,500	1,600	13,300
Wholesale and Retail Trade	0	100	6,200	-900	800	-700	700	6,300
Transport, Warehouse and Postal	-700	600	200	-500	-200	-400	-400	-1,500
Accommodation and Food Services	400	0	4,700	400	500	200	900	7,100
Media and IT	500	200	-2,200	200	-300	200	100	-1,300
Professional and Scientific Services	1,500	1,500	8,900	1,700	800	3,200	1,800	19,400
Business Support Services	1,800	2,100	3,800	900	-300	500	200	9,000
Public Administration and Defence	-200	-700	-4,400	-2,600	-700	-1,100	0	-9,700
Education	100	900	500	500	0	-1,600	100	600
Health	0	3,200	800	500	1,400	2,600	1,500	9,900
Creative and Recreation	300	300	800	400	500	600	200	3,200
Other	100	400	1,900	1,000	700	1,000	200	5,200
Total	3,500	8,900	23,600	2,200	2,700	6,600	5,300	52,800

Source: Oxford Economics

Table 16: Full-Time Equivalent (FTE) Jobs Growth by Broad Sector, 2012-37 – Growth Scenario

	Halton	Knowsley	Liverpool	Sefton	St Helens	Wirral	West Lancs	FEMA
Agriculture and Mining	0	0	0	0	100	-100	0	-100
Manufacturing	-1,300	600	-1,400	-1,000	2,400	700	-1,300	-1,200
Utilities	0	-200	-300	0	0	-200	-300	-1,000
Construction	1,300	900	4,500	1,600	1,300	2,500	1,700	13,800
Wholesale and Retail Trade	300	400	8,400	-700	1,400	0	1,000	10,900
Transport, Warehouse and Postal	-600	1,000	800	300	6,900	-300	-300	7,800
Accommodation and Food Services	700	0	6,600	500	800	400	900	9,900
Media and IT	2,000	300	1,100	400	-300	400	100	4,100
Professional and Scientific Services	4,300	2,000	25,800	2,900	1,100	4,800	1,900	42,800
Business Support Services	3,800	2,600	9,800	1,300	-100	1,100	200	18,700
Public Administration and Defence	-200	-600	-4,100	-2,500	-600	-1,100	0	-9,000
Education	300	1,000	1,300	600	100	-1,500	200	2,000
Health	100	3,400	1,700	700	1,500	2,800	1,600	11,600
Creative and Recreation	300	300	1,200	400	600	600	200	3,800
Other	100	400	2,200	1,000	700	1,100	300	5,700
Total	11,200	11,900	57,600	5,700	15,800	11,500	6,000	119,700

Source: Oxford Economics

Future Economic Growth Potential – Key Points

- Baseline, trend-based economic forecasts expect the FEMA's economy to grow by 1.9% pa (GVA, 2012-37), with employment growth of 58,900 (0.3% pa). The strongest employment growth is in professional and scientific services, construction, health and business support; with employment in public administration and manufacturing falling.

- A Growth Scenario, taking account of planned investments and policy aspirations, is expected to see the economy grow by 2.5% pa (2012-37), with improvements in productivity and total employment growth of 134,100 jobs (0.7% pa). A range of sectors are expected to perform more strongly including professional and scientific services, construction and business support; as well as wholesale and retail trade, and manufacturing. In the Growth Scenario, the FEMA outperforms forecast GVA and employment growth at a regional and national level.

- The forecasts are principally based on analysis and trends which pre-dates the UK's decision to leave the European Union. In the short-term this could have a downwards impact on economic performance; however over the longer-term the impact is less clear and there is clearly increased uncertainty regarding longer-term economic performance.

7 TREND-BASED DEMOGRAPHIC PROJECTIONS

7.1 In this section consideration is given to demographic evidence of housing need and trend-based projections. Planning Practice Guidance sets out that *'household projections published by [CLG] should provide the starting point estimate of overall housing need'*[12]. The CLG projections are directly linked to ONS Sub-National Population Projections (SNPP). The PPG outlines that *'the household projections… are statistically robust and are based on nationally consistent assumptions'*[13].

7.2 However, the PPG also identifies [2a-014] that *'establishing future need for housing is not an exact science. No single approach will provide a definitive answer'* and in 2a-017 notes that *'plan makers may consider sensitivity testing, specific to their local circumstances.'* The PPG also notes that [2a-016] that *'where possible, local needs assessments should be informed by the latest available data'* such as ONS Mid-Year Population Estimates.

7.3 A Technical Advice Note prepared for the Planning Advisory Service (PAS)[14] provides additional guidance on sensitivity testing, and in particular advises that using a longer (10- to 15-year) past trend analysis should provide a more robust projection than the SNPP (which uses data from the previous 5-6 years). The PAS Technical Advice Note also highlights the issue of Unattributable Population Change (UPC) – UPC is an adjustment made by ONS for discrepancies between Census data and annual monitoring. The PAS Note sets out (para 6.35) that *'plan makers may take a view that the UPC, or part of it, should be included in the base period as past migration'*.

7.4 On the basis of the wording in both the PPG and the PAS Technical Advice Note a number of observations can be made which are relevant to the assessment of trend-based demographic projections:

- CLG household projections (which link to ONS population projections) are consistent and technically robust and should be used as the 'starting point' for assessing housing need;
- These projections can be sensitivity tested where there is evidence of other changes over time (e.g. short-term changes to migration patterns) or where UPC may be related to recorded migration levels; and
- Up-to-date information should be used where possible and this will include later releases of ONS mid-year population estimates (MYE).

7.5 Clearly in undertaking sensitivity analyses to demographic projections, demographic growth can go up as well as down. In particular it should be borne in mind that the latest (2014-based) official projections are based on trends over the previous 5-6 year period (2008/9 – 2014) which included an economic recession and sustained downturn in the housing market. One of the impacts of this

[12] ID: 2a-016-20150227
[13] ID: 2a-018-20140306
[14] PAS (July 2016) *Objectively Assessed Need and Housing Targets – Technical Advice Note*

has been stronger relative population growth in urban areas since 2008, with a reduced trend of out-migration from such locations (which is likely to be linked to factors such as mortgage finance constraints). This has meant that more suburban or rural local authorities have typically seen lower levels of population growth than previously.

7.6 In understanding what a reasonable projection is a number of factors can be considered. In particular, this would include overlaying past and projected population growth (to see if there is a correlation) and also to compare past and projected levels of migration. It is important to recognise that migration is likely however to change over time as the age structure of the population changes and with economic circumstances.

7.7 Overall, it is clear that developing the most reasonable and realistic projections for housing need is far from straightforward and will involve a degree of professional judgement. The need for judgment can clearly be seen in a recent High Court case in Kings Lynn (CO/914/2015) where it is noted that *'this is a statistical exercise involving a range of relevant data for which there is no one set methodology, but which will involve elements of judgment about trends and the interpretation and application of the empirical material available'*.

7.8 In the Liverpool City Region (LCR), the impact of students on population growth and housing need is also important. Overall, it would be fair to say that LCR is one of the more complex areas in demographic terms, with a range of issues needing to be considered when forming a view about housing need. The remainder of this section seeks to follow a logical process although the number of potential variables involved makes it difficult to be definitive.

7.9 Assessing housing need essentially contains two components. Firstly, there are population projections. ONS publishes population projections every two years (the subnational population projections (SNPP)) as well as providing an annual estimate of population change (by age and sex) – the mid-year population estimates (MYE). Secondly, population figures are converted into estimates of the number of households by CLG in their household projections (again issued every two years). The analysis which follows therefore initially concentrates on population data, before moving on to look at household growth.

7.10 A number of analyses to follow draw on data published by ONS in its components of population change series. This data is provided in more detail (and for each area) in Appendix B. This Appendix also contains the full range of outputs at a HMA and local authority level.

2014-based Subnational Population Projections (SNPP)

7.11 The latest SNPP were published by ONS on the 29th May 2016. They replaced the 2012-based projections. Subnational population projections provide estimates of the future population of local authorities, assuming a continuation of recent local trends in fertility, mortality and migration which are constrained to the assumptions made for the 2014-based national population projections. The new SNPP are largely based on trends in the 2009-14 period (2008-14 for international migration trends).

7.12 The 2014-based SNPP are not forecasts and do not attempt to predict the impact that future government or local policies, changing economic circumstances or other factors might have on demographic behaviour. Their primary purpose is to provide an estimate of the future size and age structure of the population of local authorities in England. These are used as a common framework for informing local-level policy and planning in a number of different fields as they are produced in a consistent way.

7.13 GL Hearn's interrogation of the SNPP concludes that these represent sound trend-based demographic projections from a technical perspective. However they are projections based on short-term trends (i.e. trends over the past 5-6 years) and therefore can be influenced by short-term changes to population growth and migration. In line with the PPG, there is however a strong justification for 'rebasing' the projections to take account of ONS Mid-Year Population Projections, as the PPG advises, given that there is actual data on population change between 2014 and 2015, and it is therefore not necessary to predict what happened.

CORE CONCLUSION 1: 2014-BASED SNPP

The 2014-based SNPP is a sound population projection in terms of the methodology employed by ONS. It is however limited by the fact that it is based on short-term trends. 2015 ONS Mid-Year Population Estimates have been released and it is therefore not necessary to project population growth 2014-15.

7.14 Two initial projections are therefore presented: firstly using the SNPP as published, and secondly by using the SNPP but rebasing the projections to use the 2015 Mid-Year Estimates. Post 2015, this latter projection uses the birth and death rates in the SNPP along with the actual levels of migration. For convenience, the two projections have been named as:

- 2014-based SNPP
- Rebased 2014-based SNPP

7.15 Tables 17 and 18 show projected population growth from 2012 to 2037 in the Liverpool City Region (together with West Lancs) and the two HMAs under these two initial scenarios. The data shows

that the population of the study area is projected to increase by about 131,600 people (7.2%) in the SNPP. When updated for MYE, this figure increases slightly (to 135,700, 7.4%), reflecting a higher level of population growth in the 2014-15 period than had been projected within the Liverpool HMA, within the Mid Mersey HMA the population growth for this period was slightly lower than projected.

Table 17: Projected population growth (2012-2037) – 2014-based SNPP

	Population 2012	Population 2037	Change in population	% change
Mid Mersey HMA	505,458	551,478	46,020	9.1%
Liverpool HMA	1,320,477	1,406,053	85,576	6.5%
Liverpool City Region (+WL)	1,825,935	1,957,531	131,596	7.2%

Source: Derived from ONS data

Table 18: Projected population growth (2012-2037) – Rebased 2014-based SNPP

	Population 2012	Population 2037	Change in population	% change
Mid Mersey	505,458	551,179	45,721	9.0%
Liverpool HMA	1,320,477	1,410,495	90,018	6.8%
Liverpool City Region (+ WL)	1,825,935	1,961,673	135,738	7.4%

Source: Derived from ONS data

Potential Recessionary Impacts

7.16 It is typical in assessments of this nature to consider if there have been any fundamental changes to the population pre- and post-recession (mid-2008 being taken as the cut off point for convenience with national data such as the SNPP and MYE). Since the recession, many urban areas have seen stronger population growth, mainly as a result of changing migration patterns from such areas to more suburban or rural locations. Against this context it is appropriate to consider and interrogate longer-term trends, and consider migration trends pre- and post-recession.

7.17 Tables 19 and 20 show net migration in the 2001-8 period and compares this with similar data for the 2008-15 period. Trends over a seven year period either side of the onset of recession is considered. The analysis shows some changes in migration since 2008. In the Mid-Mersey HMA, average net migration post-2008 is some 455 people per annum higher with the difference mainly being attributable to internal migration (i.e. migration from elsewhere within the UK). In the Liverpool HMA, the difference is more significant with net migration being some 3,100 people higher on average since 2008. The impact is particularly significant for Liverpool.

7.18 More detailed analysis for local authorities (see Appendix B) identifies that post-2008 net migration has been higher in all of the local authorities apart from West Lancashire. Liverpool has seen the most significant difference between pre- and post-2008 data (average net migration increasing by

over 1,800 per annum) although there are also notable differences in Wirral and Sefton (both increasing by about 600 people on average).

Table 19: Pre- and post-recession migration averages (per annum) – Mid-Mersey HMA

	Internal net	International net	Total net
2001-8	176	235	411
2008-15	502	363	865
Post 2008 change	326	128	455

Source: ONS

Table 20: Pre- and post-recession migration averages (per annum) – Liverpool HMA

	Internal net	International net	Total net
2001-8	-2,589	1,128	-1,461
2008-15	-1,447	3,088	1,641
Post 2008 change	1,142	1,959	3,102

Source: ONS

CORE CONCLUSION 2: RECESSIONARY IMPACTS

Given the difference between pre- and post-recession migration trends, it is reasonable to model alternatives to the SNPP which take account of longer-term migration trends.

7.19 To provide a sensitivity analysis, a longer-term migration trend scenario is modelled, which considers trends over the 14-year period to 2015 (i.e. 2001-15). A 14-year period is chosen because it is the longest time period for which reasonable quality information is available, as well as being a period where roughly half is before and half after the onset of recession. This is thus a relatively stable period for analysis.

7.20 Whilst a projection for 14-years has been used, an alternative has also been developed to consider migration trends over the past 10-years (2005-15). This is a fairly standard scenario projection within housing need research. For the two HMAs, the longer-term (14-year) projection may be more robust given the potential impact of the recession. However, the 10-year projection does have the advantage of post-dating a major demographic change experience in the Country (expansion of the European Union in 2004).

7.21 Tables 21 and 22 show projected population growth from 2012 to 2037 in the Liverpool City Region and the two HMAs under these two scenarios.

7.22 The data shows that the population across the two HMAs is projected to increase by about 116,036 people (6.4%) with 10-year migration trends. When using a longer (14-year) based period, this figure decreases (to 104,700 – 5.7%), reflecting a lower level of migration between 2001-5. Both of these figures are lower than either of the 2014- SNPP based scenarios.

Table 21: Projected population growth (2012-2037) – 10-year migration

	Population 2012	Population 2037	Change in population	% change
Mid Mersey	505,458	554,131	48,673	9.6%
Liverpool HMA	1,320,477	1,387,840	67,363	5.1%
Liverpool City Region	1,825,935	1,941,971	116,036	6.4%

Source: Derived from ONS data

Table 22: Projected population growth (2012-2037) – 14-year migration

	Population 2012	Population 2037	Change in population	% change
Mid Mersey	505,458	546,228	40,770	8.1%
Liverpool HMA	1,320,477	1,384,412	63,935	4.8%
Liverpool City Region	1,825,935	1,930,640	104,705	5.7%

Source: Derived from ONS data

Unattributable Population Change

7.23 As well as looking at migration, the analysis can consider the impact of Unattributable Population Change (UPC). UPC is an adjustment made by ONS to mid-year population estimates where Census data has suggested that population growth had either been over- or under-estimated in the inter-Census years. Because UPC links back to Census data, figures are only available in the 2001-11 period.

7.24 ONS notes that there are two main causes for UPC; the first is errors in the recording of population in the Census (either in 2001, 2011 or both) or errors in the recording of migration. This is important, if the errors are in relation to past migration then forward projections based on that data are likely to be inaccurate.

7.25 Table 23 sets out the total level of UPC in each area over the 2001-11 period. Across the whole LCR, UPC can be seen to be positive by a total of 23,000 people (2,300 per annum). This means that *if* the UPC were to entirely be due to errors in migration recording, then migration has on average been under-estimated by 2,300 people per annum – this is a fairly significant amount. The table also shows that Liverpool has by far the most significant level of UPC although the figure in Wirral is also high. Despite the large positive level of UPC across the City Region, it is notable that five of the eight authorities actually have a negative UPC.

Table 23: Unattributable Population Change (UPC) by local authority (2001-11)

	Total UPC (2001-11)	Per annum
Halton	5,691	569
Knowsley	-3,649	-365
Liverpool	20,598	2,060
Sefton	-2,106	-211
St.Helens	-4,035	-404
Warrington	-1,091	-109
West Lancashire	-1,780	-178
Wirral	9,386	939
Mid-Mersey	565	57
Liverpool HMA	22,449	2,245
LCR	23,014	2,301

Source: ONS

7.26 Overall, the levels of UPC are sufficiently large to merit further sensitivity projections to be carried out. However, as previously noted, it is not entirely clear what 'Unattributable Population Change' (UPC) is related to, with the main possibilities being a mis-recording of migration and/or errors in population counts within Census data.

7.27 In Liverpool (the main area for UPC) there is good evidence that the 2001 Census may have under-estimated the population, with an ONS Report in 2004 entitled *Local Authority Studies – Analysis of data and evidence for Liverpool* showing a potential discrepancy of about 15,000 people (see Table 7.1).[15] Whilst at the time ONS concluded that there was no evidence of an under-count, it does seem plausible that there was, given that the 2011 Census now seems to be indicating that some 20,000 people were subsequently 'missed' through the ONS annual monitoring of population dynamics.

7.28 For Liverpool it is reasonable to conclude based on ONS' own analysis that a significant component of the UPC is likely to relate to a census under-count in 2001. This will not therefore have impacted on the components of population change (and thus forward projections). For other authorities there is a lack of clear evidence on which to draw concrete conclusions.

7.29 Given the significance of UPC across the study area, two sensitivity projections have been developed. These look at 'correcting' migration for UPC in the years where UPC arises. The adjustments have been made to projections that look at trends over the past 10- and 14-years. Whilst these projections look at a full UPC adjustment, in drawing conclusions it is considered that

[15] http://www.ons.gov.uk/ons/guide-method/method-quality/specific/population-and-migration/pop-ests/local-authority-population-studies/local-authority-studies/liverpool.pdf

the range between adjusted (for UPC) and unadjusted projections should be used to inform a reasonable level of population and household growth when considering long-term migration trends.

7.30 It should be noted that the UPC adjustments have only been made to longer-term projections scenarios (e.g. no adjustments are proposed to the SNPP which typically looks at short-term trends). This is because ONS has improved its methodology for recording migration, which means that data during the later period of the 2001-11 decade is likely to be of a better quality. It is the data over these latter years which has fed into the latest official (2014-based) SNPP and hence any adjustments to these are less likely to be justified.

CORE CONCLUSION 3: UNATTRIBUTABLE POPULATION CHANGE (UPC)

Given the difference in the significance of UPC in the City Region, it is reasonable to model alternative long-term scenarios to take account of this. However, any UPC adjustment should a) be treated with caution, b) only be applied to longer-term trend based projections and c) outputs should be considered alongside equivalent unadjusted projections in the form of a range.

7.31 To therefore appraise the potential impact of UPC, two additional projections have been developed; these are based on looking at migration trends over the past 10- and 14- years, but with an additional adjustment for UPC in the years and locations in which it arises. These projections have been named as:

- 10-year migration (+UPC)
- 14-year migration (+UPC)

7.32 Tables 24 and 25 show projected population growth from 2012 to 2037 in the Liverpool City Region and the two HMAs under these two scenarios.

7.33 The data shows that the population of LCR is projected to increase by about 150,800-152,200 people (8.3%). This percentage increase is above that shown in the SNPP and also with longer-term trends and without a UPC adjustment.

Table 24: Projected population growth (2012-2037) – 10-year migration (+UPC)

	Population 2012	Population 2037	Change in population	% change
Mid Mersey	505,458	554,503	49,045	9.7%
Liverpool HMA	1,320,477	1,423,658	103,181	7.8%
Liverpool City Region	1,825,935	1,978,162	152,227	8.3%

Source: Derived from ONS data

Table 25: Projected population growth (2012-2037) – 14-year migration (+UPC)

	Population 2012	Population 2037	Change in population	% change
Mid Mersey	505,458	547,082	41,624	8.2%
Liverpool HMA	1,320,477	1,429,651	109,174	8.3%
Liverpool City Region	1,825,935	1,976,733	150,798	8.3%

Source: Derived from ONS data

7.34 As noted previously, given the uncertainties about UPC, it is better to express any needs as a range of outputs from no UPC adjustment to a 100% UPC allowance. Alternatively, and for the purposes of comparison a midpoint between these figures can be considered. The midpoint of the two 10-year based projections is population growth of 7.3% (across the LCR), whilst the 14-year projections show a figure of 7.0%. These compare with figures in the SNPP 7.2%-7.4% depending on whether or not the MYE is included.

7.35 **On balance, the various projections all point towards a similar level of population growth across the City Region (something in the range of 7.0%-7.4%). However, the projections do all have a different spatial distribution.** This point is considered in more detail later in this section.

Household Formation Rates

7.36 Having studied the population size and the age/sex profile of the population the next step in the process is to convert this information into estimates of the number of households in the area. To do this the concept of headship rates is used. Headship rates can be described in their most simple terms as the number of people who are counted as heads of households (or in this case the more widely used Household Reference Person (HRP)).

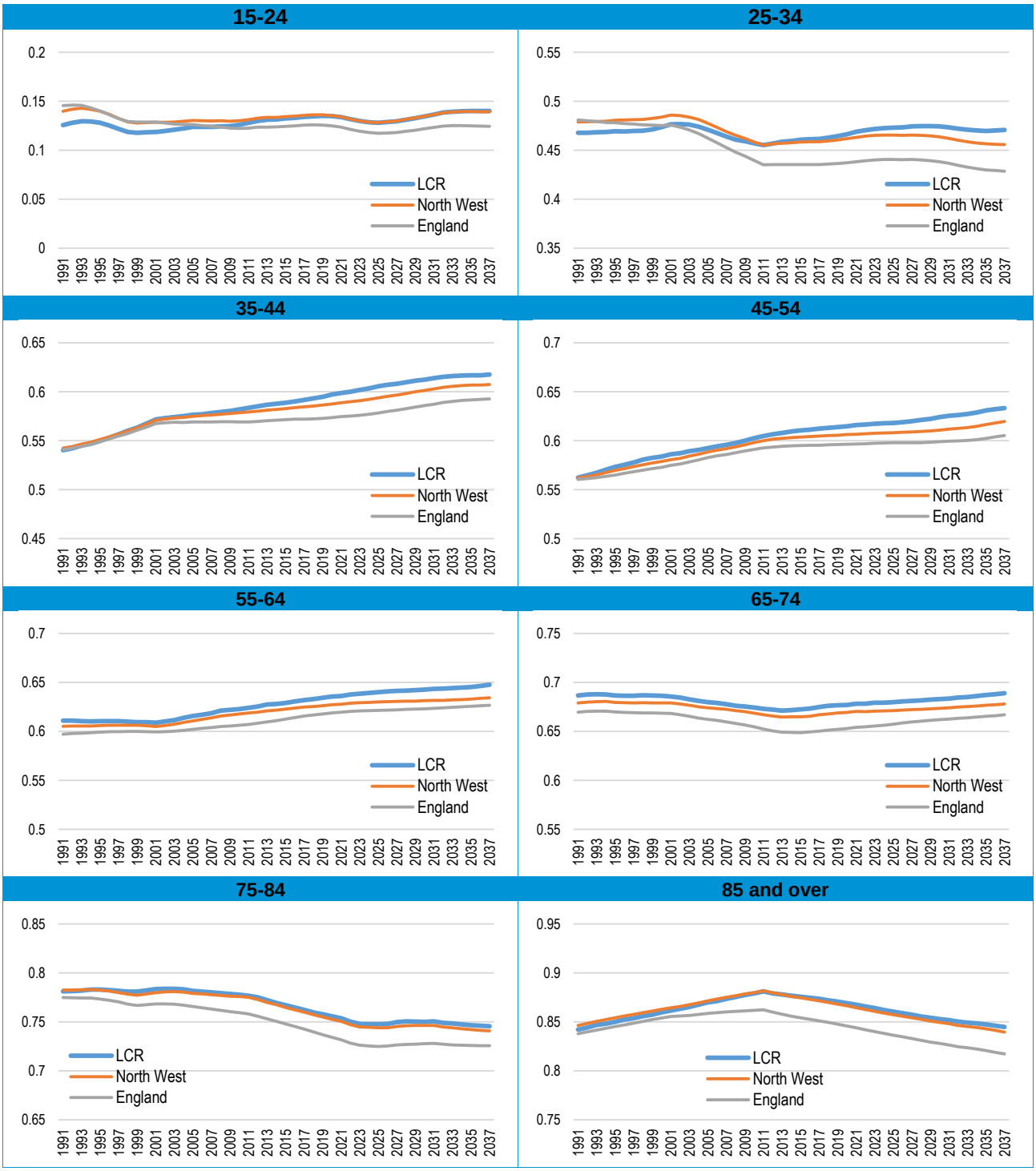
7.37 On the 12th July 2016, CLG published a new set of (2014-based) household projections – the projections contain two core analyses. The Stage 1 household projections project household formation based on data from the 1971, 1981, 1991, 2001 and 2011 Censuses with outputs for age, sex and marital status. The Stage 2 household projections consider household types and the methodology report accompanying the projections is clear that these projections are based on just two data points – from the 2001 and 2011 Census. Overall outputs on total household growth are constrained to the totals from the Stage 1 Projections. This means that both sets of projections show the same level of overall household growth (when set against the last set of SNPP) but some of the age specific assumptions differ. Differences can however occur between the Stage 1 and 2 headship rates when modelled against different population projections (due to differences in the age structure).

7.38 Overall, it is considered that the Stage 1 projections should be favoured over the Stage 2 figures for the purposes of considering overall household growth; this is for two key reasons: a) the Stage 1 figures are based on a long-term time series (dating back to 1971 and using 5 Census data points) whereas the Stage 2 figures only look at two data points (2001 and 2011) and b) the Stage 2 figures are constrained back to Stage 1 values, essentially meaning that it is the Stage 1 figures that drive overall estimates of household growth in the CLG household projections themselves. The analysis to follow therefore focuses on Stage 1 figures.

7.39 Figure 45 shows how Stage 1 figures differ for different age groups. The graphs show the proportion of persons in each age cohort who are the head of a household and how this proportion has changed over time since 1991. Similar graphs for each local authority are included in Appendix B.

7.40 It is evident from the analysis that household formation amongst households in their late 20s and early 30s fell slightly over the 2001-11 decade. The projections however anticipate that household formation rates for this age group will increase moving forwards. The 2014-based household projections also expect household formation rates amongst older age groups to fall over time. Given improving life expectancy this 'trend' looks to be reasonable (as it would be expected that more people would remain living as couples).

Figure 45: Projected household formation rates by age of head of household – Liverpool City Region



Source: Derived from CLG data

Critical Review of 2014-based Headship Rates

7.41 The headship rates in the 2014-based CLG household projections should not be used uncritically. Paragraph 2a-015 of the PPG is clear that the *'household projection-based estimate of housing need may require adjustment to reflect factors affecting local demography and household formation rates which are not captured in past trends'*.

7.42 There are a number of issues to consider here. Firstly it is important to understand that the official projections are trend-based. It is important to interrogate whether there is evidence that household formation rates have been supressed. However in doing so it should be borne in mind that there are a range of factors – including societal changes – which have influenced household formation; and that in parts of the City Region there has been evidence of low demand for housing and market failure historically (which is likely to have influenced household formation trends).

7.43 It is not straightforward to precisely determine if the projections contain any level of suppression (either in the past or projected forward) given that household formation rates can be influenced by a range of factors. Research by the late Alan Holmans for the Town and Country Planning Association (TCPA) identified that nationally:

'The working assumption in this study is that a considerable part but not all of the 375,000 shortfall of households relative to trend was due to the state of the economy and the housing market. 200,000 is attributed to over-projection of households due to the much larger proportion of recent immigrants in the population, whose household formation rates are lower than for the population as a whole. This effect will not be reversed. The other 175,000 is attributed to the economy and the state of the housing market and is assumed to gradually reverse'.[16]

7.44 Alan Holmans concluded that broadly half of changes to household formation are due to market factors and about half due to international migration. Whilst the international migration impact is not expected to change, any suppression as a result of the economy and housing market could improve in the future.

7.45 More recent research by Ludi Simpson and Neil McDonald, and by Neil McDonald and Christine Whitehead has considered these issues further. These research studies conclude that there is no general basis for making adjustments to the household formation rates in 2012-based CLG Household Projections.

7.46 For example, *New estimates of housing requirements in England, 2012 to 2037* (Neil McDonald and Christine Whitehead – TCPA – November 2015) states that:

'The 2012-based projections, which use the 2011 Census and up-to-date population figures, are more immediately relevant and more strongly based than earlier estimates. The latest projections

[16] Holmans, A. (2013) *New estimates of housing demand and need in England, 2011 to 2031, TCPA.*

can therefore be taken as a reasonable indication of what is likely to happen to household formation rates if recent trends continue. This is because, although economic growth might be expected to increase the household formation rate, there are both longer-term structural changes and other factors still in the pipeline (such as welfare reforms) that could offset any such increase'[17]

7.47 Whilst this 2015 research refers to the 2012-based projections, the household formation rates in the 2014-based figures are almost identical. On the basis of the evidence available, it seems unlikely that the 2014-based household formation rates include any degree of suppression and can therefore realistically be used to assess levels of household growth when set against population projections.

7.48 Set against this general conclusion, it is however relevant to consider the local evidence and headship rates. When looking specifically at data for Liverpool City Region, it is clear that the only age group where household formation fell between 2001-11 was for people aged 25-34. However moving forward from 2011, the rate remains fairly flat. However, it is not clear if the changes in the rates are due to market factors or due to the change in ethnic structure reflective of international migration.

7.49 At a local level it is difficult to use international migration figures because of the way such migration works: typically most international migrants start in a major city (e.g. Liverpool) and then filter out into other areas (and hence are registered by ONS as an internal migrant). Hence one way to consider the change in ethnic structure of the population is to consider changes to the Black and Minority Ethnic (BME) population.

7.50 Table 26 shows changes to the BME population in each of the age groups for which headship rate data is provided above. This analysis shows an increase in the BME population of 46,200 people aged 15 and over in the 10-year period – a 99% increase. Some 36% of this increase was in the age group 25-34. Table 27 shows the same information for the White (British/Irish) population. This shows a lower change in population and a significant decline in the number of people aged 25-34 (and 35-44).

[17] *McDonald, N. and Whitehead, C. (2015)* New estimates of housing requirements in England, 2012 to 2037, TCPA.

Table 26: Changes to Black and Minority Ethnic Population by age (2001-11) – Liverpool City Region

	BME population 2001	BME population 2011	Change	% of change
15-24	11,354	22,139	10,785	23.4%
25-34	10,724	27,302	16,578	35.9%
35-44	9,167	18,724	9,557	20.7%
45-54	6,616	11,653	5,037	10.9%
55-64	4,016	6,736	2,720	5.9%
65-74	2,919	3,702	783	1.7%
75-84	1,586	2,044	458	1.0%
85+	391	650	259	0.6%
TOTAL	46,773	92,950	46,177	100.0%

Source: Census (2001 and 2011)

Table 27: Changes to White (British/Irish) Population by age (2001-11) – Liverpool City Region

	White (B/I) population 2001	White (B/I) population 2011	Change	% of change
15-24	214,178	230,629	16,451	52.7%
25-34	220,678	197,764	-22,914	-73.4%
35-44	255,497	222,021	-33,476	-107.3%
45-54	230,856	249,733	18,877	60.5%
55-64	185,850	217,338	31,488	100.9%
65-74	156,202	160,305	4,103	13.1%
75-84	95,052	105,870	10,818	34.7%
85+	30,998	36,856	5,858	18.8%
TOTAL	1,389,311	1,420,516	31,205	100.0%

Source: Census (2001 and 2011)

7.51 From this it is clear that a major part of the changes in the headship rates of the 25-34 age group is likely to be due to international migration and growth in BME communities. Given that moving forward from 2011 the projections are expecting headship rates in this age group to stabilise; there is no suggestion of any 'suppression' being built into the projections.

7.52 What is also notable is that the household formation rates of those aged 25-34 are notably above that seen nationally; and are more positive than projections shown for the North West.

7.53 It is also useful to consider the 35-44 age group (noting that, for example, people aged 25-34 in 2011 with be aged 35-44 by 2021). The 35-44 age group shows little change in headship rates in the past and continuing in the future: indeed trends are slightly upwards in the future. There is no evidence of suppression in this age group either in the past or projected forward when looking at trends across the city region.

7.54 GL Hearn has sought to analyse and consider the age-specific headship rates on an authority by authority basis. Graphs showing the projected household formation rates for each local authority are included in Appendix B. The projections show a continued worsening of the formation rates

amongst those aged 25-34 and 35-44 in Halton and West Lancashire over the period to 2037, suggesting an adjustment for this cohort is justified in these authorities. The headship rates in these authorities have therefore been adjusted based on tracking regional trends (by 5-year age group and sex). The adjustments have been applied post-2014.

CORE CONCLUSION 4: HEADSHIP RATES

This section has provided a detailed interrogation of household formation rates. For Halton and West Lancashire there is local evidence that more positive household formation amongst those aged 25-34 and 35-44 would be a reasonable planning assumption.

Housing Need

7.55 The tables below bring together outputs in terms of household growth and housing need using the headship rates discussed above and the full range of demographic scenarios developed. To convert households into dwellings the data includes an uplift to take account of vacant / second homes. This has been based on 2015 Council Tax data, with different rates being applied in each local authority. The vacancy allowance is applied as an uplift to estimated household growth[18]. The figures used are:

- Halton – 1.6%
- Knowsley – 2.1%
- Liverpool – 2.9%
- Sefton – 3.6%
- St. Helens – 3.1%
- Warrington – 2.3%
- West Lancashire – 2.5%
- Wirral – 3.0%

7.56 The analysis shows an overall housing need for 4,735 dwellings per annum when using the 2014-based SNPP as the underlying population projection, with a figure of 4,811 if MYE data for 2015 is included.

7.57 With long-term (10-year) migration assumptions the housing need is shown to be for some 4,416 dwellings per annum (dpa), this figure decreases slightly (to 4,240) when the trend reference period is extended to 14-years. With a UPC adjustment, the level of need increases to around 5,075 dwellings per annum. The midpoint of the two 10-year projections is for 4,745 dwellings per annum, with the equivalent figure linked to 14-year trends being 4,658 dpa.

[18] The uplift applied is a result of the relationship of dwellings/ households, rather than the % of total stock which is vacant.

Table 28: Projected housing need – range of demographic based scenarios and 2014-based headship rates – LCR (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
2014-based SNPP	791,597	906,784	115,187	4,607	4,735
2014-based SNPP (+MYE)	791,597	908,614	117,017	4,681	4,811
10-year migration	791,597	899,047	107,449	4,298	4,416
14-year migration	791,597	894,767	103,169	4,127	4,240
10-year migration (+UPC)	791,597	915,070	123,473	4,939	5,074
14-year migration (+UPC)	791,597	915,084	123,487	4,939	5,075

Source: Demographic projections

Local Authority Outputs

7.58 Table 29 brings together summarised figures for each local authority – the table shows annual housing need under each of the six scenarios and shows the headship rate assumptions for Halton and West Lancashire (over the 25-year period from 2012).

Table 29: Projected housing need – range of demographic based scenarios – by local authority (all figures per annum)

		2014-based SNPP	2014-based SNPP (+MYE)	10-year migration	14-year migration	10-year migration (+UPC)	14-year migration (+UPC)
Halton	2014-headship	234	235	237	221	386	394
	Adjusted headship	254	254	257	241	408	416
Knowsley	2014-headship	266	280	321	300	211	180
Liverpool	2014-headship	1,680	1,739	1,338	1,429	1,955	2,184
Sefton	2014-headship	534	540	509	442	458	375
St. Helens	2014-headship	415	416	390	368	281	245
Warrington	2014-headship	765	762	834	745	802	711
West Lancashire	2014-headship	169	175	196	220	145	168
	Adjusted headship	193	200	221	246	170	193
Wirral	2014-headship	673	664	592	515	836	819
Mid-Mersey HMA	Adjusted headship	1,434	1,432	1,480	1,354	1,490	1,372
Liverpool HMA	Adjusted headship	3,346	3,423	2,981	2,932	3,630	3,751
Total	Adjusted headship	4,780	4,855	4,462	4,286	5,121	5,123

Source: Demographic projections

7.59 To avoid double counting, a consistent demographic projection needs to be used for the purposes of drawing conclusions on the demographic need. The starting point is the 2014-based Household Projections. Updating these to take account of the latest Mid-Year Population Estimates, as the PPG advises, results in a need for 4,855 dpa (1,432 dpa in the Mid Mersey HMA; and 3,423 dpa in the Liverpool HMA).

7.60 A 10 year migration scenario results in a need for between 4,462 – 5,121 dpa, with a need for between 4,286 – 5,123 dpa shown based on 14-year migration trends. The SNPP sits centrally within this range and thus appears to be a reasonable trend-based projection.

7.61 For the Mid Mersey HMA, the SNPP sits between the range shown based on 10 year migration trends (1480 – 1490 dpa) and 14 year trends (1354 – 1372 dpa). For the Liverpool HMA it similarly sits within the range shown by 10 year trends (2,981 – 3,630 dpa) and 14 year trends (2,932 – 3,751).

7.62 GL Hearn therefore conclude that the 2014 SNPP, adjusted for the Mid-Year Population Estimates, provides an appropriate based conclusions on the demographic-based need. It should be noted that in subsequent sections adjustments are made to support employment growth in both HMAs, and therefore the selection of the appropriate demographic projections has a limited impact on the overall conclusions on objectively assessed housing need.

Impact of Students on Population Growth and Housing Need

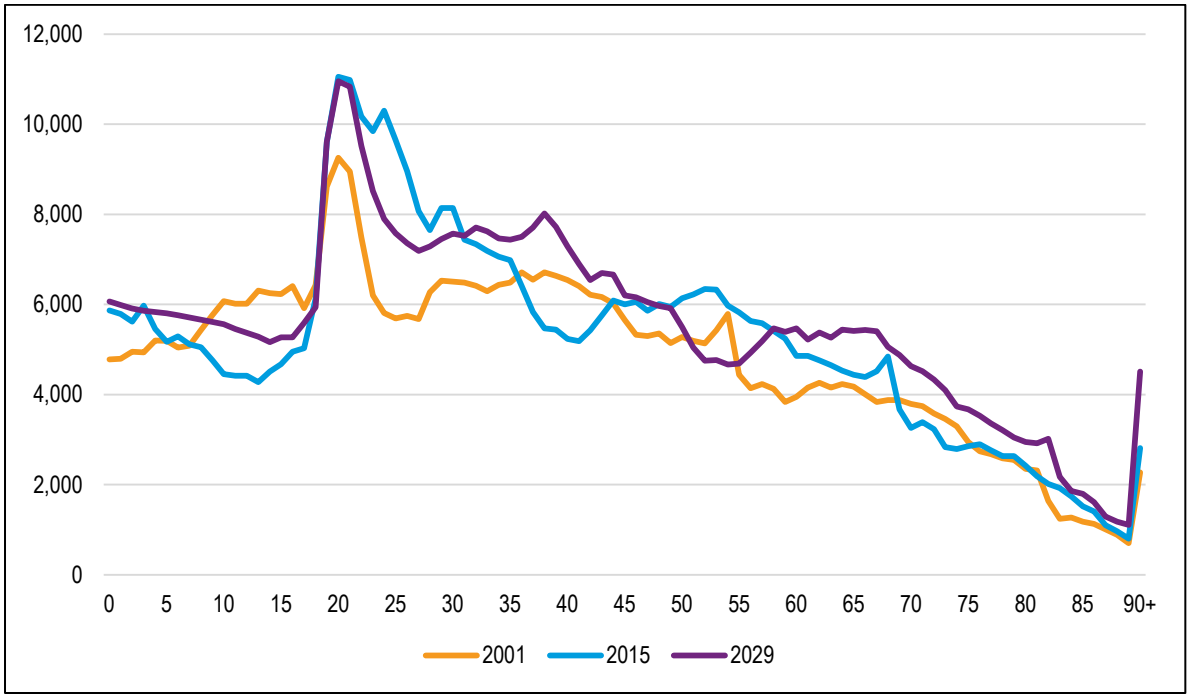
7.63 One question that often arises in areas with a notable student population is about the extent to which student dynamics are driving population growth and hence housing need. This is not a simple question to answer – whilst population projections do include students, they are not separately identified from the general population.

7.64 Whilst all areas have some students, the vast majority are based in Liverpool, with a smaller number in West Lancashire in particular. Hence the analysis to follow focusses on the City.

7.65 One way to look at the issue of students is to consider the age structure. The figure below shows the age structure in Liverpool in 2001, 2015 and 2029 (this latter date has been selected so that there is an equal gap (of 14-years) in the dates used in analysis). Projected information for 2029 has been taken from the 2014-based SNPP as published with data for 2001 and 2015 being taken from mid-year population estimates.

7.66 The figure clearly shows an increase in the number of people of student age in the 2001-15 period – with a peak at about age 20. Moving through to 2029, this peak is not projected to get any higher and indeed there are projected to be some population losses in other age groups moving through people in their 20s. Whilst this analysis is not conclusive, it would indicate that student growth (which has been seen in the past) is not projected to continue in the future. The projections are therefore not unduly influenced by student trends.

Figure 46: Liverpool City Age Structure (2001, 2015 and 2029)



Source: ONS

7.67 A second way to look at this issue is to consider household types of younger households. From the 2014-based CLG household projections it is possible to consider households where the household reference person is aged 15-24 (which would broadly correlate with the main student age groups). Table 30 shows the estimated number of households in 2012 and 2037 in each of the household types used by CLG.

7.68 This shows that the number of households aged 15-24 is projected to increase slightly over the projection period. The key group in terms of students are the 'other' households, which will include multiple unrelated adults living together. This category (which is by no means restricted to students) is projected to increase by some 537 households over the 25-years – this is about 21 per annum. Again, this analysis does not suggest that students are having a significant impact on the household projections.

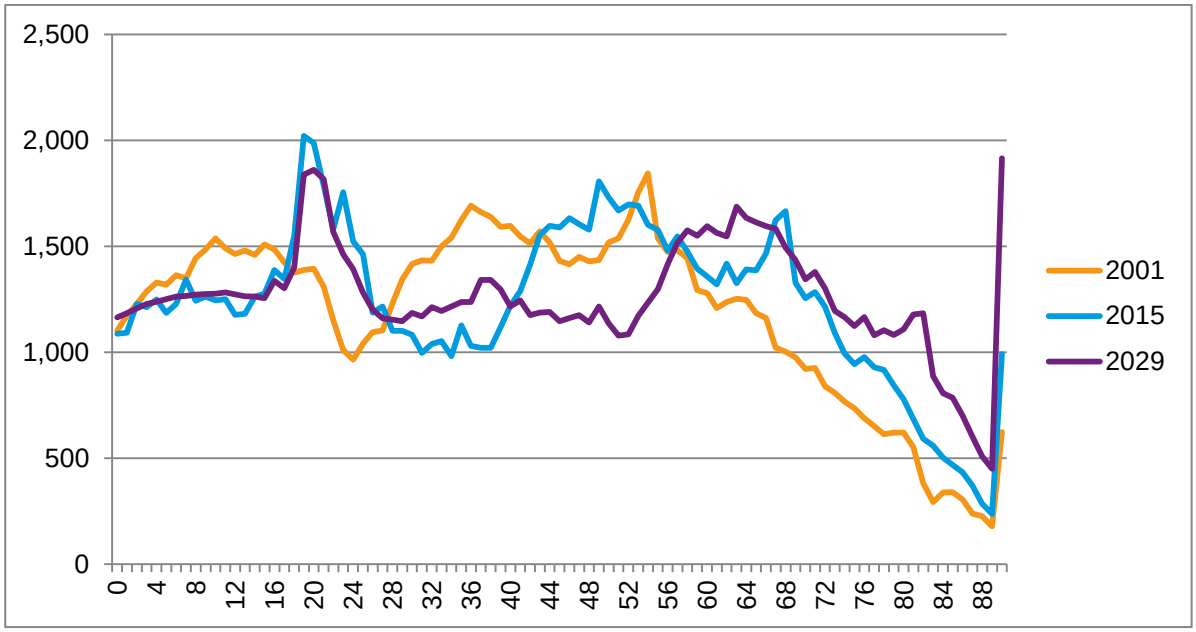
Table 30: Changes to household types – households aged 15-24 – Liverpool

Household types	2012	2037	Change	% change
One person households: Male	2,927	4,721	1,794	61.3%
One person households: Female	2,372	2,916	544	22.9%
One family and no others: Couple: No dependent children	966	657	-309	-32.0%
A couple and one or more other adults: No dependent children	191	63	-128	-67.0%
Households with one dependent child	1,818	948	-870	-47.9%
Households with two dependent children	496	187	-309	-62.3%
Households with three dependent children	105	65	-40	-38.1%
Other households	4,039	4,576	537	13.3%
Total	12,915	14,132	1,217	9.4%

Source: CLG 2014-based household projections

7.69 A similar analysis for West Lancashire highlights that between 2001 and 2015 the population aged 18-24 increased by 12,200 persons (42%), influenced by strong growth in the student population at Edge Hill University. The ONS 2014-based demographic projections do not assume further growth, indeed they assume a 7% fall in the population in these age groups through to 2029.

Figure 47: West Lancashire Age Structure (2001, 2015 and 2029)



Source: ONS

7.70 Analysis of the number of households aged 15-24 in the 2014-based CLG Household Projections shows some growth in 'other' households, of around 15 per year; as well as some growth in couples with one or more other adults.

Table 31: Changes to household types – households aged 15-34 – West Lancashire

	2012	2037	Change	% Change
One person households: Male	187	186	-1	-0.5%
One person households: Female	109	31	-78	-71.6%
One family and no others: Couple: No dependent children	176	203	27	15.3%
A couple and one or more other adults: No dependent children	56	102	46	82.1%
Households with one dependent child	362	304	-58	-16.0%
Households with two dependent children	129	125	-4	-3.1%
Households with three dependent children	34	77	43	126.5%
Other households	442	815	373	84.4%
Total	1496	1843	347	23.2%

Source: CLG 2014-based household projections

7.71 It should be borne in mind that the demographic projections (consistent to CLG's methodology) hold the institutional population aged under 75 constant in the forward projections. This means that the inherent assumption within the modelling is that the population living in student halls of residence remains constant. This issue and student housing needs are considered further in Section 10, later in this report.

CORE CONCLUSION 5: STUDENTS

Liverpool City has a notable student population that could potentially impact on the population and household projections. However, the demographic projections contain limited additional growth from students (and student households) – both in Liverpool and West Lancashire - and so this cohort of the population is not unduly influencing local projection data.

8 HOUSING AND ECONOMIC GROWTH

8.1 In this section consideration is given to economic growth and how this may influence the level and distribution of housing need within the two housing market areas.

8.2 The SHELMA uses the economics forecast scenarios prepared by Oxford Economics, specifically:

- Baseline Scenario – a trend-based scenario which assumes that historical relationships between performance locally and at a regional/ national level hold true moving forwards; and
- Growth Scenario – a more aspirational scenario which models the impacts of faster growth across key growth sectors across the Liverpool City Region combined with development/ regeneration projects and proposals in individual authorities.

8.3 The relationship between economic growth and housing need is complex, influenced by a number of factors including:

- The inter-relationship between jobs and people, recognising that some people hold down more than one job;
- Levels of economic participation, with employment rates a function of a number of factors including the availability of jobs and skills;
- Commuting patterns and ratios, which can influence the balance between residents in employment and jobs in an area. These are influenced by transport connections, investment, the availability of employment opportunities and earnings levels.

8.4 The complexity of these factors, coupled with the inevitable uncertainties associated with predicting long-term economic performance, makes accurate modelling of the numbers of homes needed to support future economic growth inherently difficult to accurately predict. However Planning Practice Guidance requires consideration of the relationship between jobs growth and housing need.

8.5 The starting point for considering what housing provision may be required to support economic growth is the expected growth in employment. Table 32 shows the total jobs growth envisaged in the Baseline and Growth Scenarios.

Table 32: Total Employment Growth – 2012-37

	Baseline Scenario	Growth Scenario	Differential
Halton	3,800	12,400	8,600
St Helens	3,200	17,100	13,900
Warrington	27,900	28,800	900
Mid Mersey HMA	**34,900**	**58,300**	**23,400**
Knowsley	9,000	12,300	3,300
Liverpool	28,700	67,600	38,900
Sefton	2,500	6,500	4,000
West Lancashire	6,000	6,800	800
Wirral	5,800	11,400	5,600
Liverpool HMA	**52,000**	**104,600**	**52,600**

Source: Oxford Economics

The basis of the forecasts and Strategic B8 allocations

8.6 The economic-led housing need is based on the labour demand scenarios (Baseline and Growth Scenarios). It is a demand-based model which taken account of sectoral structure and past performance in the Baseline Scenario; and in the case of the Growth Scenario, planned and potential development/ regeneration projects and enhanced performance of LEP target sectors. This means that there are elements of the Growth Scenario which are influenced by policy-based factors.

8.7 The Growth Scenario takes into account existing available land/ sites for strategic B8 development, as well as proposals such as the Parkside Strategic Rail Freight Interchange and other preferred option sites in the case of St Helens district. However GL Hearn has not sought to prejudge future decisions regarding the allocation of further land and where this spatially is located. Given the sub-regional/ regional nature of demand in this sector, and the degree to which growth will be to some degree 'supply-led' at a local authority level (with employment growth taking place in authorities which allocate land at commercially attractive locations). These factors may in the future affect the spatial distribution of growth within the FEMA in sectors such as land transport, warehousing and postal, wholesale etc.

8.8 For the purposes of the SHELMA, it is however necessary to draw conclusions on objectively-assessed housing need at this point. This has therefore been driven by existing concentrations and past growth by sector, together with the understanding of current major sites with development potential, and proposed/ potential sites within St Helens Borough.

8.9 GL Hearn considers that the Oxford Economics Growth Scenario captures the overall scale of demand which is expected to arise from enhanced demand for large-scale B8 warehouse development. Section 12 sets out the methodology for calculating the additional 'Strategic B8' floorspace need across the LCR. This comprises two components – a replacement build of 952,000 sq m, and a growth build of 638,000 sq m. The "growth build" element will result in around 8,000 additional permanent FTE jobs across the LCR by 2037 (based on a typical density of 80 sq.m per FTE job). Through replacement build it is reasonable to expect some productivity improvements and increased efficiencies which may influence job counts.

8.10 The Baseline Scenario shows a loss of 1,500 FTE jobs in the Transport, Warehouse and Postal sector across the LCR by 2037[19], while the Growth Scenario shows a growth of 7,750 FTE jobs. This means the Growth Scenario forecasts an additional 9,250 FTE jobs above the baseline in this sector.

[19] Note this will include some activities beyond those taking place in larger warehousing units

8.11 The Growth Scenario forecast includes a sufficient level of jobs growth, at LCR level, to support the number of jobs expected to arise from the 'Strategic B8' growth. Furthermore, the Growth Scenario forecasts a significant growth in Transport, Warehouse and Postal jobs will be in St Helens taking account of potential future allocations. This aligns with the site supply analysis, which shows that St Helens has the largest quantum of suitable land for 'Strategic B8' development.

8.12 Once policy decisions have been made regarding the distribution of further allocations for strategic B8 development, it may be necessary to further consider or review the distribution of housing need. This is considered further in Section 12.

Calculating the Housing Need to Support Economic Growth

8.13 The Oxford Economics model forecasts people-based employment by comparing the difference between their modelled employment estimates for 2011 with information from the 2011 Census on the number of people working in an area. A detailed interrogation of this data however reveals that their modelling assumptions show a variance between people-based and workplace-based employment. This variance ranges from 10% below the level of jobs in Warrington, to 3% above the level of jobs in Wirral. Against this context, GL Hearn consider that an alternative source should also be used to relate jobs to people; and we have instead sought to measure 'double jobbing' – the proportion of people with more than one job – using data from the Annual Population Survey. We have averaged data over the 2004-16 period to take account of the higher error margin associated with individual years' data at local authority level. The table below sets out the assumed levels of double jobbing.

Table 33: Double Jobbing

	% Double Jobbing
Halton	2.5%
St Helens	2.7%
Warrington	3.1%
Knowsley	2.2%
Liverpool	2.7%
Sefton	3.3%
West Lancashire	3.4%
Wirral	3.2%

8.14 The growth in labour supply which is necessary to support employment growth is also influenced by commuting patterns. The SHELMA analysis points to notable commuting interactions between local authorities across the City Region. There is clear potential over the 25 year period for commuting patterns between authorities to change, influenced by transport investment; and locations of housing and employment growth. Indeed the longer-term trend is of increasing commuting distances.

8.15 It should be noted that the Oxford Economics model includes assumptions on changes in commuting dynamics, influenced by trends and what the model expects the balance between labour demand and supply to be in different areas. The reality is that it may be entirely reasonable to expect an area which sees stronger growth in labour supply (than labour demand) to see an increase in net out-commuting (and visa-versa). Moreover major employment centres typically draw in labour from surrounding areas.

8.16 Changes in commuting dynamics however have potential cross-boundary implications (in that if one authority assumes that net out-commuting falls, this would impact on other authorities). Therefore, the standard modelling approach in technical assessments such as this is to assume that the 'commuting ratio' is held constant. This is to ensure the assessment is undertaken on a policy-off basis. This means that the balance between the number of people living and working in an area remains constant. Table 34 shows the current commuting ratio, based on 2011 Census data.

Table 34: Commuting Ratios

	Work in area	Live in area	Commuting ratio
Halton	57,638	57,771	1.00
Knowsley	57,469	61,932	1.08
Liverpool	236,934	197,457	0.83
Sefton	103,528	122,709	1.19
St Helens	65,252	78,862	1.21
Warrington	115,466	101,235	0.88
West Lancashire	49,881	52,045	1.04
Wirral	112,947	140,681	1.25

Source: 2011 Census

8.17 Applying the double jobbing and commuting ratios to the forecast employment growth (shown in Table 32) results in the following expected changes in the resident workforce over the 2012-37 period:

Table 35: Expected Changes in Resident Workforce, 2014-37

	Baseline		Growth Scenario	
	Additional jobs 2014-37	Change in resident workforce	Additional jobs 2014-37	Change in resident workforce
Halton	4,608	4,502	13,273	12,970
Knowsley	3,149	3,317	6,498	6,846
Liverpool	23,231	18,842	62,106	50,373
Sefton	-1,349	-1,545	2,655	3,041
St Helens	4,630	5,443	18,546	21,803
Warrington	21,687	18,418	22,747	19,318
West Lancashire	3,274	3,302	4,076	4,111
Wirral	2,430	2,930	8,073	9,735
Mid-Mersey HMA	30,925	28,363	54,566	54,091
Liverpool HMA	30,734	26,846	83,407	74,105
Total	61,659	55,209	137,974	128,196

8.18 Next it is necessary to consider expected changes in the employment rate and economic participation.

Economic Participation Assumptions for the Baseline Scenario

8.19 The Baseline forecast assumes 'business as usual' and thus it is reasonable to expect limited changes in economic participation in this scenario; which sees relatively modest employment growth relative to regional/ national trends. We have therefore modelled changes to employment rates which take account of the expected impact of increasing state pension ages over the forecast period along with some modest changes in other age groups. The detailed modelling assumptions are set out in Appendix C.

8.20 These show small changes to the economically active population aged up to about 55 (including reductions in activity rates for people aged 16-24 – partly linked to compulsory education to age 18). Older age groups are modelled to see more notable increases in activity, which is linked to pensionable age changes as well as a general trend for people to work longer (linked to improving health and a general reduction in people's pension availability). The rates of change for economic activity are based on data provided by Experian at a national level, which has been modelled locally based on activity rate data shown in the 2011 Census.

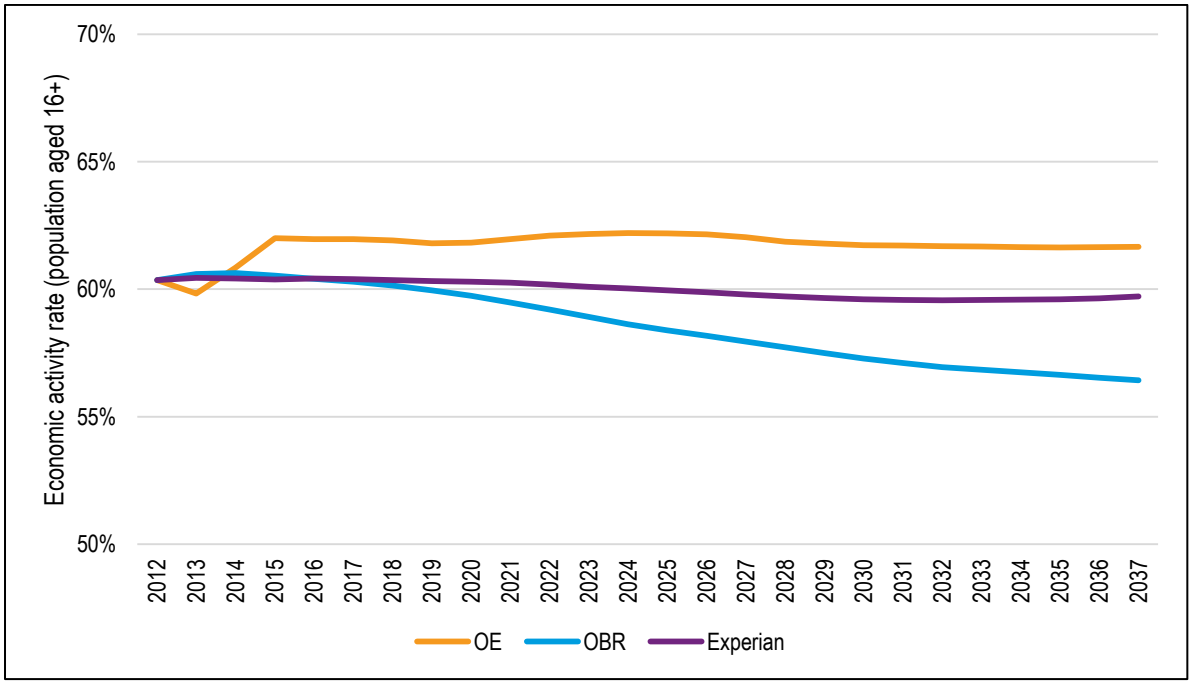
8.21 It is considered that the activity rate changes forecast by Experian are fairly realistic when set against other factors (such as projected population growth and job forecasts at a national level). Additional charts in the Appendix show a comparison of the assumed activity rates in LCR with alternatives from Oxford Economics (OE) and the Office for Budget Responsibility (OBR). It can be

seen that the modelled rates typically sit somewhere in between these alternatives, reinforcing them as realistic in a local context.

8.22 Figure 48 shows a comparison of the activity rate modelled herein based on our (Experian linked) assumptions, to those from OE and also OBR. It should be noted that the OE figures are based on an employment rate that has been rebased (in 2012) to be consistent with estimated economic activity rates for the same period. The general trend will therefore hold true and a reasonable comparison can be made.

8.23 Overall, the economic activity rates assumed in the Baseline Scenario show a very slight decline from 2012 to 2037 – this is due to demographic change and an increasing proportion of older people in the population. Whilst, the activity rates of older people are forecast to increase; it remains the case that these will remain below those seen in other (younger) age groups.

Figure 48: Changes to Economic Activity Rates (Population Aged 16+) – Liverpool City Region (2012-37) – Baseline Scenario



Source: Oxford Economics, OBR and Experian (rebased using 2011 Census data)

Economic Participation Assumptions in the Growth Scenario

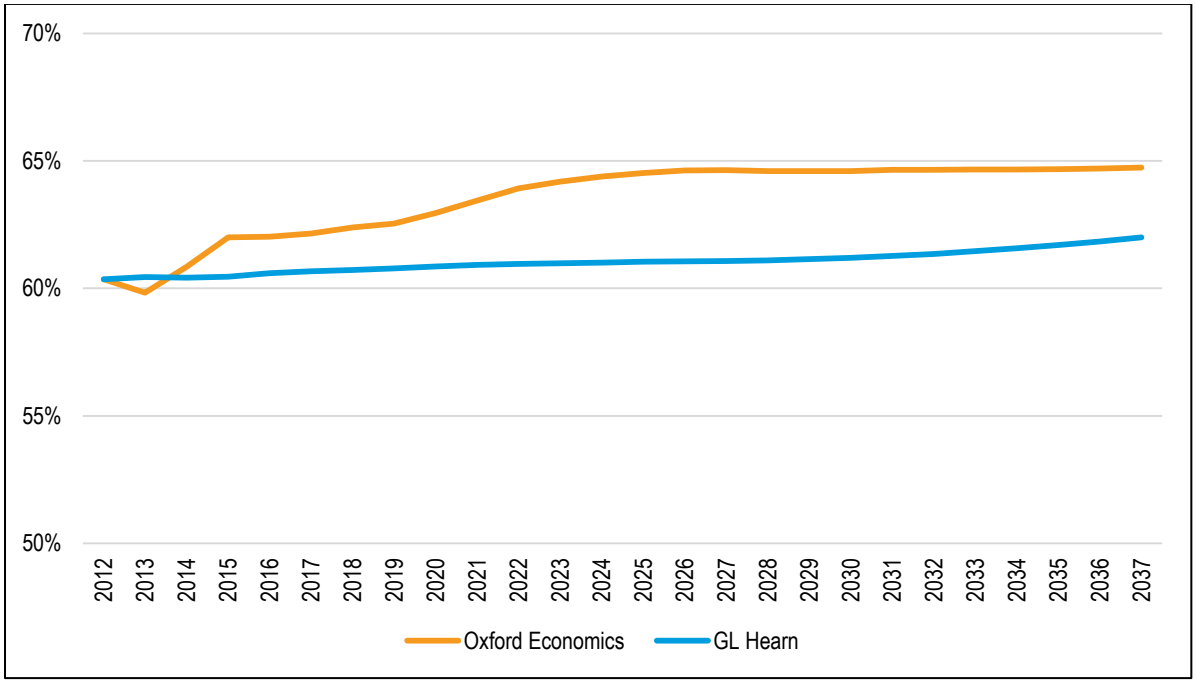
8.24 As set out in Section 4, an analysis of the City Region's economy shows relative low employment rates compared to most wider benchmarks and comparable areas.

8.25 GL Hearn has assessed Oxford Economics' assumptions (which assume notably stronger improvements in economic participation in the Growth Scenario than the Baseline) and undertaken

further analysis of the potential for improvements in employment rates. Within the two HMAs, all areas besides Warrington have an employment rate which is below the national average. The greatest scope for improvement in the employment rate, as identified is in Liverpool and Knowsley. The modelling for the Growth Scenario therefore assumes that the economic activity rate increases above the baseline position and rises to half of the difference between the current rate and the national average rate by the end of the forecast period. The detailed modelling assumptions are set out in Appendix C.

8.26 Figure 49 shows how the economic activity rate (expressed as a rate of the total population aged 16+) is forecast to increase in this scenario. A comparison is also made with figures provided by Oxford Economics (note there is no equivalent data from OBR). For the whole of the City Region it can be seen that the assumptions used see some increase in the overall activity rate, although by 2037 the figure is still 2.7 percentage points below the figure within Oxford Economics own forecasts.

Figure 49: Changes to Economic Activity Rates – Liverpool City Region (2012-37) – Scenario uplift



Unemployment Rates

8.27 The SHELMA does not make any specific assumptions about unemployment. By definition the methodology assumes that the number of people unemployed in 2015 (the base date for the economic forecasts) remains the same moving forward to 2037. The methodology employed looks at changes to the number of people who are economically active, and it is therefore assumed that all of any increase is equivalent to the number of additional people who are working.

8.28 In terms of an unemployment rate, this means that the proportion of people who are unemployed (e.g. as a proportion of those who are economically active) would be projected to decrease very slightly over the forecast period.

Housing Need to Support Economic Growth

8.29 To calculate the housing need necessary to support employment growth, the employment rate changes envisaged are inputted and migration adjusted (either upwards or downwards) to support the necessary growth in labour supply. This recognises that both in- and out-migration of working-age people can be influenced by the availability of employment.

8.30 The results are shown in Table 36. This applies adjusted headship rate identified in the demographic analysis in the previous section. This shows the number of dwellings required across the two HMAs to support the Baseline Scenario is 4,015 dpa. The Growth Scenario suggests a need across the two HMAs of 6,122 dpa.

Table 36: Projected Economic-Driven Housing Need (Dwellings per Annum, 2012-37)

	Baseline Scenario	Growth Scenario
Halton	326	565
Knowsley	271	373
Liverpool	862	1,791
Sefton	454	587
St Helens	397	855
Warrington	949	973
West Lancashire	221	241
Wirral	536	737
Mid Mersey HMA	1,671	2,393
Liverpool HMA	2,343	3,729
City Region (+Warrington+West Lancs)	4,015	6,122

8.31 Table 37 provides a comparison between the demographic-based dwelling requirement and the economic-led dwelling requirement. In all local authorities and across both HMAs the economic-led housing need in the Growth Scenario is greater than the demographic-based need. The economic-led need in the Baseline Scenario is higher than the demographic need in Halton, Warrington and West Lancashire.

Table 37: Comparison Between the Demographic-Based and the Economic-Led Dwelling Requirement (DPA, 2012-37)

	Headship Assumptions	2014-based SNPP	Baseline Scenario	Growth Scenario
Halton	Adjusted headship	254	326	565
Knowsley	2014-headship	280	271	373
Liverpool	2014-headship	1,739	862	1,791
Sefton	2014-headship	540	454	587
St Helens	2014-headship	416	397	855
Warrington	2014-headship	762	949	973
West Lancashire	Adjusted headship	200	221	241
Wirral	2014-headship	664	536	737
Mid Mersey HMA		1,432	1,671	2,393
Liverpool HMA		3,152	2,343	3,729
City Region (+WL)		4,584	4,015	6,122

Housing and Economic Growth – Key Points

- To support the Baseline Economic Growth Scenario would imply a need for 2,343 homes pa across the Liverpool HMA, which is below the trend-based (2014-based) demographic projections. It would imply a need for 1,671 homes pa in the Mid Mersey HMA, which is 17% greater than the trend-based demographic projections. This is modelled assuming the commuting ratio remains constant and the employment rate 16+ falls modestly from 60.4% to 59.7% between 2012-37.

- At a local authority level, the Baseline Economic Growth Scenario points to a higher level of housing need relative to the trend-based (2014-based) demographic projections in Halton, Warrington and West Lancashire.

- The Growth Scenario results in a higher level of housing need in all areas, with a need for 2,393 dpa in the Mid Mersey HMA and 3,729 dpa in the Liverpool HMA (2012-37). This takes account of enhanced sector performance, planned/ potential development and regeneration projects; and assumes that half of the difference in economic participation between local authorities and that nationally is made up over the period to 2037.

9 AFFORDABILITY AND HOUSING MARKET SIGNALS

9.1 Planning Practice Guidance (PPG) on *Housing and Economic Development Needs Assessments* sets out that the "market signals" should be considered to provide information on housing demand, and the balance between supply and demand for market housing. The PPG outlines that:

> *"The housing need number suggested by household projections (the starting point) should be adjusted to reflect appropriate market signals, as well as other market indicators of the balance between the demand for and supply of dwellings. Prices or rents rising faster than the national/local average may well indicate particular market undersupply relative to demand."*

9.2 Relevant market signals are identified in the PPG, and are considered in this section. In addition consideration is given to the need for affordable housing, drawing on existing affordable housing needs evidence and recognising that there is a clear relationship between the affordability of market housing and the need for affordable housing.

9.3 The analysis is geared at understanding housing market dynamics and considering if there is a case for adjustment to overall housing provision to improve affordability. Its focus therefore necessarily differs from how previous SHMA and related studies may have considered these issues.

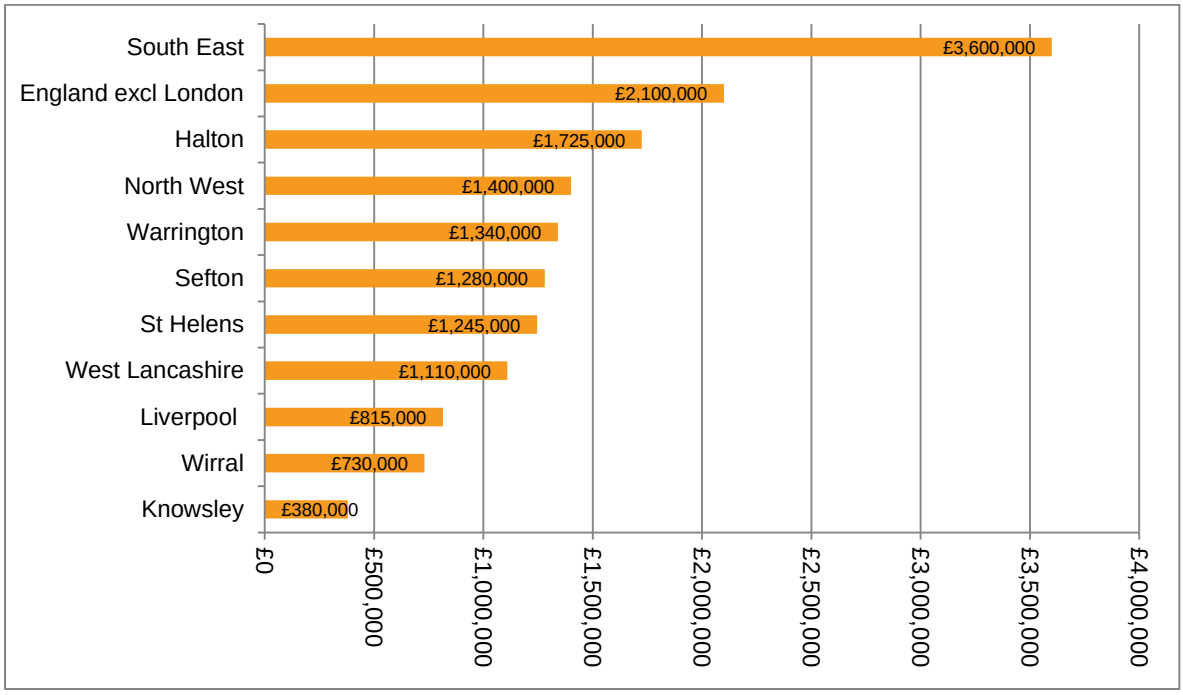
Land Values

9.4 CLG's publication *Land Value estimates for Policy Appraisal* (Dec 2015) provide estimates of residential land values (post planning permission) for local authorities in England. Land value premiums provide direct intelligence on areas where there is a shortage of residential land.

9.5 As Figure 50 shows, land values across the local authorities in both housing market areas are substantially below the national average. Residential land values in Liverpool are for instance 61% below the national average (excluding London).

9.6 Halton is the only local authority where land values exceed the North West average (by 23%). However there will be many areas within the region where land values exceed the average, and values in Halton are 18% below the national average (excluding London).

Figure 50: Residential Land Values per Hectare, Dec 2015



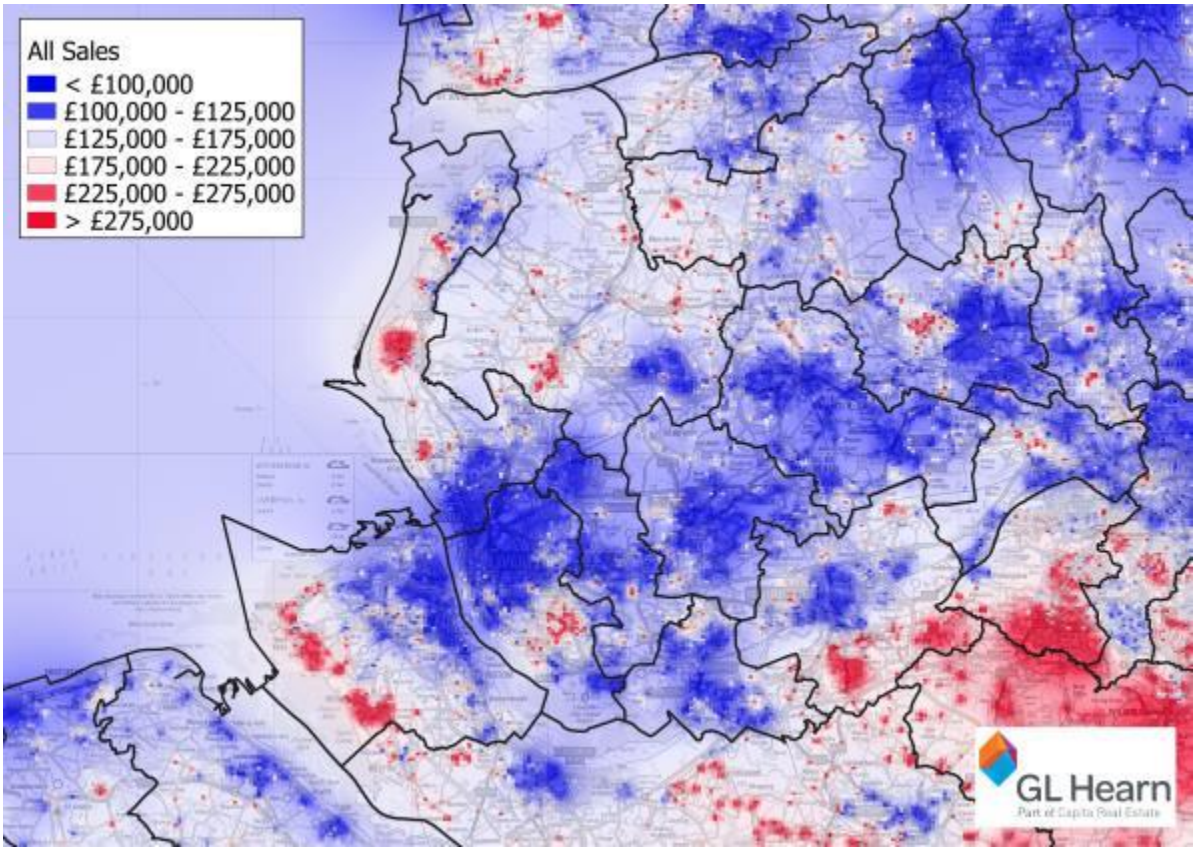
Source: CLG Land Values for Policy Appraisal

House Price and Sales Trends

9.7 House prices provide information on the relative demand for housing in different areas. Figure 51 profiles median house prices in 2015. It illustrates a band of relatively low house prices stretching along the M62 Corridor, and highlights that house prices across most of the main towns in both the Liverpool and Mid Mersey HMAs fall below £125,000.

9.8 Within the Liverpool HMA, there are areas of higher house prices (> £175,000) on the western side of Wirral; in Crosby, Formby and parts of Southport within Sefton; in Ormskirk and some rural parts of West Lancashire; and in some neighbourhoods within South Liverpool. However within each of these authorities, there are areas of both higher and lower house prices.

Figure 51: Median House Price Heat Map, 2015



Source: GLH Analysis of HMLR Price Paid Data

9.9 Median house prices across the Liverpool HMA are 33% below the national average and 3% below the North West average. In the Mid Mersey HMA, prices are 32% below the national average, and 1% below the regional average.

9.10 An analysis of median house prices at a local authority level indicates that it is in West Lancashire, Warrington, Sefton and Wirral where prices are above the North West average, and only in West Lancashire to any significant degree. Median house prices in Liverpool, Knowsley and St Helens are more than 15% below the regional average.

9.11 Lower quartile (LQ) house prices across all of the authorities considered are below the national average. LQ prices are above the regional average in West Lancashire (28% higher), Warrington (19% higher), and to a lesser extent Sefton and Wirral, as shown in Table 38.

Table 38: Median and Lower Quartile House Prices, 2015

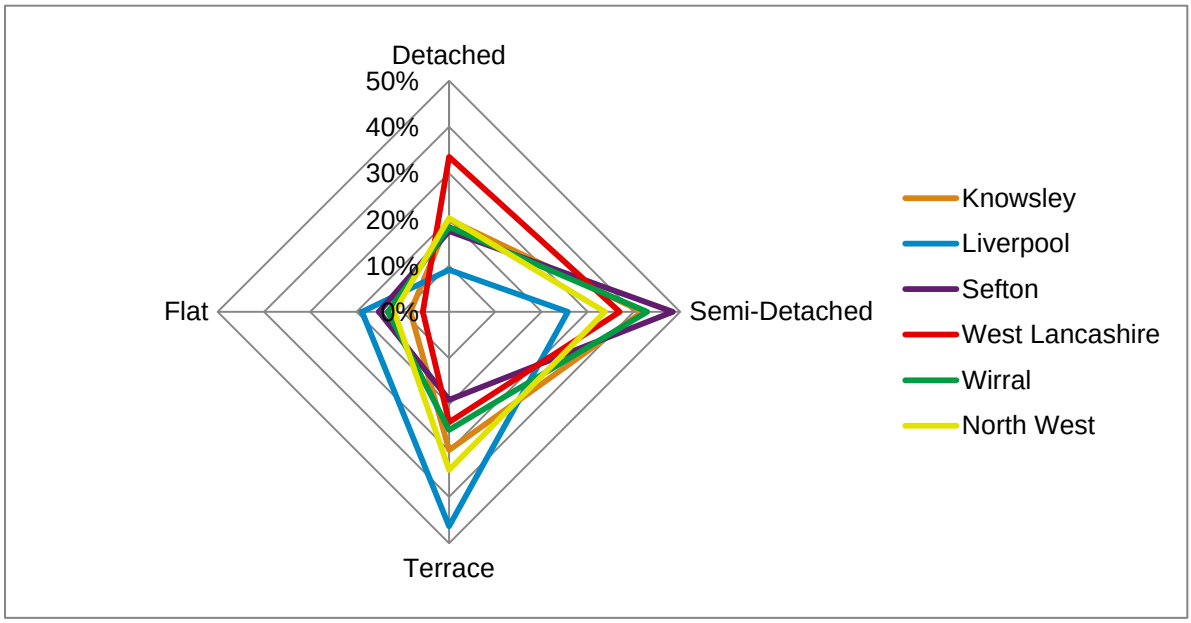
	Median, 2015	Differential to North West	Lower Quartile, 2015	Differential to North West
Halton	£127,000	-9%	£86,375	-11%
St Helens	£117,000	-16%	£78,000	-20%
Warrington	£160,000	14%	£115,000	19%
Mid Mersey HMA	£139,046	-1%		
Knowsley	£115,000	-18%	£79,000	-19%
Liverpool	£118,250	-16%	£77,000	-21%
Sefton	£148,250	6%	£110,000	13%
West Lancashire	£167,000	19%	£123,750	28%
Wirral	£142,500	2%	£104,000	7%
Liverpool HMA	£135,499	-3%		
North West	£140,000	0%	£97,000	0%
England and Wales	£203,500	45%	£135,000	39%

Source: GLH Analysis of HM Land Registry Price Paid Data

9.12 Median house prices are influenced by the stock mix and mix of homes sold in different areas: it is reasonable to expect higher average house prices in an area with a greater concentration of larger properties.

9.13 Within the Liverpool HMA, the lower median house price in Liverpool is influenced in part by a higher concentration of terraced and flatted properties (as is common in cities). In contrast, West Lancashire sees a higher proportion of detached sales which make up more than a third of sales.

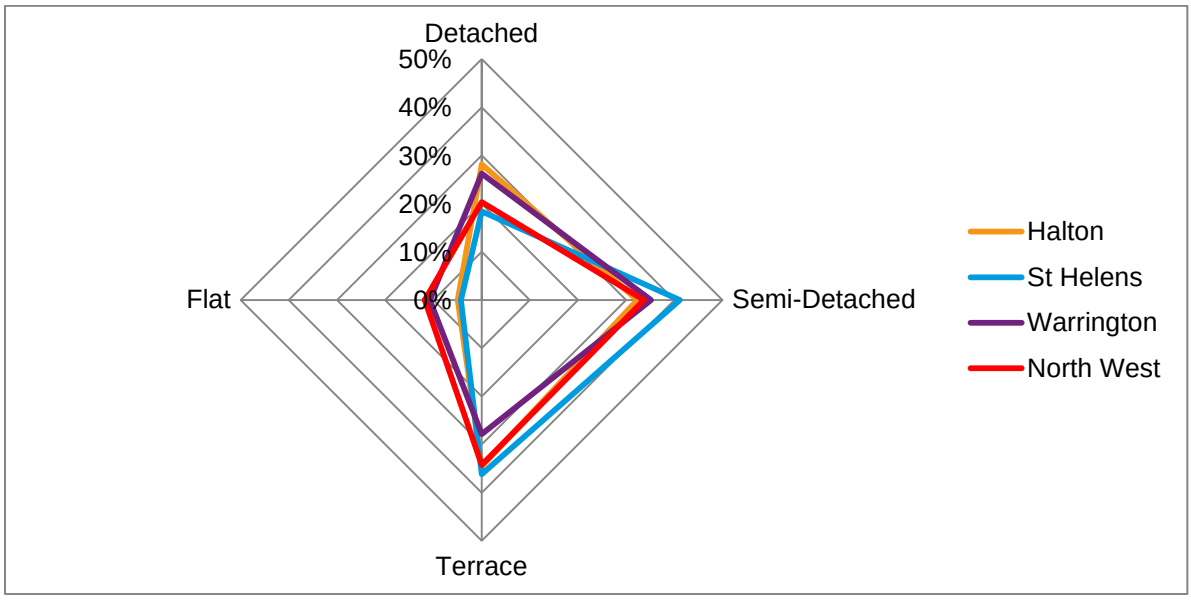
Figure 52: Mix of Properties Sold – Liverpool HMA, 2015



Source: GLH Analysis of HM Land Registry Price Paid Data

9.14 Within the Mid Mersey HMA, both Halton and Warrington show an above average representation of detached and semi-detached sales. In Halton, this is due to a particularly high proportion of new build sales skewing the figures for detached and semi-detached sales higher. In Warrington, it reflects the higher proportion of these house types in the Borough. St Helens has the highest proportion of semi-detached sales.

Figure 53: Mix of Properties Sold- Mid Mersey HMA, 2015



Source: GLH Analysis of HM Land Registry Price Paid Data

9.15 The analysis highlights that above average median house prices (relative to the north west) in West Lancashire and Warrington reflect the housing mix in these areas, which have a high proportion of detached (and to a lesser extent semi-detached) sales in relative terms.

9.16 House price changes have also been analysed. The PPG outlines that long-term changes in house prices may indicate an imbalance between housing supply and demand. GL Hearn have assessed house price changes over various time periods, considering absolute and relative changes as the PPG advises.

9.17 In considering changes in house prices it is important to recognise the impact of macro-economic factors, and thus it is relevant to consider trends over the last five years (2010-2015) as these can differ from longer-term trends.

9.18 Table 39 provides an analysis of absolute changes in house prices. Looking over the past 10 or 15 years, house price growth across all authorities has been below the national average. It has been above the North West average in Sefton, Wirral and West Lancashire over a 15 year period, but not to a substantive degree; however these authorities have seen strong recent house price growth. Halton has seen above average house price growth relative to the North West over the past five years.

Table 39: Absolute Changes in House Prices per Year

	1 Year	5 Year	10 Year	15 Year
Knowsley	-£3,000	£0	-£300	£4,028
Liverpool	-£2,500	£200	£350	£4,337
Sefton	£10,700	£2,990	£1,970	£6,113
Wirral	£8,950	£2,790	£2,395	£6,197
West Lancashire	£7,974	£4,000	£2,300	£6,333
Halton	£5,000	£3,004	£1,100	£4,816
Warrington	£0	£800	£2,000	£5,750
St Helens	-£792	£0	£450	£4,047
North West	£3,005	£2,010	£2,000	£5,533
England & Wales	£12,000	£5,400	£4,700	£8,300

Source: GLH Analysis of HM Land Registry Price Paid Data

9.19 The rate of growth in percentage terms is shown below. Price growth over the last five or ten years in comparative terms has been relatively weak in many areas, in all cases falling below that seen nationally. Looking at the long-term trend over 10 or 15 years shows that it is only in Wirral that rates of house price growth have exceeded that seen at a national or regional level.

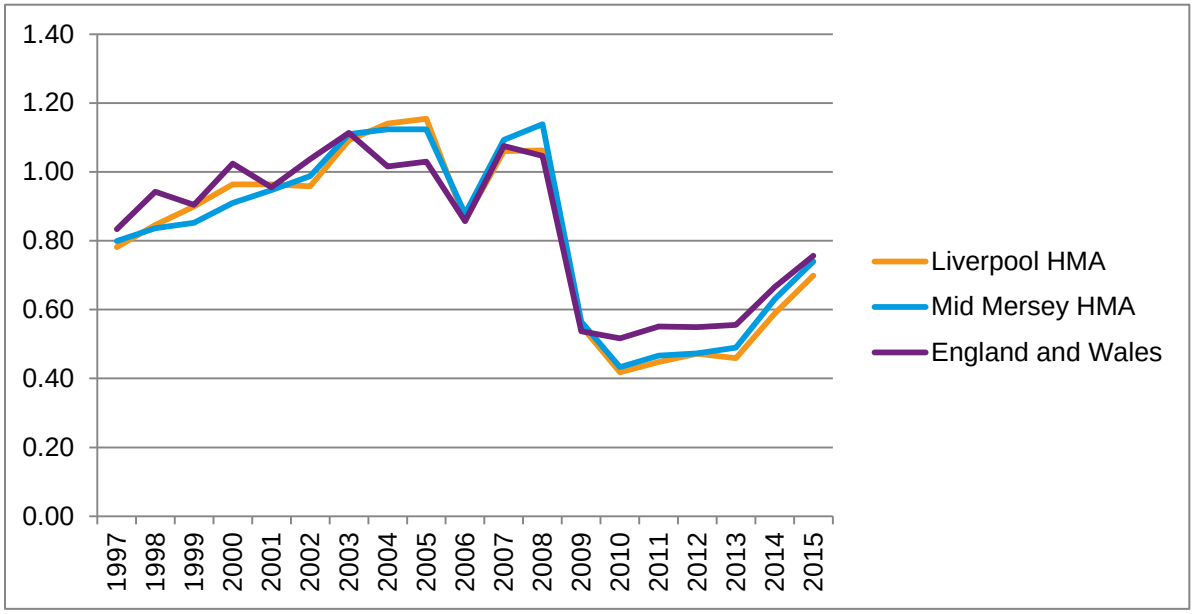
Table 40: % Growth in House Prices per Year (CAGR)

	1 Year	5 Year	10 Year	15 Year
Knowsley	-2.6%	0.0%	-0.3%	5.3%
Liverpool	-2.1%	0.2%	0.3%	5.7%
Sefton	7.4%	2.0%	1.4%	6.1%
Wirral	6.4%	2.0%	1.8%	6.7%
West Lancashire	5.1%	2.6%	1.5%	5.9%
Halton	4.2%	2.6%	0.9%	5.9%
Warrington	0.0%	0.5%	1.4%	5.6%
St Helens	-0.7%	0.0%	0.4%	5.1%
North West	2.2%	1.5%	1.6%	6.2%
England & Wales	6.2%	2.8%	2.6%	6.3%

Source: GLH Analysis of HM Land Registry Price Paid Data

9.20 Sales data provides information on effective demand for market housing. Figure 54 shows sales trends benchmarked relative to average sales over the pre-recession decade (1998-2007). It highlights that in both HMAs, sales volumes dropped dramatically between 2008-9 on the onset of the credit crunch; and that it was not until 2013 that a substantive recovery set in. This is influenced by macro-economic factors. Whilst sales recovered strongly during the 2013-15 period, they remain 30% below the pre-recession average in the Liverpool HMA and 26% below in the Mid Mersey HMA relative to 24% nationally. This continues to point to effective market demand remaining below long-term trends.

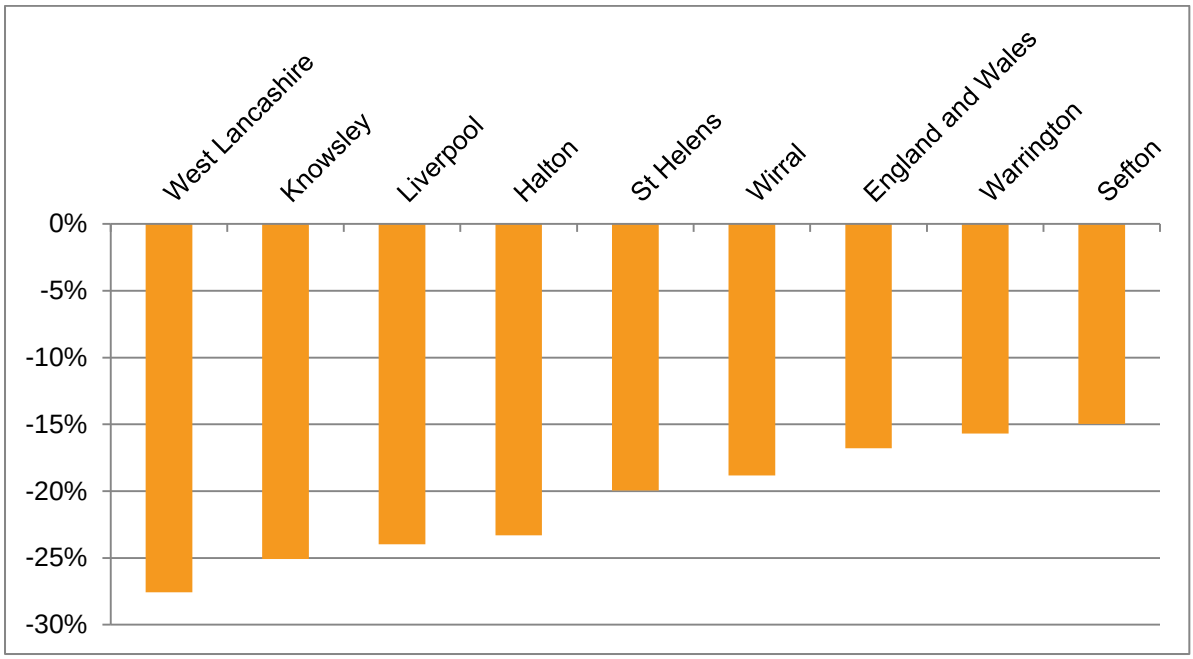
Figure 54: Sales Trends, 1997 – 2015



Source: GLH Analysis of HMLR Price Paid Data / CLG Housing Statistics

9.21 The position for individual local authorities is shown below. Sales in 2015 were a substantial 28% below pre-recession levels in West Lancashire, and 25% below in Knowsley. Only Sefton and Warrington have shown a stronger relative recovery in sales than the position nationally. In general there is a correlation between those authorities which have seen stronger recent house price growth and a stronger recovery in sales. West Lancashire is however an exception to this.

Figure 55: Sales in 2015 relative to Pre-Recession Average



Source: GLH Analysis of HMLR Price Paid Data

Trends in Private Rents

9.22 Across most of the authorities in the two HMAs, private rental levels per calendar month (PCM) are below the North West average; and in all cases rents levels are below the national average. The exceptions are West Lancashire and Warrington, where rents are a modest £25 PCM above the regional average (a 5% differential).

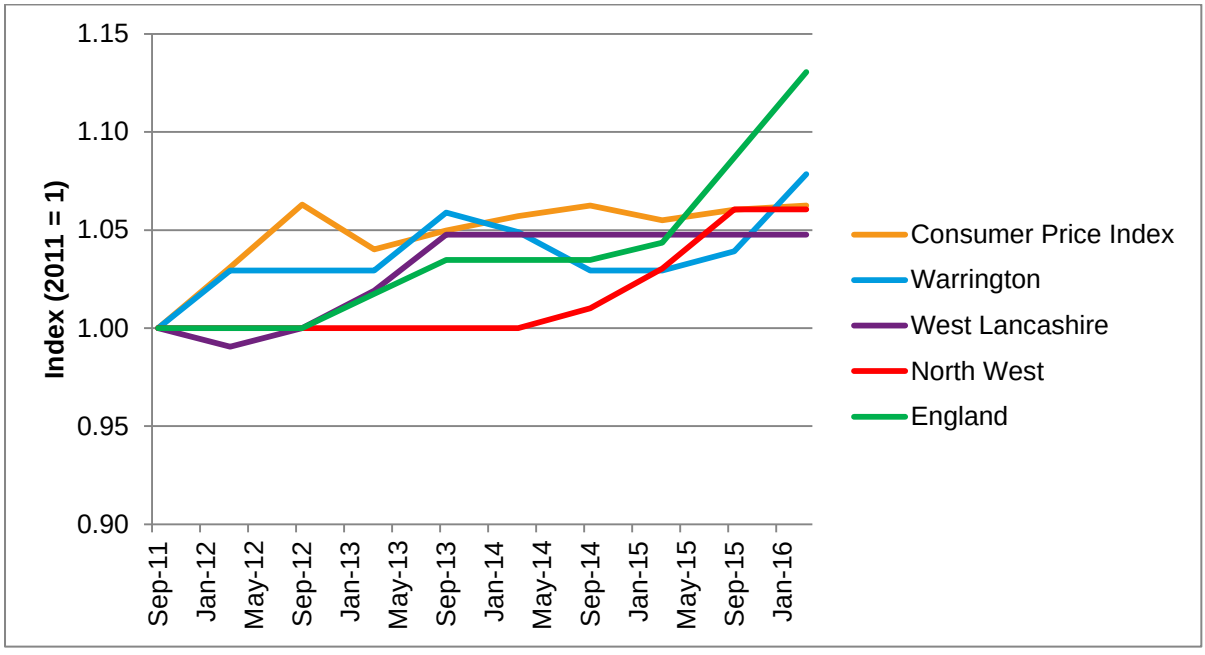
9.23 The trend in rents across much of the Liverpool HMA, and in particular in the City, has been downwards over the period since 2001. Rental growth in nominal terms has been seen in West Lancashire and Warrington, but it is only Warrington that has seen growth in real terms. Rental growth where it has been seen has been below growth rates seen nationally.

Table 41: Rental Cost and Trends

	Median Rent, Year to March 2016	Differential vs. NW	Price Growth PA 2011-16
Knowsley	£525	£0	-0.8%
Liverpool	£450	-£75	-2.1%
Sefton	£525	£0	-0.8%
West Lancashire	£550	£25	1.0%
Wirral	£500	-£25	-1.1%
Halton	£500	-£25	0.2%
St Helens	£475	-£50	0.0%
Warrington	£550	£25	1.7%
North West	£525	£0	1.3%
England	£650	£125	2.8%

Source: GLH Analysis of VOA Private Rental Market Statistics

Figure 56: Rental Trends in Selected Authorities



Source: GLH Analysis of VOA Private Rental Market Statistics

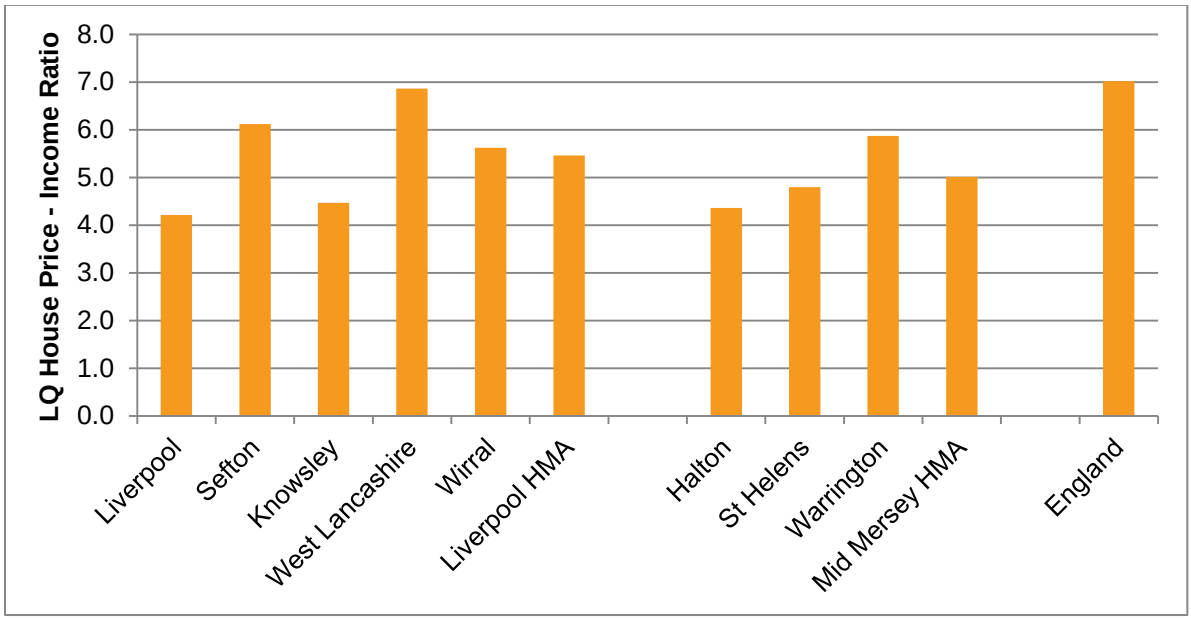
Affordability

9.24 The PPG sets out that the ratio of lower quartile house prices to lower quartile incomes can be used to assess the affordability of housing. The ratio provides an indication of the relative ability of younger households to be able to get on the housing ladder. It should be borne in mind that the ratio is relatively simplistic; households' actual ability to afford to buy will be influenced by their

ability to maintain mortgage repayments (influenced by interest rates) as well as their ability to obtain mortgage finance, including available savings which can be put towards a deposit.

9.25 As Figure 57 indicates, the lower quartile affordability ratio in 2015 in both HMAs (and in all of their constituent authorities) is below the national average of 7.0. Within the Liverpool HMA, the ratio is below 5.0 in Liverpool and Knowsley, and is highest in West Lancashire at 6.9. In the Mid Mersey HMA, the ratio is below 5.0 in both Halton and St Helens, and stands at 5.9 in Warrington.

Figure 57: Lower Quartile Affordability Ratio, 2015



Source: CLG Housing Statistics

9.26 Table 42 analyses how the lower quartile house price to income ratio has changed, and also shows the median ratio. Over the previous five years (2010-15), the ratio has improved in Sefton and remained at a similar level across the other authorities and both HMAs. The ten year change points to affordability improving marginally across both HMAs. However the fifteen year change shows a growth in the affordability ratio across all authorities. For all periods, the affordability ratio across England has increased at a higher rate than either of the HMAs.

Table 42: Changes in Lower Quartile Affordability Ratio

	Median Ratio	LQ Ratio	5 Year Change	10 Year Change	15 Year Change
Liverpool	4.64	4.21	0.4	0.3	1.9
Sefton	6.14	6.12	-0.8	-0.4	2.3
Knowsley	4.55	4.47	0.2	-0.6	1.4
West Lancashire	6.63	6.86	0.1	-0.1	3.1
Wirral	5.46	5.63	-0.3	0.5	2.6
Liverpool HMA	5.49	5.46	-0.1	-0.1	2.3
Halton	4.50	4.36	0.1	-0.6	1.8
St Helens	5.18	4.80	0.0	-0.2	2.1
Warrington	6.12	5.87	0.4	-0.5	2.4
Mid Mersey HMA	5.27	5.01	0.1	-0.4	2.1
England	7.49	7.02	0.3	0.2	3.1

Source: GLH Analysis of CLG Housing Statistics

Overcrowding

9.27 Table 43 shows the number of overcrowded households in each area. That is, households which currently live in a property with fewer rooms than required for the members of the household. With the exception of Liverpool, all authorities had a lower overcrowding rate than either the North West average (6.2%) or the national average (8.5%) in 2011.

9.28 The table also shows the change in the proportion of overcrowded households since 2001. Halton, Knowsley, and St. Helens have seen a reduction in the proportion of overcrowded households during this period, while Sefton and West Lancashire have seen zero change. Wirral has seen a modest growth of 0.3 percentage points (pp) while Liverpool has seen a growth of 2.1 pp. By comparison the North West has seen a growth of 0.8 pp over this period while the UK has seen a growth of 1.pp.

Table 43: Overcrowded Households

	Overcrowded Households 2011	Overcrowded Households 2011	Overcrowded Households 2001	Overcrowded Households 2001	Change 2001-11
Halton	2,638	4.9%	2,515	5.2%	-0.3%
Knowsley	3,642	5.9%	4,392	7.3%	-1.3%
Liverpool	20,032	9.7%	14,191	7.6%	2.1%
Sefton	5,701	4.8%	5,593	4.8%	0.0%
St Helens	3,102	4.1%	3,493	4.8%	-0.7%
West Lancs	1,577	3.5%	1,514	3.5%	0.0%
Wirral	5,503	3.9%	4,878	3.7%	0.3%
North West	187,816	6.2%	152,248	5.4%	0.8%
England and Wales	1,995,860	8.5%	1,510,422	7.0%	1.6%

Source: Census 2011 and 2001

9.29 Table 44 shows the number of concealed households in each area. This shows that Knowsley (2.20%) is the only area with a level of concealed housing above the regional (1.62%) or national (1.84%) averages in 2011. Also shown is the percentage point change in concealed households between 2001 and 2011. This shows the percentage point increase in all areas is lower than either the North West (0.50%) or England and Wales (0.68%) growth over this period.

Table 44: Concealed Households

	Concealed Households 2011	Concealed Households 2011	Concealed Households 2001	Change 2001-11
Halton	537	1.45%	1.07%	0.38%
Knowsley	846	2.02%	1.56%	0.46%
Liverpool	2,076	1.78%	1.34%	0.44%
Sefton	1,174	1.49%	1.20%	0.29%
St Helens	660	1.26%	0.99%	0.27%
West Lancashire	470	1.44%	1.04%	0.41%
Wirral	1,302	1.42%	0.93%	0.49%
North West	32,128	1.62%	1.11%	0.50%
England and Wales	289,295	1.84%	1.16%	0.68%

Source: Census 2011 and 2001

Rates of Development

9.30 Planning Practice Guidance outlines that the rate of development should be considered, with a meaningful period used to assess housing supply. If this historic rate of development shows that actual supply fell below planned supply, future supply should be increased to reflect the likelihood of under-delivery of a plan.

9.31 The last recession had a particular impact on housing supply, both at a national and local level. GL Hearn consider in this context that a meaningful period would need to include periods of both stronger and weaker housing market conditions (based on national dynamics), and have therefore sought to assess trends over the period since 2002. It should however be borne in mind that in the early 2000s there was evidence of low demand and market failure in parts of the Liverpool HMA.

9.32 Moreover it is important to recognise the context through which housing targets were derived. Historically housing targets have been set out through the Regional Spatial Strategy which sought to promote urban renaissance, and in doing so directed growth to the re-use of brownfield land in the urban cores within the region.

9.33 Over the period since 2002, there has been a 5% over-delivery within the Mid Mersey HMA; but a 32% under-delivery in the Liverpool HMA driven by low delivery within Knowsley, Liverpool, Sefton and Wirral (all of which contained areas of low demand designated for housing market renewal). It is important to note that the data in Table 45 shows net completions and is impacted by high

number of demolitions, particularly in Knowsley, Liverpool, and Sefton, resulting from the Housing Market Renewal Initiative.

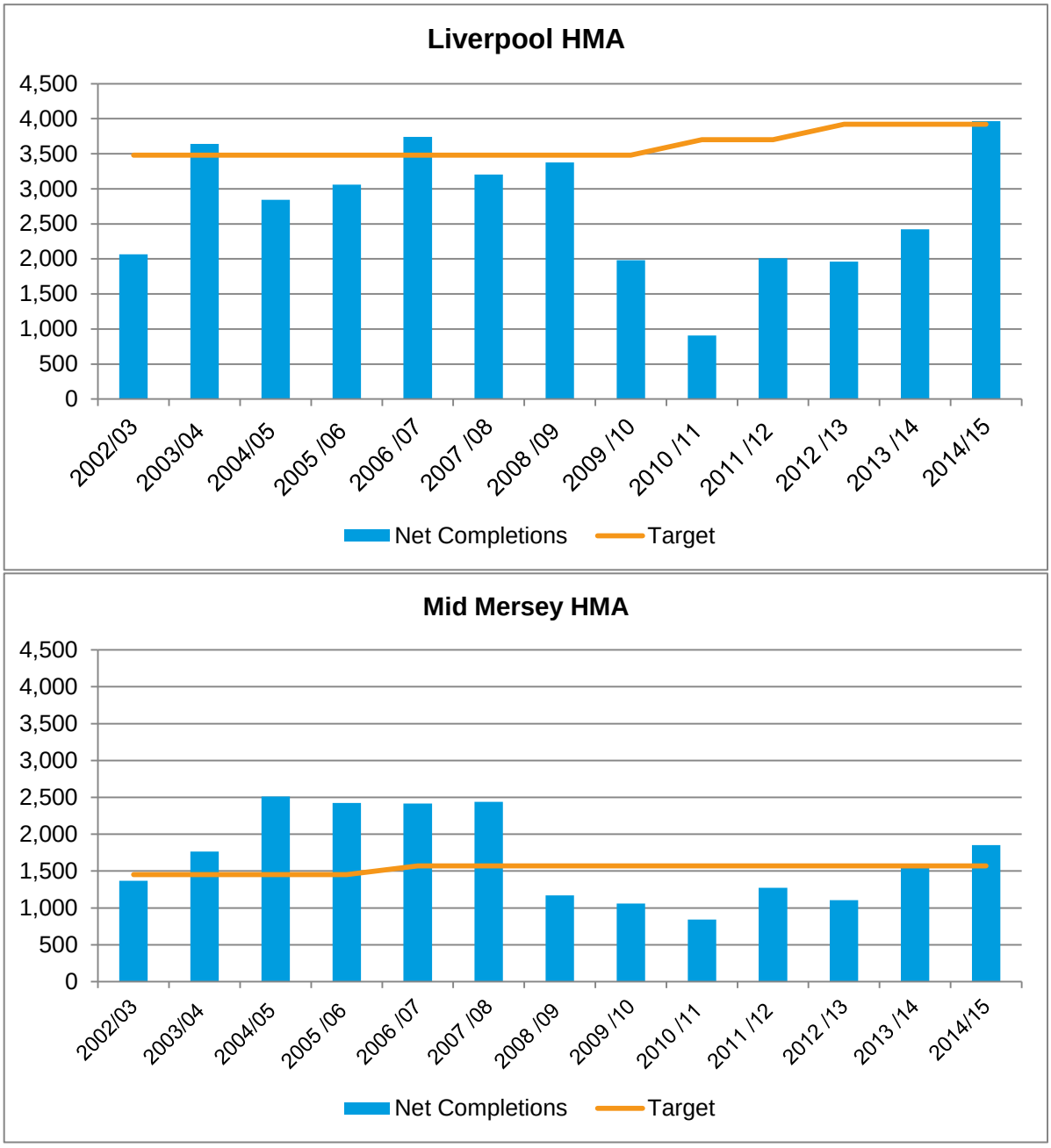
Table 45: Housing Delivery related to Targets, 2002-2015

	Net Completions	Housing Requirement	% Over/ Under Delivery
Liverpool	16,432	26,007	-37%
Wirral	4,780	6,500	-26%
Knowsley	3,144	5,630	-44%
West Lancashire	3,412	3,906	-13%
Sefton	5,256	6,500	-19%
Liverpool HMA	33,018	48,543	-32%
St Helens	5,658	7,410	-24%
Halton	4,581	6,590	-30%
Warrington	10,751	6,020	79%
Mid Mersey HMA	20,990	20,020	5%

Source: GLH Analysis of Annual Monitoring Reports

9.34 Figure 58 plots the housing delivery trends in each of the HMAs. The influence of the recession and credit crunch on housing delivery between 2008-13 is self-evident. These is a clear correlation between the trend in housing completions shown with the overall housing sales trends; which strongly suggests that demand-side rather than supply-side factors drove the reduction in housing delivery (given that new-build sales typically make up less than 10% of total sales).

Figure 58: Housing Delivery Trend



Source: GLH Analysis of Annual Monitoring Reports

Market Signals – Key Points

- Land values across the City Region are below the national average, with only Halton exceeding the north west average. Median prices across the main towns fall below £125,000, and overall across both HMAs prices are on average a third below the national average – a significant differential.
- Lower quartile (entry level) house prices are below the national average, and only significant above the North West average in West Lancashire and Warrington. Relative to incomes, lower quartile prices are below the national average in both HMAs. They are highest in West Lancashire at 6.9 in 2015.
- House price growth has exceeded the regional average in the longer-term in West Lancashire, Wirral and Sefton in absolute terms; but in proportional terms only in the Wirral. Growth in all areas has fallen below the national average.
- Rents are relatively low relative to national benchmarks, with no particularly high cost rental areas relative to the regional average. Rental growth since 2011 in all areas has been below regional/ national benchmarks.
- Whilst there is evidence of under-delivery of housing, this is principally 2008-13, which correlates to a national slump in housing delivery influenced by macro-economic factors which saw demand fall.

Affordable Housing Need

9.35 The SHELMA Report has not specifically assessed the need for affordable housing. However affordable housing needs evidence is a consideration in drawing conclusions on the overall objectively assessed housing need.

9.36 The need for affordable housing is dealt with separately in the PPG, with guidance provided on how this is assessed alongside information on how needs for different types of housing should be assessed. The Guidance states that affordable need should be calculated by "*adding together the current unmet housing need and the projected future housing need [for affordable housing] and then subtracting this from the current supply of affordable housing stock.*"[20] It is important to recognise the following with regard to assessing affordable need:

- Firstly, it clearly includes existing households – the types of households identified as having a current need include those with insecurity of tenure, overcrowded households, those lacking facilities or with a social/physical impairment which cannot be met *in situ*. This includes households across a range of tenures who are in need
- Secondly, it clearly includes supply-side factors – with the estimate of need expected to be compared against the current total affordable housing supply and committed supply of affordable housing, and future supply taking account of relets.

[20] ID 2a-022-20140306

9.37 This is in contrast to other parts of the methodology where supply-side factors are left aside, and the focus is on *net* growth in households/ dwellings. This is an important consideration when the assessed affordable need is compared against demographic projections.

9.38 The PPG identifies that the affordable housing need should be identified as an annual flow, and that:

> *"The total affordable housing need should then be considered in the context of its likely delivery as a proportion of mixed market and affordable housing developments, given the probable percentage of affordable housing to be delivered by market housing led developments. An increase in the total housing figures included in the local plan should be considered where it could help to deliver the required number of affordable homes."*[21]

9.39 GL Hearn recognise that there has been some debate over the last couple of years so over whether affordable housing need is thus a component of the OAN, or that there is a separate requirement in setting policy to consider adjusting upwards the housing requirement to boost affordable housing delivery. The appropriate approach has been confirmed by the High Court in *Kings Lynn & West Norfolk vs. SSCLG & Elm Park Holdings Ltd.*[22] In this judgement, Mr Justice Dove notes the "ingredients" involved in assessing the full OAN, and that this necessitated considering a range of relevant data for which there is no one set methodology and which will involve elements of judgement. He went on to outline how the need for affordable housing should be considered in drawing conclusions on the OAN:

> *"31 In terms of the first element of the assessment in the first of the sub-bullet points in paragraph 159, namely meeting household and population projections taking account of migration and demographic change, the PPG illustrates that this is a statistical exercise involving a range of relevant data for which there is no one set methodology, but which will involve elements of judgment about trends and the interpretation and application of the empirical material available.*
>
> *These judgments will arise for instance in relation to whether, for example, adjustments for local demography or household formation rates are required (see paragraph ID 2a-014–20140306), and the extent and nature of adjustments for market signals (see paragraph ID 2aa-018–20140306). Judgment will further be involved in taking account of economic projections in undertaking this exercise.*
>
> *32 At the second stage described by the second sub-bullet point in paragraph 159, the needs for types and tenures of housing should be addressed. That includes the assessment of the*

[21] ID 2a-029-20140306
[22] *Kings Lynn & West Norfolk vs. SSCLG & Elm Park Holdings Ltd* [2015] EWHC 2464 (Admin)

need for affordable housing as well as different forms of housing required to meet the needs of all parts of the community. Again, the PPG provides guidance as to how this stage of the assessment should be conducted, including in some detail how the gross unmet need for affordable housing should be calculated. The Framework makes clear these needs should be addressed in determining the FOAN, but neither the Framework nor the PPG suggest that they have to be met in full when determining that FOAN. This is no doubt because in practice very often the calculation of unmet affordable housing need will produce a figure which the planning authority has little or no prospect of delivering in practice. That is because the vast majority of delivery will occur as a proportion of open-market schemes and is therefore dependent for its delivery upon market housing being developed. It is no doubt for this reason that the PPG observes at paragraph ID 2a-208–20140306 as follows:

"The total affordable housing need should then be considered in the context of its likely delivery as a proportion of mixed market and affordable housing developments, given the probable percentage of affordable housing to be delivered by market housing led developments. An increase in total housing figures included in the local plan should be considered where it could help deliver the required number of affordable homes."

33 This consideration of an increase to help deliver the required number of affordable homes, rather than an instruction that the requirement be met in total, is consistent with the policy in paragraph 159 of the Framework requiring that the SHMA "addresses" these needs in determining the FOAN. They should have an important influence increasing the derived FOAN since they are significant factors in providing for housing needs within an area."

9.40 It seems clear from this that the expectation is that it may be necessary, based on the affordable needs evidence to *consider* an adjustment to enhance the delivery of affordable housing, but that this does not need to be necessarily done in a mechanical way whereby the affordable need on its own dictates the OAN figure. Nonetheless it is clear that affordable housing need may result in upwards adjustments to the OAN, but with consideration given to the overall deliverability of housing.

9.41 Table 46 summarises the current affordable housing needs evidence. Specific figures should be treated with some caution because of differences in methodological assumptions used in how they are derived, and different dates of assessment. Figures are thus not necessarily directly comparable.

9.42 The table provides an indication of the potential proportion of housing that could be delivered as affordable housing. This is a broad-brush assumption which has been made for indicative purposes only based on a review of current policy requirements. With these assumptions the analysis shows

that an uplift of 17% would be needed to meet the affordable need in the Mid Mersey HMA from the demographic based need (but an uplift of 87% for Halton); with an uplift of 196% required for the Liverpool HMA (with figures of 800% for West Lancashire, 463% for Knowsley and 168% for Sefton). The affordable housing needs evidence suggests that an uplift from the demographic need (based on the 2014-based Household Projections) would be justified in all areas besides St Helens.

9.43 Substantial uplifts are clearly unreasonable, and what must be borne in mind is that additional households are required to occupy homes; and it is really only concealed and homeless households which overall will be additional. Moreover any adjustments made from the demographic starting point – either to headship rates, to address market signals or to support economic growth – will deliver additional market and affordable housing.

Table 46: Indicative Housing provision to meet the Affordable Housing Need

Local Authority	Affordable housing need (pa)	Potential AH Delivery	Housing required to meet affordable need (pa)	Source of Needs Evidence
Halton	119	25%	476	Mid Mersey SHMA January 2016, GL Hearn
Liverpool	386	(20%)	(1,930)	Liverpool SHMA June 2016; GL Hearn
St Helens	96	30%	320	Mid Mersey SHMA January 2016, GL Hearn
Warrington	220	25%	880	Mid Mersey SHMA January 2016, GL Hearn
Sefton	434	30%	1,447	Review of the Objectively Assessed Need for Housing, July 2015, Nathaniel Lichfield and Partners
Knowsley	315	20%	1575	Strategic Housing Market Assessment, January 2010, David Couttie Associates
West Lancashire	540	30%	1,800	West Lancashire Strategic Housing Market Assessment, May 2009, Nevin Leather Associates
Wirral	1034	40%	2,585	Wirral SHMA 2016

[Note. Liverpool does not have an affordable housing target. GLH has made a broad assumption on potential delivery through Registered Provider-led development schemes and regeneration schemes]

Implications of Housing Market Signals

9.44 Overall the analysis of market signals shows a variance in housing market dynamics, house prices, and affordability pressures across the City Region. The price of market housing has increased over recent years, however the evidence suggests that there has not been a corresponding worsening in affordability in either the Liverpool HMA or Mid Mersey HMA. Compared to elsewhere in the Country, affordability pressures in the City Region are modest.

9.45 The analysis of the housing market signals set out in this section suggests that it would be appropriate to consider an uplift to improve affordability in Sefton, West Lancashire, and Wirral.

Conversely, the market signals show that affordability pressures are relatively less acute in the authorities of Halton, Knowsley, Liverpool, and St Helens compared to elsewhere in the City Region, and compared to regional or national levels.

9.46 In line with the approach outlined in the PPG it is appropriate to consider an upward adjustment to the demographic starting point in some authorities in order to reflect the housing market signals and to enhance affordable housing delivery. There is some debate as to whether a market signals adjustment should be made relative to the demographic need, or whether it should be applied on top of adjustments to support economic growth. The argument in favour of the former is that it is intending to 'oversupply' housing in order to improve affordability; whilst in respect of the latter, it is that households are required to live in additional homes and that additional housing above the demographic starting point would potentially support additional workforce growth.

9.47 The PPG sets out that the scale of such an adjustment should be *"a level that is reasonable"*. SHMAs around the country have generally applied adjustments to improve affordability of up to 20%, We are aware of only one exception to this, in Cambridge (where a 30% adjustment has been recommended).

9.48 Over the last few years or so different Government Planning Inspectors have taken a range of views on this matter, including:

- Mendip (October 2014) – *'these findings indicate that trends in Mendip sit fairly comfortably alongside county, regional and national trends and do not, therefore, justify an upward adjustment of the housing numbers that came out of the housing projection'*
- Eastleigh (November 2014) – *'It is very difficult to judge the appropriate scale of such an uplift. I consider a cautious approach is reasonable bearing in mind that any practical benefit is likely to be very limited because Eastleigh is only a part of a much larger HMA. Exploration of an uplift of, say, 10% would be compatible with the "modest" pressure of market signals recognised in the SHMA itself'*.
- Uttlesford (December 2014) – *'While evidence on some of these topics is patchy. Taking them in the round and without discussing them in detail here, I consider that an uplift of at least 10% would be a reasonable and proportionate increase in the circumstances of Uttlesford'*
- Stratford-on-Avon (March 2015) – Despite the area show strong evidence of strong affordability pressures the inspector concluded that *'On balance I conclude, despite the SHMA's finding that there is a case for an uplift, that an upward adjustment in housing numbers has not been justified in terms of market signals in the District'.*
- Crawley (May 2015) – Despite the Council themselves seeking to make a market signals adjustment the inspector concluded that he was *'not convinced that the market signals uplift is justified by the evidence, for the various indicators reveal a situation in Crawley which is not as severe as in other North West Sussex authorities, and one that has not worsened in recent years'*.
- Cornwall (June 2015) – The same Inspector as the Eastleigh Local Plan inquiry suggested that *'National guidance is that a worsening trend in any relevant market signal should result in an uplift. But for the reasons given below I do not consider that I should require such an uplift to be made for Cornwall at this time'*

9.49 On the basis of the housing market signals considered in this section we consider that it is appropriate to apply an affordability uplift of 10% in Sefton, West Lancashire, and Wirral. In methodological terms we have sought to be consistent to existing SHMA studies in Sefton and Wirral.

9.50 In considering the scale of adjustment, and the authorities to which it is applied, it should be borne in mind that in proportional terms Sefton and Wirral see the lowest upwards adjustments from the demographic need to support economic growth. West Lancashire sees a higher adjustment (22%) to support economic growth, but potentially warrants an additional adjustment given that it is the authority within the two HMAs with the highest lower quartile house price-to-income ratio and shows very high levels of affordable housing need.

10 SPECIALIST HOUSING NEEDS

10.1 This section moves on to consider housing needs associated with a selected number of groups within the population, or distinct market segments, where these are influenced by the demographic analysis in this report (and therefore need to be considered to provide a consistent evidence base). The analysis therefore focuses on assessing housing needs associated with older persons – including specialist housing needs and registered care.

10.2 In addition, given the Government's agenda to promote self- and custom-build development, consideration is given to the need for this form of development as this is a gap in a number of instances in local authorities' existing evidence bases. An explanation is provided relating to where evidence regarding student housing needs and needs of gypsies and travellers can be found.

10.3 The SHELMA should be read alongside local housing needs/ market assessment which provide locally-specific evidence on the mix of housing, and affordable housing need, in different parts of the City Region.

Older Persons' Housing Needs

10.4 In the Liverpool City Region (as in many areas) a growing older person population is likely to have some impact on the future need and demand for homes. The PPG (2a-021) recognises the need to provide housing for older people as part of achieving a good mix of housing. In this section we draw on a range of sources including our population projections, 2011 Census information and data from POPPI (Projecting Older People Population Information).

10.5 Factors influencing the housing needs of older persons include:

- A rising population of older people – which is a key influence on housing need;
- Many older households are equity rich and are able to exercise housing choice;
- An increased diversity of specialist housing to reflect different levels of care/ support needs; and
- A move away from residential institutions towards providing care support in someone's home through adaptation and visiting support.

10.6 Where projections are used to look at future changes to the older person population, the analysis uses the 2014-based SNPP (as published). This is mainly to allow for comparative analysis across areas (including regional and national comparisons) and it should be noted that figures would not be expected to change substantially if a different projection were to be used – this is because the number of older people is less variable when modelling assumptions are changed; this is due to changes being focussed on migration, which in turn is more concentrated amongst younger age groups (notably people of 'working-age' and their associated children).

Current Population of Older People

10.7 The table overleaf provides baseline population data about older persons and compared this with other areas. The data has been taken from the published ONS mid-year population estimates and is provided for age groups from 65 and upwards. The data shows, when compared with both the region and England, that the study area has a similar proportion of older persons. There are however notable differences between areas, with the population aged 65 and over being 15% in Liverpool, and rising to 23% in Sefton.

Table 47: Older Person Population (2015)

		Under 65	65-74	75-84	85+	Total	Total 65+
Halton	Popn	104,989	12,727	6,600	2,212	126,528	21,539
	% of popn	83.0%	10.1%	5.2%	1.7%	100.0%	17.0%
Knowsley	Popn	122,587	12,940	8,813	2,891	147,231	24,644
	% of popn	83.3%	8.8%	6.0%	2.0%	100.0%	16.7%
Liverpool	Popn	408,541	37,361	24,075	8,603	478,580	70,039
	% of popn	85.4%	7.8%	5.0%	1.8%	100.0%	14.6%
Sefton	Popn	211,898	31,680	21,583	8,546	273,707	61,809
	% of popn	77.4%	11.6%	7.9%	3.1%	100.0%	22.6%
St Helens	Popn	142,228	20,049	11,562	3,773	177,612	35,384
	% of popn	80.1%	11.3%	6.5%	2.1%	100.0%	19.9%
Warrington	Popn	170,819	20,886	11,898	4,092	207,695	36,876
	% of popn	82.2%	10.1%	5.7%	2.0%	100.0%	17.8%
West Lancashire	Popn	88,932	13,306	7,724	2,780	112,742	23,810
	% of popn	78.9%	11.8%	6.9%	2.5%	100.0%	21.1%
Wirral	Popn	253,893	36,046	21,838	9,123	320,900	67,007
	% of popn	79.1%	11.2%	6.8%	2.8%	100.0%	20.9%
Mid-Mersey HMA	Popn	418,036	53,662	30,060	10,077	511,835	93,799
	% of popn	81.7%	10.5%	5.9%	2.0%	100.0%	18.3%
Liverpool HMA	Popn	1,085,851	131,333	84,033	31,943	1,333,160	247,309
	% of popn	81.4%	9.9%	6.3%	2.4%	100.0%	18.6%
Study area (LCR+)	Popn	1,503,887	184,995	114,093	42,020	1,844,995	341,108
	% of popn	81.5%	10.0%	6.2%	2.3%	100.0%	18.5%
North West		81.9%	10.0%	5.9%	2.3%	100.0%	18.1%
England		82.3%	9.6%	5.7%	2.4%	100.0%	17.7%

Source: ONS 2015 Mid-Year Population Estimates

Future Changes in the Population of Older Persons

10.8 As well as providing a baseline position for the proportion of older persons we can use population projections to provide an indication of how the numbers might change in the future compared with other areas. The information presented below uses data from the 2014-based SNPP and looks over the 2012-37 period to be consistent with projections developed in this report.

10.9 The data shows that the study area (in line with other areas) is expected to see a notable increase in the older person population with the total number of people aged 65 and over projected to increase by 52% over the 25-years to 2037; this compares with overall population growth of 7% and a modest decrease in the Under 65 population.

10.10 The projected growth in the population aged 65 and over is slightly lower than that projected for other areas although differences are not substantial. When looking at individual local authorities the data shows the strongest growth in older people to be projected to be in Warrington with the lowest growth seen in Sefton – the differences are in part due to different levels of overall projected population growth, as well as being influenced by the current population profile in each location.

Table 48: Projected Change in Population of Older Persons (2012 to 2037)

	Under 65	65-74	75-84	85+	Total	Total 65+
Halton	-7.7%	39.3%	85.0%	184.2%	4.3%	69.4%
Knowsley	-6.2%	45.0%	50.4%	125.5%	3.8%	55.7%
Liverpool	5.8%	35.1%	44.8%	95.4%	11.5%	45.7%
Sefton	-8.3%	25.3%	44.4%	117.6%	3.1%	44.5%
St Helens	-3.5%	25.4%	58.1%	164.4%	6.7%	50.9%
Warrington	2.7%	44.4%	83.6%	173.0%	14.1%	71.3%
West Lancashire	-6.4%	20.7%	56.6%	175.6%	4.7%	49.8%
Wirral	-7.0%	28.2%	51.5%	113.7%	3.8%	47.8%
Mid-Mersey HMA	-2.1%	36.1%	74.0%	172.3%	9.1%	63.1%
Liverpool HMA	-2.4%	30.4%	48.1%	116.0%	6.5%	47.3%
Study area (LCR+)	-2.3%	32.0%	54.6%	129.7%	7.2%	51.6%
North West	-1.1%	34.2%	58.5%	130.1%	8.5%	54.3%
England	7.6%	44.5%	66.7%	137.9%	17.2%	64.4%

Source: ONS (2014-based SNPP and mid-year population estimates)

Health Related Population Projections

10.11 In addition to providing projections about how the number and proportion of older people is expected to change in the future the analysis has looked at the likely impact on the number of people with specific illnesses or disabilities. For this, data from the Projecting Older People Information System (POPPI) website has been used. This provides prevalence rates for different disabilities by age and sex. For the purposes of this report, analysis has focussed on estimates of the number of people with dementia and mobility problems.

10.12 For both of the health issues analysed the figures relate to the population aged 65 and over. The figures from POPPI are based on prevalence rates from a range of different sources and whilst these might change in the future (e.g. as general health of the older person population improves) the estimates are likely to be of the right order.

10.13 Table 49 shows that both of the illnesses/disabilities are expected to increase significantly in the future although this would be expected given the increasing population. In particular, there is projected to be a large rise in the number of people with dementia (up 85%) along with an 68% increase in the number with mobility problems.

Table 49: Estimated Population Change for range of Health Issues (2012 to 2037)

	Type of illness/disability	2012	2037	Change	% increase
Halton	Dementia	1,228	2,677	1,449	118%
	Mobility problems	3,374	6,572	3,198	95%
Knowlsey	Dementia	1,581	2,836	1,254	79%
	Mobility problems	4,259	7,097	2,838	67%
Liverpool	Dementia	4,577	7,534	2,957	65%
	Mobility problems	12,206	18,889	6,683	55%
Sefton	Dementia	4,256	7,510	3,254	76%
	Mobility problems	11,099	17,733	6,634	60%
St Helens	Dementia	2,087	4,123	2,036	98%
	Mobility problems	5,720	9,974	4,254	74%
Warrington	Dementia	2,172	4,732	2,559	118%
	Mobility problems	5,930	11,492	5,562	94%
West Lancashire	Dementia	1,412	2,885	1,473	104%
	Mobility problems	3,832	6,819	2,988	78%
Wirral	Dementia	4,533	8,022	3,489	77%
	Mobility problems	11,795	19,168	7,372	63%
Mid-Mersey HMA	Dementia	5,488	11,532	6,044	110%
	Mobility problems	15,024	28,038	13,014	87%
Liverpool HMA	Dementia	16,359	28,787	12,428	76%
	Mobility problems	43,190	69,706	26,515	61%
Study area (LCR+)	Dementia	21,847	40,319	18,472	85%
	Mobility problems	58,214	97,744	39,530	68%

Source: Data from POPPI and demographic projections

Indicative Need for Specialist Housing for Older Persons

10.14 Given the ageing population and higher levels of disability and health problems amongst older people there is likely to be an increased requirement for specialist housing options moving forward. The analysis in this section draws on data from the Housing Learning and Information Network (Housing LIN) along with our demographic projections to provide an indication of the potential level of additional specialist housing that might be required for older people in the future.

Current Stock of Specialist Housing

10.15 The table overleaf shows the current supply (stock) of specialist housing for older people. This is split between sheltered housing (which contains two categories) and extra-care housing; analysis is also provided of the tenure of the housing (split between market and affordable). The categories of specialist housing are defined as:

- *Sheltered housing:* Schemes/properties are included where some form of scheme manager (warden) service is provided on site on a regular basis but where no registered personal care is provided. A regularly visiting scheme manager service may qualify as long as s/he is available to all residents when on site. An on-call-only service does not qualify a scheme to be included in sheltered stats. In most cases schemes will also include traditional shared facilities - a residents' lounge and possibly laundry and garden.
- *Enhanced sheltered housing.* Schemes/properties are included where service provision is higher than for sheltered housing but below extra care level. Typically, there may be 24/7 staffing cover, at least one daily meal will be provided and there may be additional shared facilities. In the table overleaf these are included within the Sheltered category.
- *Extra care housing:* Schemes/properties are included where care (registered personal care) is available on site 24/7.

10.16 At present it is estimated that there are just over 19,700 units of specialist accommodation across the study area; this is equivalent to 126 units per 1,000 people aged 75 and over (ranging from 79 per 1,000 in Halton up to 170 per 1,000 in West Lancashire). The analysis shows a significantly higher proportion of the stock is in the affordable than the market sector (81% vs. 19%).

Table 50: Current Supply (Stock) of Specialist Housing for Older People

	Type of Housing	Market	Affordable	Total	Supply per 1,000 aged 75+
Halton	Sheltered	48	555	603	68
	Extra-Care	0	97	97	11
	Total	48	652	700	79
Knowsley	Sheltered	146	1,013	1,159	99
	Extra-Care	0	179	179	15
	Total	146	1,192	1,338	114
Liverpool	Sheltered	390	3,093	3,483	107
	Extra-Care	33	315	348	11
	Total	423	3,408	3,831	117
Sefton	Sheltered	1,256	2,803	4,059	135
	Extra-Care	62	33	95	3
	Total	1,318	2,836	4,154	138
St Helens	Sheltered	55	1,326	1,381	90
	Extra-Care	206	189	395	26
	Total	261	1,515	1,776	116
Warrington	Sheltered	447	644	1,091	68
	Extra-Care	0	475	475	30
	Total	447	1,119	1,566	98
West Lancashire	Sheltered	158	1,518	1,676	160
	Extra-Care	0	111	111	11
	Total	158	1,629	1,787	170
Wirral	Sheltered	982	3,389	4,371	141
	Extra-Care	0	203	203	7
	Total	982	3,592	4,574	148
Mid-Mersey HMA	Sheltered	550	2,525	3,075	77
	Extra-Care	206	761	967	24
	Total	756	3,286	4,042	101
Liverpool HMA	Sheltered	2,932	11,816	14,748	127
	Extra-Care	95	841	936	8
	Total	3,027	12,657	15,684	135
Study area (LCR+)	Sheltered	3,482	14,341	17,823	114
	Extra-Care	301	1,602	1,903	12
	Total	3,783	15,943	19,726	126

Source: Housing LIN

Projected Future Need for Specialist Housing

10.17 A toolkit has been developed by Housing LIN, in association with the Elderly Accommodation Council and endorsed by the Department of Health, to identify potential demand for different types of specialist housing for older people and model future range of housing and care provision. It suggests that there should be around 170 units of specialised accommodation (other than registered care home places) per thousand people aged over 75 years. In projecting forward (at a national level) the Housing LIN works on the basis of a requirement for 125 sheltered housing units per 1,000 population, 20 enhanced sheltered units and 25 Extra-care units.

10.18 Table 51 below shows the change in the population aged 75 and over and what this would mean in terms of provision at 170 units per 1,000 population. The analysis shows a potential need for 18,840 units – 754 per annum in the 2012-37 period. This is around 16% of the total need identified in the demographic modelling linked to the 2014-based household projections (although the proportion would be lower if a projection with higher household growth were to be used).

10.19 The figures provided about the number and proportion of homes that might need to be specifically for older persons should be treated as indicative of potential need and not some sort of delivery target. In reality, the ability for such housing to be provided will also be influenced by the ability for this to be financed by the Councils.

Table 51: Projected need for Specialist Housing for Older People (2012-37)

	Population aged 75+ (2012)	Population aged 75+ (2037)	Change in population aged 75+	Specialist housing need (@ 170 units per 1,000)	Per annum need (2012-37)
Halton	8,392	17,583	9,191	1,562	62
Knowsley	11,414	19,087	7,673	1,304	52
Liverpool	31,957	50,328	18,371	3,123	125
Sefton	29,063	47,752	18,689	3,177	127
St Helens	14,295	26,358	12,063	2,051	82
Warrington	14,471	30,045	15,574	2,648	106
West Lancashire	9,622	18,004	8,382	1,425	57
Wirral	30,104	50,983	20,879	3,549	142
Mid-Mersey HMA	37,158	73,986	36,828	6,261	250
Liverpool HMA	112,160	186,154	73,994	12,579	503
Study area (LCR+)	149,318	260,139	110,821	18,840	754

Source: Derived from demographic projections and Housing LIN

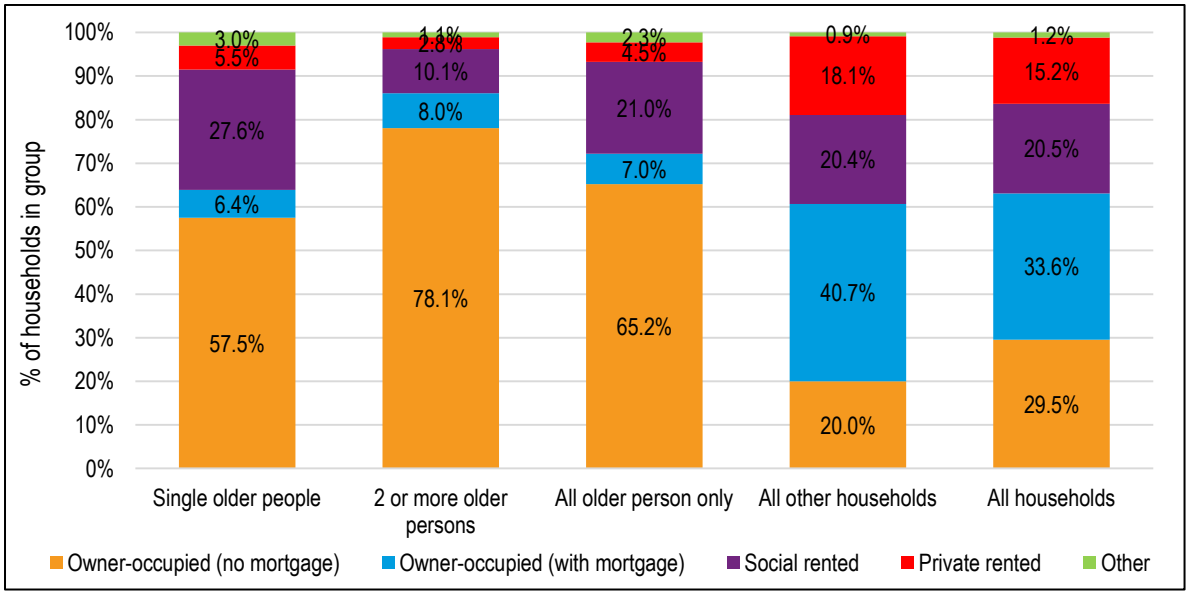
Types and Tenures of Specialist Housing

10.20 Figure 59 shows the tenure of older person households – the data has been split between single older person households and those with two or more older people (which will largely be couples). The data shows that older person households are relatively likely to live in outright owned accommodation (65%) and are also slightly more likely than other households to be in the social rented sector. The proportion of older person households living in the private rented sector is relatively low (4% compared with 15% of all households in the study area).

10.21 There are however notable differences for different types of older person households with single older people having a much lower level of owner-occupation than larger older person households – this group also has a much higher proportion living in the social rented sector.

10.22 Given that the number of older people is expected to increase in the future and that the number of single person households is expected to increase this would suggest (if occupancy patterns remain the same) that there will be a notable demand for affordable housing from the ageing population. That said, the proportion of older person households who are outright owners (with significant equity) may mean that market solutions will also be required to meet their needs.

Figure 59: Tenure of Older Person Households – study area (2011)

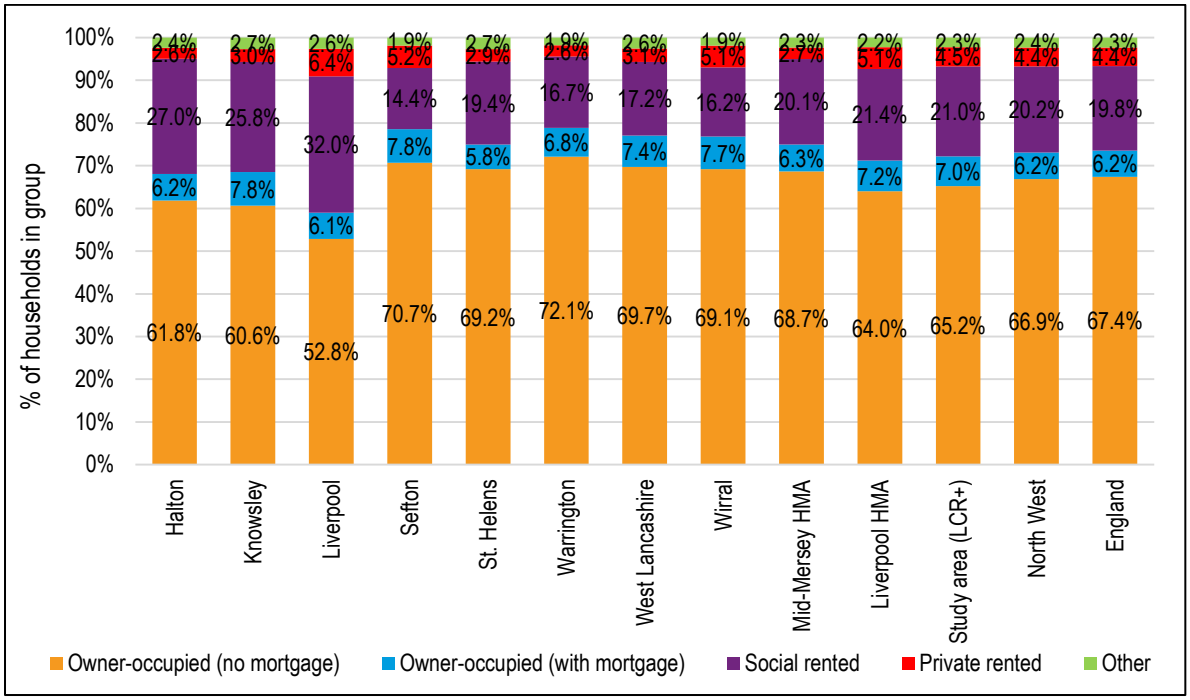


Source: 2011 Census

10.23 For individual local authorities (data in Figure 60) the tenure profile of older persons shows some differences, although it is clear in all locations that outright ownership is the main tenure group – the proportion of older person households who are outright owners varies from 53% in Liverpool, up to 72% in Warrington. The data shown is for all older person households (i.e. combining single person

households and those with two or more older people). Data has also been provided for the North West region and England for comparative purposes.

Figure 60: Tenure of Older Person Households – by local authority (2011)



Source: 2011 Census

10.24 The analysis therefore shows that the current profile of older person households is significantly biased towards outright ownership, with the current supply having a notably higher proportion of affordable homes. Housing LIN suggests a broad tenure split of 40% rented housing (affordable housing) and 60% in the market.[23] The higher proportion in the market reflects the fact that the majority of older person households are currently owner-occupiers (as is the case in the study area). This general split is arguably reasonable although local considerations might mean that a different mix is considered appropriate for individual local authorities (or HMAs).

10.25 The analysis is not specific about the types of specialist housing that might be required; decisions about mix should be taken at a local level taking account of specific needs and the current supply of different types of units available (for example noting that at present the dominant type of housing is traditional sheltered accommodation). There may also be the opportunity moving forward for different types of provision to be developed as well as the more traditional sheltered and Extra-Care housing.

[23] See: http://www.housinglin.org.uk/_library/Resources/Housing/Support_materials/Reports/MCGVdocument.pdf

10.26 Within the different models and assumptions made regarding the future need for specialist retirement housing (normally defined as a form of congregate housing designed exclusively for older people which usually offers some form of communal space, community alarm service and access to support and care if required), there may for example be an option to substitute some of this specialist provision with a mix of one and two bedroomed housing aimed to attract 'early retired' older people which could be designated as age specific or not. Such housing could be part of the general mix of one and two bedroom homes but built to Lifetime Homes standards in order to attract retired older people looking to 'down size' but perhaps not wanting to live in specialist retirement housing.

10.27 Our experience when carrying out stakeholder work as part of other commissions typically identifies a demand for bungalows. Where developments including bungalows are found it is clear that these are very popular to older people downsizing. It should be acknowledged that providing significant numbers of bungalows involves cost implications for the developer given the typical plot size compared to floor space – however providing an element of bungalows should be given strong consideration on appropriate sites, allowing older households to downsize while freeing up family accommodation for younger households.

10.28 In summary, for the purposes of analysis, a number of assumptions have been taken from Housing LIN to estimate how much specialist provision might be needed in the future (and to some extent what types). The analysis should however be considered as indicative and interpreted with the following considerations:

- The analysis takes no account of whether or not there is a shortfall (or surplus) of specialist housing at the base date of 2012;
- Locally, the figure of 170 per 1,000 may be considered too high given that life expectancy and general health may improve in the future;
- The national tenure split of 40% affordable housing may not be appropriate in all locations within the study area.
- Whilst the analysis is split between sheltered, enhanced sheltered and extra-care housing in the same proportions as shown nationally, it may be the case that there will over time be a shift away from conventional sheltered housing to reflect the demand profile in the sector and a possible requirement for higher levels of care as the population ages.

Registered Care Housing

10.29 As well as the need for specialist housing for older people the analysis needs to consider Registered Care. At present (according to Housing LIN) there are around 15,600 spaces in nursing and residential care homes in the study area. Registered care housing is defined in two categories as set out below:

- *Residential care:* Where a care homes is registered to provide residential (personal) care only, all beds are allocated to residential care.

- *Nursing care:* Where a care homes is registered to provide nursing care all beds are allocated to nursing care, although in practice not all residents might be in need of or receiving nursing care.

10.30 The current supply of registered care bedspaces is shown in Table 52 below.

Table 52: Current Supply (Stock) of Registered Care Bedspaces

	Residential care	Nursing care	Registered care total
Halton	474	328	802
Knowsley	446	675	1,121
Liverpool	1,207	2,128	3,335
Sefton	1,673	1,542	3,215
St Helens	662	520	1,182
Warrington	540	1,156	1,696
West Lancashire	514	574	1,088
Wirral	1,167	1,994	3,161
Mid-Mersey HMA	1,676	2,004	3,680
Liverpool HMA	5,007	6,913	11,920
Study area (LCR+)	6,683	8,917	15,600

Source: Housing LIN

10.31 Given new models of provision (including Extra-care housing) it may be the case that an increase in this number would not be required (although this would also be assuming that the Councils would (and could) fund the care and housing related support required to operate extra care housing). There will however need to be a recognition that there may be some additional need for particular groups such as those requiring specialist nursing or for people with dementia.

10.32 As with the analysis of potential need for specialist accommodation, the analysis below considers changes to the number of people aged 75 and over who are expected to be living in some form of institutional housing. This is a direct output of the demographic modelling which indicates an increase of 8,954 people living in institutions over the 2012-37 period (358 per annum). These figures are important to note if the Councils intend to include C2 class uses in their assessment of 5-year housing land supply as it will be necessary to include figures on both the need and supply side of the equation. They are modelled in a consistent way to the OAN for C3 dwellings, but are separate from this.

Table 53: Potential Need for Residential Care Housing

	Institutional population aged 75+ (2012)	Institutional population aged 75+ (2037)	Change in institutional population aged 75+	Per annum 'need' (2012-37)
Halton	507	1,100	593	24
Knowsley	624	1,134	510	20
Liverpool	1,981	3,267	1,286	51
Sefton	2,433	4,222	1,789	72
St Helens	795	1,620	825	33
Warrington	1,174	2,523	1,349	54
West Lancashire	935	1,913	978	39
Wirral	2,228	3,853	1,625	65
Mid-Mersey HMA	2,476	5,243	2,767	111
Liverpool HMA	8,201	14,389	6,188	248
Study area (LCR+)	10,678	19,632	8,954	358

Source: Derived from demographic projections

Older Persons' Housing Needs – Key Points

- Within the overall need for housing there will potentially be a need to provide some specialist (supported) housing. This is particularly in response to an ageing population and the higher levels of disability experience by older persons.
- At present the population of older people in the study area is broadly similar to that seen in other areas – some 18% of people were aged 65 and over in 2015. Over the 2012-37 period the number of people aged 65 and over is projected to increase by 52% with a higher (130%) increase in the number of people aged 85 and over.
- This demographic change would be likely to see an increase in the number of people with specific disabilities (e.g. dementia and mobility problems) as well as a general increase in the numbers with a long-term health problem or disability.
- The analysis identifies over the 2012-37 period that there may be a need for 754 specialist units of accommodation for older people (generally considered to be sheltered or extra-care housing) per annum. Such provision would be within a C3 use class and would therefore be part of the objective assessment of need.
- Additionally, the analysis highlights a potential need for an additional 358 registered care bedspaces per annum for older people (aged 75 and over) in the 2012-37 period. As these would be in use class C2, they would be in addition to the estimates of housing need from demographic modelling.

Student Housing

10.33 Student housing needs will arise principally from growth in student numbers. The household projections herein, and therefore the calculations of OAN derived from these, assume that all population growth in age groups under 75 is within the 'household population.' The projections, in line with the CLG Household Projections Model, assumes the population under 75 living in institutions (which includes prisons, student halls or residence, boarding schools, nursing/ care homes etc.) remains constant in absolute terms. This means there is no demographically projected growth in the student population living within institutions such as halls of residence or purpose-built student accommodation.

10.34 The main universities within the City Region are:

- Liverpool Hope University
- Liverpool John Moores University
- University of Liverpool
- Edge Hill University

10.35 The first three above are based in Liverpool, with Edge Hill based in Ormskirk, West Lancashire. In addition, Liverpool hosts the Liverpool Institute of Performing Arts.

10.36 Accordingly, the student needs are focussed in the authorities of Liverpool and West Lancashire. Both authorities continually liaise with the universities to identify the need for student accommodation at a local authority level. It is therefore not considered appropriate or necessary to consider the need for student housing at a sub-regional level. It is recommended that student housing needs should continue to be identified by the authorities of Liverpool and West Lancashire through their Local Plans preparation.

Self/ Custom Build

10.37 Housing needs evidence need to investigate the contribution that self-build makes toward the local supply. *Laying the Foundations – a Housing Strategy for England 2010* sets out that only one in 10 new homes in Britain were custom built – a lower level than in other parts of Europe. It identifies barriers to self or custom-build development[24] as including:

- A lack of land;
- Limited finance and mortgage products;
- Restrictive regulation; and
- A lack of impartial information for potential custom homebuilders.

[24] Self-build is generally considered to refer to situations where a household individually organises and designs the construction of their own home. With custom-build development, a household would work with a specialist developer to design their home.

10.38 Government aspires to make self-build a 'mainstream housing option' by making funding available to support self- and custom-builders and by asking local authorities to champion the sector. Up to £30m of funding has been made available via the Custom Build programme administered by the HCA to provide short-term project finance to help unlock group custom build or self-build schemes. The fund can be used to cover eligible costs such as land acquisition, site preparation, infrastructure, S106 planning obligations etc.

10.39 Local authorities are now required to establish and maintain a register of those interested in building or commissioning their own home. This was introduced by the Self- and Custom Homebuilding Act 2015. Council registers show that there is a relatively low level of demand for custom build across the Liverpool City Region and the two HMAs. As such this is not considered to be a strategic issue, and therefore better addressed at a local authority level, rather than in this SHELMA.

10.40 Data on the availability of plots is held on the Buildstore website, which maintains a register of those wishing to build a custom or self-build property as well as a register of plots available for this type of development. As of August 2016, there are 680 people registered on the Custom Build register within the seven local authorities. Halton has the greatest number of people on the custom build register with 317 registrations.

Table 54: People Registered on Custom Build and Plotsearch Registers

Local Authority	Custom Build Register
Halton	317
Knowsley	70
Liverpool	61
Sefton	47
St. Helens	74
West Lancashire	24
Wirral	87
Total	**680**

Source: Buildstore, 2016

10.41 Buildstore's registers are an online resource, registration is free and unrestricted. Accordingly, the above data should be treated with caution and may over represent the true need for self/custom build. For example, several of the Councils' own self build registers contain a considerably smaller number of records.

10.42 Table 55 provides information of the available supply of self-build locations in the City Region and the number of plots within these locations, as recorded on the Buildstore online database[25]. This shows that over half (22 out of 38) of the self-build plots in the City Region are in Wirral, at 14

[25] We are also aware of a small number of self-build sites not recorded on Buildstore so the figures represent a minimum.

locations within the Borough. There are also a small number of plots available in Liverpool (9), Sefton (6), and a single plot in St Helens.

Table 55: Availability of Custom/Self-Build Plots (August 2016)

Local Authority	Town	Locations	Plots
Liverpool	Liverpool	8	9
Sefton	Southport	4	6
St Helens	St. Helens	1	1
Wirral	Prenton	4	5
Wirral	Wallasey	1	1
Wirral	Wirral (other)	9	16
Total		**27**	**38**

Source: Buildstore, 2016

10.43 From a development point of view, key issues with this market are associated with skills and risk: whilst there may be a notable number of people with an 'interest' in self-build, there is in some circumstances a significant financial outlay, risk and time-cost associated with self-build.

10.44 We would expect most new delivery to be on small windfall sites; although there is some potential through policy to encourage developers of larger schemes to designate parts of these as plots available for custom build.

Gypsy and Travellers

10.45 The Department for Communities and Local Government (DCLG) published an updated planning policy for traveller sites in August 2015. This set out how local planning authorities should make their own assessment of need for the purposes of planning. It amends section 8 of the Housing Act 1985 to require local housing authorities to consider the needs of people residing in or resorting to their district with respect to the provision of sites on which caravans can be stationed or places on inland waterways where houseboats can be moored.

10.46 Assessments of Gypsy and Traveller needs have been undertaken by the Merseyside & West Lancashire Gypsy and Traveller Accommodation Assessment (August 2014)[26], and the Cheshire Gypsy and Traveller Accommodation Assessment (March 2014) for Halton.

10.47 The need for moorings for houseboats will be individually assessed at a local authority level and each authority should individually assess what proportion of their OAN should be met by appropriate provision as part of their Local Plan preparation process.

[26] Knowsley Council, Liverpool Council, Sefton Council, St Helens Council, West Lancashire Borough Council, and Wirral Council.

11 NEED FOR OFFICE AND INDUSTRIAL LAND

11.1 In this section we consider demand for employment land and floorspace over the plan period from 2012-37. The section considers requirements for employment land in the B1, B2 and 'small scale' B8 use classes. In this report we have used a definition of 'Small Scale' B8 to mean units under 9,000 sq m or 100,000 sq ft in size. Warehouse units larger than this are defined as 'large scale' B8.

Methodology

11.2 The demand for large scale B8 is considered separately from small scale B8 (and set out in Section 12). The deep water container terminal at Liverpool2, which opened in November 2016, will increase freight throughput at the port are expected to drive increased demand for warehouse/distribution land in the FEMA over the forecasting period (2012-37). Increased port capacity and activity will drive increased demand for warehouse and distribution activities across the City Region. This increased demand is likely to be predominantly for large scale warehouse units capable of supporting regional and national operations.

11.3 However, this port related demand will to some extent be additional to past and current demand trends and will not therefore be reflected in either the labour demand forecasting or past completion trends traditionally used to estimate future employment land demand. Therefore, relying on either of these traditional sources to calculate employment need will likely severely underestimate demand for large scale B8 units. However an important component of h demand for new-build large scale warehousing will arise from replacement of older outdated stock. Accordingly, this study uses an alternative methodology to estimate large scale B8 demand which takes account of the need to replace older stock and the increase in freight throughput resulting from the Liverpool2 development and wider SuperPort concept.

11.4 The labour demand scenarios, produced by Oxford Economics and the Liverpool City Region LEP, take the proposals at Liverpool2 into account in their Growth Scenario model. However, the labour demand scenarios provide outputs at a sectoral level, but do not differentiate between jobs at small scale or large scale B8 uses – this is not derivable from the model. Therefore disaggregating jobs growth for small scale or large scale B8 from the labour demand forecasts is likely to result in a high level of uncertainty.

11.5 Additionally, the correlation between jobs numbers and employment floorspace (i.e. the employment density) becomes increasingly inaccurate for large scale units. For large scale warehouse units the employment density is usually more strongly influenced by the type of commodity being stored. Again, this means that forecasting large scale B8 need from the labour demand forecasts is likely to result in a high level of uncertainty.

11.6 Therefore, taking the above into consideration, GL Hearn has drawn upon past completions trends data to assess the demand for small scale B8 land.

11.7 To consider demand for office (B1a, B1b) and industrial (B1c, B2) land we have considered the labour demand scenarios provided by Oxford Economics and the Liverpool City Region LEP as well as past completions data.

Figure 61: Components of Employment Land Need

B1a	• Labour Demand Scenarios • Completions Trend
B1b	• Labour Demand Scenarios • Completions Trend
B1c	• Labour Demand Scenarios • Completions Trend
B2	• Labour Demand Scenarios • Completions Trend
'Small scale' B8	• Completions Trend
'Large scale' B8	• Model based on freight throughput and replacement demand (See Section 12)
Margin	• Completions Trend

11.8 The analysis of 'demand' for employment land therefore does not take account of any supply-side factors such as existing employment land allocations or commitments.

Labour Demand Scenario

11.9 The labour demand scenario is based on econometric forecasts produced by Oxford Economics and Liverpool City Region LEP. Two forecasts have been considered:

- Baseline Scenario; and
- Liverpool City Region LEP Growth Scenario.

11.10 The Baseline Scenario is based on Oxford Economics' baseline model. The Growth Scenario is based on additional information provided by the Liverpool City Region LEP and local authorities inputs regarding planned/ potential development and regeneration schemes. These forecasts are presented in more detail in Section 6 of this report. The Full-Time Equivalent (FTE) jobs growth of each forecast is shown in the table below.

Table 56: Full-Time Equivalent (FTE) Jobs Growth, FEMA – 2012-37

	Baseline Scenario	Growth Scenario
Halton	3,500	11,200
Knowsley	8,900	11,900
Liverpool	23,600	57,600
Sefton	2,200	5,700
St. Helens	2,700	15,800
Wirral	6,600	11,500
West Lancashire	5,300	6,000
FEMA	52,800	119,700

Source: Oxford Economics

11.11 GLH has estimated a labour demand based employment land needs for each of the FEMA authorities based on the outputs of Oxford Economics' Baseline and Growth Scenarios.

Translating Sectors to Use Classes

11.12 The Growth Scenario sets out forecast jobs growth across 96 sectors. GLH has considered the proportion of employment in each of these sectors which is likely to take place in office (Use Class B1a), R&D floorspace (Use Class B1b), light industrial floorspace (Use Class B1c) and general industrial floorspace (Use Class B2). We have calibrated our standard model to relate to sectors and use classes for the Liverpool City Region's economy through interrogation of the composition of employment in key sectors[27]. This is used to derive forecasts of net growth in FTE employment by use class over the plan period.

11.13 To these figures we have applied standard employment densities taking account of the HCA Employment Densities Guide: 3rd Edition (Bilfinger GVA and the Homes and Communities Agency,

[27] This analysis is undertaken at 4-digit SIC level.

2015). We have converted figures to provide employment densities for gross external floor areas on the following basis:

- General Offices (B1a): The 2015 Employment Densities Guide provides a range of plot ratios for B1a uses – broken down by sub-sector. The sub-sectors are Corporate; Professional Services; Public Sector; Technology, Media, and Telecoms; Financial and Insurance; and Call Centres. These have employment ratios ranging from 8-13 sq m (NIA) per FTE employee. We have assumed that the gross external area of buildings is on average 20% higher than the net internal area;
- Research and Development Offices (B1b): The 2015 Employment Densities Guide includes employment densities for research and development (B1b) uses (unlike the 2010 guide). The guide sets out that the sector can be considered to be split into two key directions; an innovation and science focussed direction which is associated with the knowledge economy and life sciences activity, and a more traditional industrial focussed direction which fits alongside manufacturing. An average of 50 sq m GEA per FTE employee has been assumed, assuming that the gross external area of buildings is on average 20% higher than the net internal area;
- Light and General Industrial (B1c and B2): an average of 40 sq m GEA per employee, assumes the focus is likely to be more towards light industrial activities given small business focus of economy, assumes that the gross external area of buildings is on average 5% higher than the gross internal area.

11.14 Applying these employment densities[28] to the forecasts of net growth in jobs in B-class activities, we can derive forecasts for net changes in employment floorspace required to support the forecast level of jobs growth.

Accounting for Manufacturing Losses

11.15 For some sectors the Growth Scenario forecasts a net loss in FTE jobs over the period 2012-37. This is particularly the case for a number of the manufacturing sub-sectors. This raises the question of how the losses should be treated in terms of employment land needs. The above employment densities apply to modern developments and account for current working practices. However, applying the modern employment densities to losses is liable to overestimate the losses of employment land. Losses will generally be older stock which is less suitable for modern working practices. The HCA Guide advises that in such instances care must be taken and appraisers should adjust for the type and age of the buildings concerned and the businesses within them. Such an approach is unsuitable for a strategic study such as this.

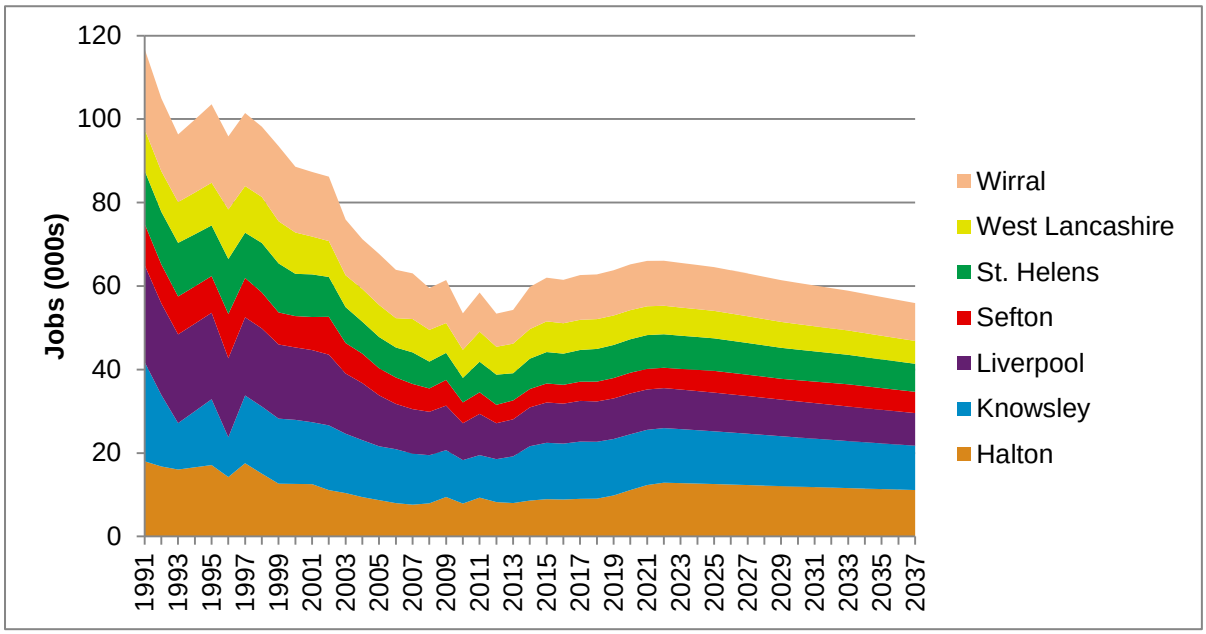
11.16 Furthermore, although there has been a considerable loss of jobs in the Manufacturing sector over the last two decades, changing operating practices and increasing levels of automation has meant that this has not necessarily translated into an equivalent loss of industrial floorspace. In other words, the amount of floorspace required per manufacturing worker (i.e. the employment density)

[28] Note: The employment densities for some of the use-classes use Gross External Area (GEA) while others use net internal area (NIA), as is set out in the HCA Guide.

has been increasing, influenced by productivity improvements. The figures below consider this issue in greater detail for the FEMA.

11.17 Figure 62 shows the total manufacturing jobs in the FEMA since 1991 and the forecast in manufacturing jobs to 2037. This shows a large and steady decline in manufacturing jobs throughout the 1990s and 2000s. Over the period from 2000 to 2012 there was a 40% reduction in manufacturing jobs. This trend has, in recent years, reversed and the forecasts show a short term increase in jobs to 2020. The Oxford Economic forecasts show that after 2020, manufacturing jobs are forecast to return to the long-term trend of decline.

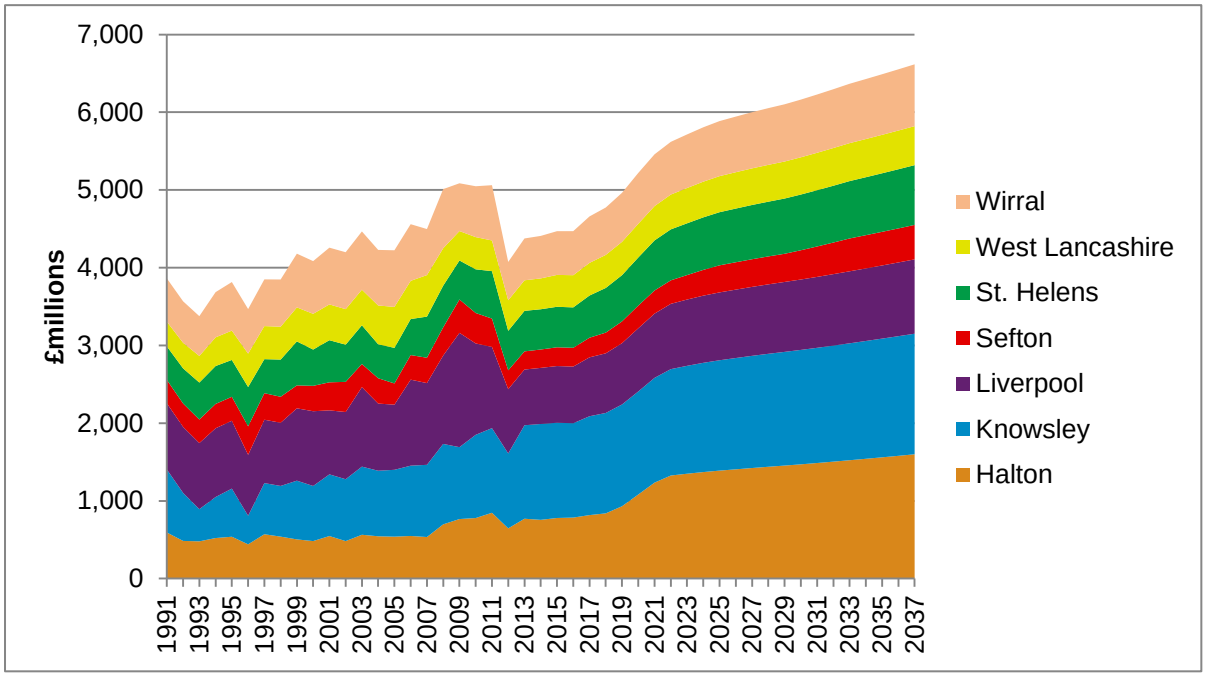
Figure 62: Total Manufacturing Jobs – 1991-2037



Source: Oxford Economics Growth Scenario

11.18 Conversely, since 1991 the manufacturing sector's GVA has seen steady increases to 2011. Over the period from 2000-2011, manufacturing GVA has grown by 24%. In 2012 the data shows a one-off blip, however the forecasts beyond this shows a continuation of the strong and consistent growth. Clearly, the historic losses in manufacturing jobs is not translated into reduced growth in the sector and the growth in GVA points to increased productivity in the sector.

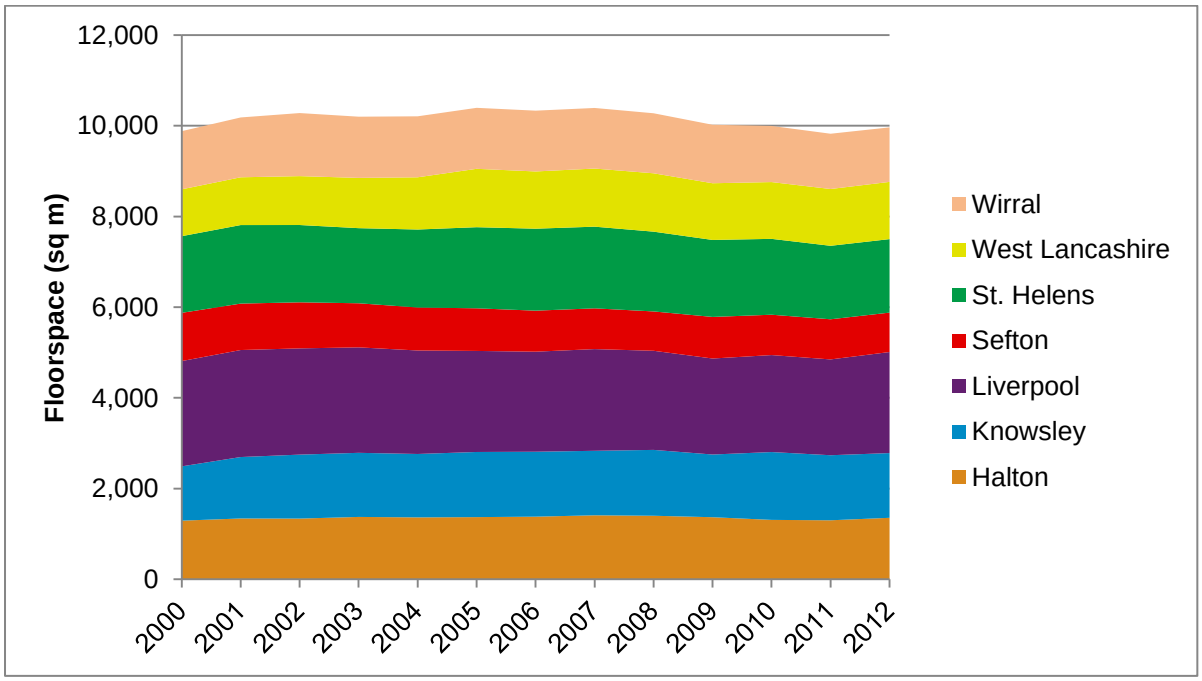
Figure 63: Manufacturing GVA – 1991-2037



Source: Oxford Economics Growth Scenario

11.19 Figure 64 shows the total industrial floorspace over the period from 2000 to 2012. Over this period (when there was a 40% reduction in jobs) there has been a 0.8% net increase in industrial floorspace in the FEMA.

Figure 64: Total Industrial Floorspace – 2000-2012



Source: VOA

11.20 The evidence shows that historically the job losses in the manufacturing sector have not correlated to a corresponding decrease in industrial floorspace. However, the historic trend does show growth to GVA (economic output) indicating increased productivity within the sector. This suggests that job losses in the sector are a result of streamlined/ more productive operating practices rather than a reduction in activity or indeed floorspace requirements.

11.21 Furthermore, the FEMA's historic trends in manufacturing jobs and GVA are forecast to continue over the period to 2037. Accordingly, assuming these trends continue, it is reasonable to assume that any forecast losses in manufacturing jobs will similarly not be translated into significant net reductions in industrial floorspace.

11.22 On this basis, GL Hearn has forecast future industrial floorspace requirements (which principally relate to manufacturing activities) in the labour demand scenarios based on those manufacturing sub-sectors which are expected to see growth in employment over the forecast period (2012-37). For industrial floorspace in particular it highlights that consideration should also be given to the completions trend forecasts.

11.23 It should be noted that the floorspace figures shown in Figure 64 are net figures. While the overall quantum of industrial floorspace in the FEMA has remained largely consistent over this period this does not reflect a lack of development. Older existing stock will require updating, and some existing sites may no longer be suitable or attractive in market terms to support manufacturing (or other employment) uses. Local authorities should therefore continue to identify any such sites and provide a suitable level of land to replace these losses.

Labour Demand Forecasting Results

11.24 The forecast jobs growth in the Baseline and Growth Scenarios results in the following requirement for B1 and B2 floorspace:

Table 57: Baseline Scenario – Office and Industrial Floorspace Requirement (Sq m)

	B1a	B1b	B1c	B2	Total
Halton	30,600	30,700	28,400	33,800	123,500
Knowsley	55,900	20,200	40,400	61,400	177,900
Liverpool	163,700	19,000	46,200	23,400	252,300
Sefton	19,600	3,700	24,700	12,200	60,200
St Helens	18,300	5,200	28,600	18,800	70,900
Wirral	54,400	24,100	47,500	45,000	171,000
West Lancashire	34,200	6,500	23,100	14,700	78,500
FEMA	376,800	109,300	239,000	209,400	934,500

Table 58: Growth Scenario – Office and Industrial Floorspace Requirement (Sq m)

	B1a	B1b	B1c	B2	Total
Halton	110,700	33,900	30,000	34,600	209,200
Knowsley	71,500	20,400	41,200	61,800	194,900
Liverpool	550,800	19,600	63,700	23,500	657,600
Sefton	48,800	3,700	25,700	12,200	90,400
St Helens	43,900	19,200	76,000	73,300	212,400
Wirral	90,100	26,500	51,800	49,400	217,800
West Lancashire	36,500	6,600	23,300	14,700	81,100
FEMA	952,200	130,000	311,700	269,400	1,663,300

11.25 The figures in Tables 57 and 58 are net changes and do not take account of frictional vacancy or replacement demand, such as from existing companies requiring upgraded floorspace. The demand assessment is trend-based.

11.26 To calculate the land requirements to support these net changes, we have applied the following plot ratios[29]. This is the ratio of gross floorspace to site area:

- In Liverpool:
  - 1.5 for B1a/b office and R&D uses; and
  - 0.4 for B1c and B2 industrial uses.
- In the rest of the FEMA:
  - 0.75 for B1a/b office and R&D uses; and
  - 0.4 for B1c and B2 industrial uses.

11.27 This generates the following requirement for net additional office and industrial land to support the Baseline Scenario and the Growth Scenario:

Table 59: Baseline Scenario – Net Office and Industrial Floorspace Requirement (Ha)

	B1a	B1b	B1c	B2	Total
Halton	4.3	4.1	7.1	8.4	23.9
Knowsley	7.5	2.7	10.1	15.4	35.6
Liverpool	11.0	1.3	11.6	5.9	29.7
Sefton	2.7	0.5	6.2	3.0	12.4
St Helens	2.5	0.7	7.2	4.7	15.1
Wirral	7.3	3.2	11.9	11.3	33.7
West Lancashire	4.6	0.9	5.8	3.7	14.9
FEMA	39.9	13.3	59.7	52.3	165.3

[29] Based on figures from Employment Land Reviews: Guidance Note (Report to the Office of the Deputy Prime Minister from Environmental Resources Management, December 2004).

Table 60: Growth Scenario – Net Office and Industrial Floorspace Requirement (Ha)

	B1a	B1b	B1c	B2	Total
Halton	15.2	4.5	7.5	8.7	35.9
Knowsley	9.6	2.7	10.3	15.4	38.1
Liverpool	36.9	1.3	15.9	5.9	60.0
Sefton	6.6	0.5	6.4	3.1	16.6
St Helens	6.0	2.6	19.0	18.3	45.9
Wirral	12.1	3.5	12.9	12.4	41.0
West Lancashire	4.9	0.9	5.8	3.7	15.3
FEMA	91.4	16.0	77.9	67.4	252.7

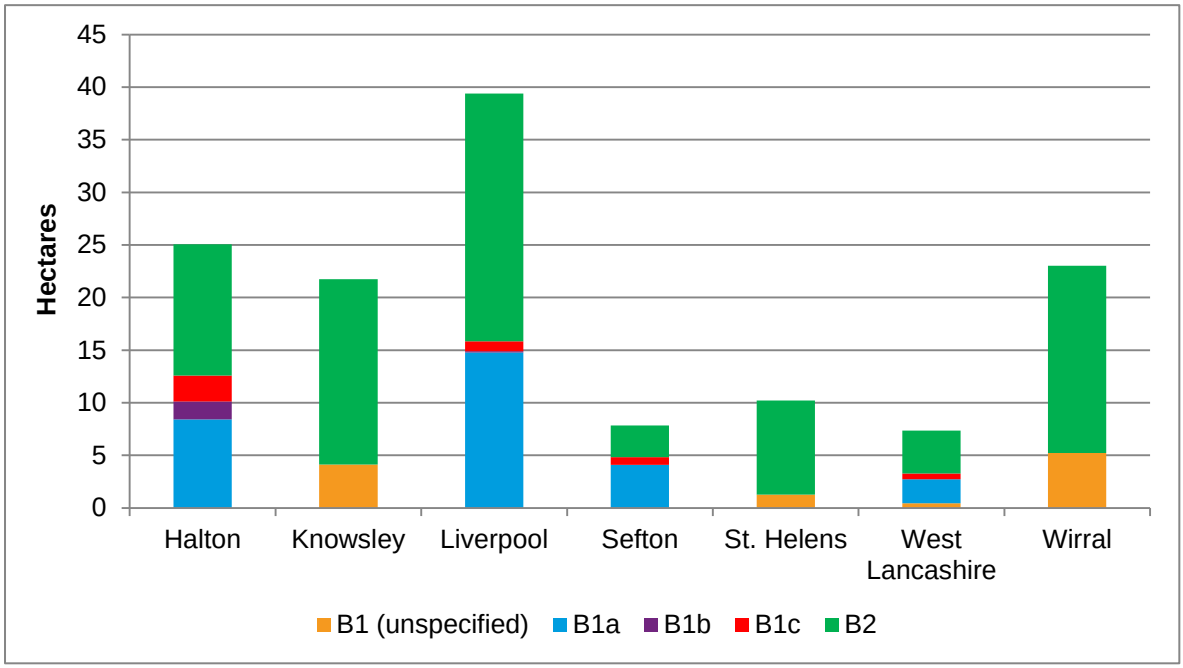
11.28 In identifying how much land to allocate for development, we consider that it would be prudent to include a 'margin' in addition to the labour demand based figures above in order to provide for some flexibility, recognising:

- Typically, there is some level of vacant floor space within functioning markets;
- The potential error margin associated with the forecasting process;
- To provide a choice of sites to facilitate competition in the property market;
- To provide flexibility to allow for any delays in individual sites coming forward.

11.29 GL Hearn consider that it would be appropriate to make provision for a 5-year 'margin' based on past employment delivery. It is considered that it would be appropriate to use long-term trends to calculate this, given that recent take-up may in some instances have been influenced by short-term supply-side constraints. Where data is available, completions have been considered over the period from 2000.

11.30 Figure 65 shows the margin for each authority based on 5 years' completions trend data. Completions data was recorded in terms of floorspace (sq m) and converted to land area (ha) using consistent plot ratio assumptions as above.

Figure 65: Margin – 5 Year Completions Trend



Source: Local Authorities' Monitoring Data

11.31 The total land requirement for office and industrial uses (Use Classes B1a/b/c and B2) is derived by adding the margin to the outcomes of the Baseline and Growth Scenario forecasts. This is shown in the table below.

Table 61: Total Land Requirement for Office and Industrial Uses, 2012-37

	Margin	Baseline Scenario + Margin	Growth Scenario + Margin
Halton	25.1	49.0	60.9
Knowsley	21.7	57.3	59.8
Liverpool	39.4	69.1	99.4
Sefton	7.8	20.2	24.4
St Helens	10.2	25.3	56.1
Wirral	23.0	56.7	64.0
West Lancashire	7.3	22.2	22.6
LCR	134.6	299.9	387.3

Past Completions Trends

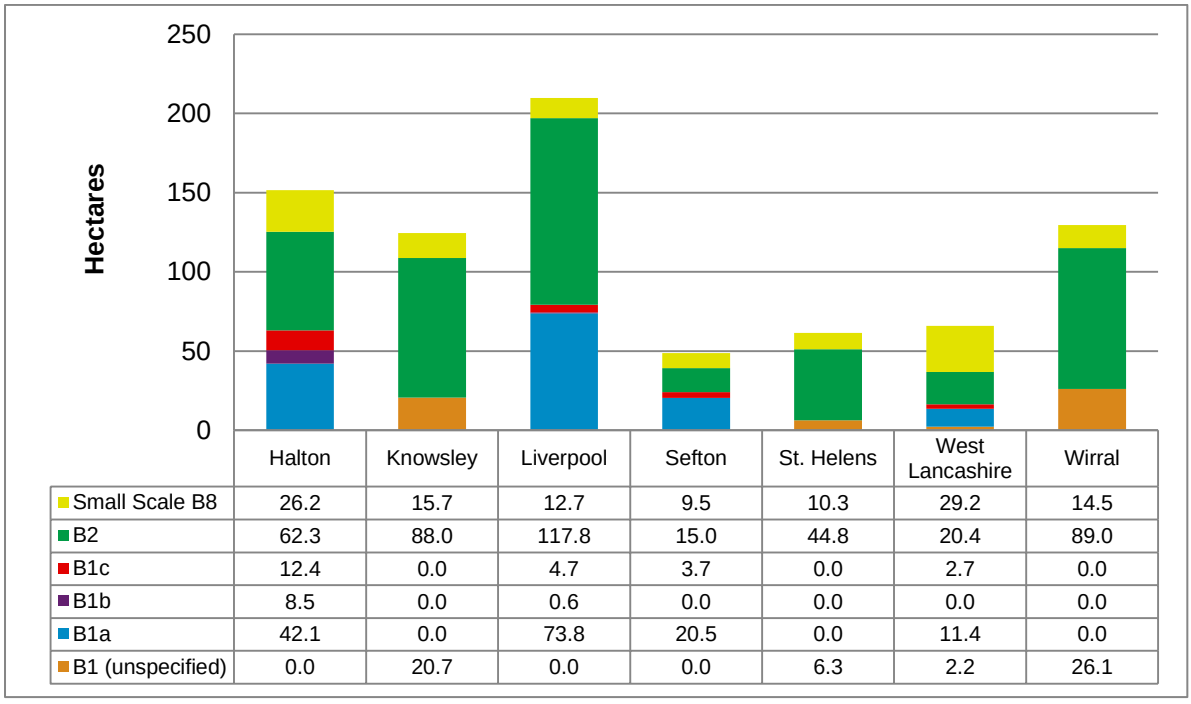
11.32 Next an alternative forecast approach has been considered, based on projecting forward past gross completions of employment floorspace development. The completions trend includes B1, B2, and small scale B8 developments. Large scale B8 developments have been stripped out. As gross completions data is used, it is not necessary to include provision for a 'margin' in the modelling.

11.33 The Councils have, where available, provided GL Hearn with monitoring data indicating employment floorspace completions since 2000. This period is bisected by the 'credit crunch' in 2008, and is representative of a full market cycle[30].

11.34 Assuming future development is consistent with historic trends, the quantum of employment land which would be required to support future development can be extrapolated over the 25 year period 2012-37. Completions data was recorded in terms of floorspace (sq m) and converted to land area (ha) using consistent plot ratio assumptions set out previously.

11.35 The employment land requirement based on past completions trends (excluding demand for large scale B8 uses) is shown below. The completions data for some local authorities contained some 'general' or unspecified B-class uses. These have been disaggregated into B use classes on a pro rata basis.

Figure 66: Employment Land Requirement Based on Completions Trend, 2012-37



	Halton	Knowsley	Liverpool	Sefton	St. Helens	West Lancashire	Wirral
Small Scale B8	26.2	15.7	12.7	9.5	10.3	29.2	14.5
B2	62.3	88.0	117.8	15.0	44.8	20.4	89.0
B1c	12.4	0.0	4.7	3.7	0.0	2.7	0.0
B1b	8.5	0.0	0.6	0.0	0.0	0.0	0.0
B1a	42.1	0.0	73.8	20.5	0.0	11.4	0.0
B1 (unspecified)	0.0	20.7	0.0	0.0	6.3	2.2	26.1

Source: Local Authorities' Monitoring Data

Comparison of Labour Demand and Completions Trends Land Requirements

11.36 Table 62 provides a comparison of the employment land requirements resulting from the labour demand scenarios and the completions trend data over the period 2012 to 2037.

[30] For the majority of the authorities, completions data from 2000/2001 has been used; in Liverpool completions data from 2002/03 has been used; in St. Helens completions data from 2008/09 has been used as older data does not differentiate between large scale and small scale B8 developments.

11.37 The Baseline Scenario identifies the smallest requirement for both B1 and B2 land with a need at FEMA level for 160.1ha and 139.8ha respectively. The Growth Scenario and completions trends both identify a similar requirement for land for B1 office space at a FEMA level: 232.5ha and 235.7ha respectively. However, the distribution per local authority differs, with Halton and St Helens in particular showing large differences between the two forecasting methods.

11.38 Conversely, the estimates for B2 industrial land requirements differ greatly. The Growth Scenario shows a need for 154.8 ha while the completions trend shows a need for 437.3 ha at FEMA level and is higher for every local authority. This reflects the amount of new development which is not driven by any increase in labour demand – for example, existing companies vacating older stock and moving into more modern premises, or expansions at existing sites to accommodate new working practices. This is a particular issue for industrial space due to increasing automation in the sector resulting in fewer jobs per floorspace area.

11.39 For small scale B8 the completions trends show a need for 118.2 ha. Small scale B8 need wasn't considered in the labour demand scenarios.

Table 62: Comparison Between Labour Demand Scenarios and Completions Trend, 2012-37

	Baseline Scenario		Growth Scenario		Completions Trend		
	B1	B2	B1	B2	B1	B2	Small Scale B8
Halton	28.1	20.9	39.8	21.1	63.0	62.3	26.2
Knowsley	24.4	33.0	26.8	33.0	20.7	88.0	15.7
Liverpool	39.7	29.4	70.0	29.4	79.2	117.8	12.7
Sefton	14.2	6.1	18.4	6.1	24.2	15.0	9.5
St Helens	11.6	13.7	28.8	27.3	6.3	44.8	10.3
Wirral	27.6	29.1	33.8	30.1	26.1	89.0	14.5
West Lancs	14.5	7.7	14.9	7.7	16.3	20.4	29.2
FEMA	**160.1**	**139.8**	**232.5**	**154.8**	**235.7**	**437.3**	**118.2**

11.40 In identifying the overall requirements for employment land, the need for 'Strategic B8' (considered in Section 12) will need to be added to the above figures. Additionally, the local authorities may wish to consider identifying additional employment land to support commodities storage and to support inward investment opportunities (considered in Section 13).

Need for Office and Industrial Land – Key Points

- The evidence points to a need for B1 development of between 160 ha (in the baseline labour demand scenario) to 236 ha (based on past completions) across the FEMA. The Growth Scenario sits at the higher end of this range (232 ha) and in particular models significant stronger office floorspace demand in Liverpool. Delivery of this will to some degree be influenced by the availability of suitable land in/ around Liverpool City Centre, and potentially public-sector support for development.

- For B2 industrial floorspace, a need for 140 – 155 ha is identified in the labour demand scenarios, and a significant 437 ha based on past completions across the FEMA. This is an assessment of gross requirements to meet modern business needs, and does not necessarily imply that poorer quality older industrial sites will meet these needs. Local employment land studies consider the quality of existing sites/ allocations.

- A need for 118 ha of land across the FEMA capable of accommodating small-scale B8 warehouse/ distribution development in units of under 9,000 sq.m is identified (i.e. sites of less than c. 2.5 ha).

12 NEED FOR LARGE SCALE B8 WAREHOUSING DEVELOPMENT

12.1 This section moves on to consider demand scenarios for large-scale B8 warehouse development. A 'large scale' warehouse is defined as an individual unit over 9,000 square metres or approximately 100,000 square feet, this being the standard recognised definition within the commercial property sector.

Existing Large Scale Warehouse Supply

12.2 The *Valuation Office Agency (VOA)* records the amount of floor space by function within individual commercial properties across England and Wales for Business Rates purposes (non-domestic ratings list). The full ratings list has been supplied to MDS Transmodal and subsequently compiled into a database showing, for individual properties, their location and the amount of floor space by function (e.g. warehousing). This database has therefore been interrogated to identify and quantify current large scale warehouse supply in the Liverpool City Region FEMA.

12.3 Table 63 below records current large scale warehouse capacity in the Liverpool City Region by Local Authority. Across the Liverpool City Region, a total of 84 warehouse units covering just over 1.5 million square metres can be identified. The mean size of unit is therefore around 18,300 square metres. Halton, Knowsley and St Helens accommodate just under two-thirds of the City Region's warehouse capacity, and the logistics space located in the SHELMA study area accounts for a little under 30% of the total warehousing stock in the North West of England.

Table 63: Existing (2014) Large Scale Warehouse Floor Space Liverpool City Region

	Floor Space (000s sq m)	% of LCR Floor Space	Number Units
Halton	350	23%	19
Knowsley	403	26%	18
Liverpool	182	12%	10
Sefton	67	4%	6
St Helens	246	16%	13
West Lancashire	179	12%	8
Wirral	109	7%	10
Total	**1,537**		**84**
	Floor Space (000s sq m)	**% of LCR Floor Space**	
FEMA	1,537	28%	
Rest of North West	3,996	72%	
North West Total	**5,533**		

Source: MDS Transmodal, based on VOA data

Forecast of Land Use Requirements to 2043

12.4 A forecast of future demand for new-build large scale warehousing in the Liverpool City Region has been undertaken. The output from this exercise is an estimate of the *total gross warehouse new-build* which can be expected up to 2043[31]. Planners often consider the 'net change' in floor space, but for warehousing the gross new-build rate is the more important figure as, in many cases, new capacity will need to be accommodated at new sites. This is because many existing sites are poorly located in relation to the wider road network and residential areas or the plots cannot accommodate the larger warehouses that are usually required by the market.

12.5 The traditional approach to employment land forecasting is to relate employment levels to floor space. More specifically, future growth in employment is related to future demand for floor space/land. While this provides a suitable forecasting method for many land-use types (e.g. B1), applying the same approach to the logistics sector is unreliable and ultimately produces inaccurate results, for three main reasons:

- The correlation between employment density and floor space in the logistics warehousing sector is weak. Facilities of broadly the same floor space can have widely varying employment densities, as employment levels are generally related to cargo type and site activity. For example, regional distribution centres handling food produce are very labour intensive whereas national distribution centres storing white goods will have a fairly low employment density. Also, in some parts of the logistics sector employment levels are highly seasonal in nature;
- Demand for floor space is related to cargo volume and throughput; and
- Warehouse buildings have a much shorter economic life when compared with office or retail property, meaning there is a continual need to renew existing but life-expired capacity.

12.6 Given this position, a different approach to forecasting future warehouse new-build is required. This needs to take into account the fact that demand for new-build warehousing is a combination of two factors, namely:

- The requirement to continually replace existing warehouse capacity which is 'life expired' (replacement build); and
- The need for additional floor space to handle long-term growth in traffic volumes (growth build).

Replacement Build

12.7 Most newly built floor space is 'like-for-like' replacement for existing warehouse stock which is 'life expired'. This is for a number of reasons. Firstly, the useful economic life of a modern warehouse building is around 30 years (many developers will depreciate their warehouse stock over a 25-30 year economic life), after which the building can be substantially refurbished and then re-let for a similar use (e.g. for new occupier and cargo type) or demolished, allowing the plot to be 'recycled' for new buildings (potentially new-build warehousing). While many older buildings may be physically

[31] The forecast years 2033 and 2043 have been selected in order to remain consistent with the recently published Transport for the North Freight and Logistics Strategy.

sound (i.e. they are not physically obsolete), they can become functionally obsolete e.g. they are unable to accommodate modern automated stock handling equipment. Essentially, buildings reach the end of their useful economic life and are no longer suitable for their original designed use, thereby necessitating substantial refurbishment or a direct new-build replacement for the existing occupier.

12.8 However, while stock might depreciate over 25-30 years, this does not mean the owners will necessarily evict and demolish the property once it is fully depreciated. The evidence shows that there are a considerable number of warehouses across the City Region that have been fully depreciated on the developer's books but are still occupied and generating rents. Therefore, the useful life-span of a modern unit can reasonable be considered to be around 30-35 years.

12.9 This process consequently requires new sites to be brought forward (or new plots at existing sites), thereby allowing occupiers to re-locate to new buildings and releasing the existing facility for refurbishment or plot recycling. It should also be noted that this process also permits land adjacent to or within urban areas, which in all other respects are now poorly suited for large scale warehouse buildings (e.g. due to poor road connections, small/irregular shaped plots or housing close by) to be released for other more appropriate uses, including both employment and non-employment uses, such as new residential developments.

12.10 Secondly, economies of scale can be gained through merging operations based at multiple sites to one new location. For example, 2 x 20,000 square metres warehouse operations are combined at one new 40,000 square metres facility – the new-build rate is 40,000 square metres but the net change will be zero on the basis that the old warehouses are demolished. The ability to operate fewer but larger distribution centres has been facilitated by advances in modern ICT inventory management systems which have permitted much larger warehouses to be operated more efficiently than was previously the case.

12.11 Finally, changing market conditions, both within specific companies/sectors and in the wider economy, means that warehouse operations might need to relocate in order to remain competitive. Sites and locations which were originally competitive can over time become sub-optimal. For example, occupiers who previously sourced goods from domestic suppliers (and therefore had a Midlands/north of England location) but now predominantly import from Eastern European and deep-sea markets may now find that a rail-linked site or port centric location is now the competitive option. As a result, a proportion of newly built floor space is required simply to 'stand still' (i.e. will be built anyway regardless of traffic growth).

12.12 On the basis that the useful life of a modern warehouse building is 30-35 years, up to 2033 we could therefore expect around 50% of the existing warehouse stock in the city region to require

replacement. Likewise, up to 2043 we could therefore expect around 80% of the existing warehouse stock in the city region to require replacement. This is shown in Table 64.

Table 64: Estimated Replacement New-Build Liverpool City Region to 2033 and 2043 (000s sq m)

	2014	2033	2043
Existing floor space	1,537		
Replacement build		768	1,229
% Existing stock requiring replacement		50%	80%

Source: MDS Transmodal

12.13 This means that up to 2033 we can expect just under 0.8 million square metres of new warehouse floor space to be built in the Liverpool City Region FEMA simply to replace existing stock i.e. the 'replacement build' element.

Growth Build

12.14 The growth build element has been calculated as follows:

- Estimating annual cargo throughput via the existing supply of large scale warehouse capacity in the Liverpool City Region;
- Forecasting future cargo throughput for 2033 and 2043, derived from traffic growth rates recently produced for the Transport for the North's Freight and Logistics Strategy; then
- Relating the growth in cargo throughput up to 2033 and 2043 to the need for additional floor space.

12.15 Based on standard conversion factors which relate floor space to cargo throughout, we estimate that the existing supply of large scale warehouse capacity in the Liverpool City Region FEMA handles around 28.2 million tonnes of cargo per annum. This is shown in the table below.

Table 65: Throughput via Existing Warehouse Supply Liverpool City Region

Existing floor space (000s sq m)	1,537
Pallets per sq m	1.5
Tonnes/pallet	0.8
Floor space utilisation	85%
Stock turns per annum	18
2014	
Pallets in-stock at any one time (000s)	1,959
Pallets handled per annum (000s)	35,262
Tonnes lifted per annum (000s)	28,210

Source: MDS Transmodal

12.16 In Summer 2015, Transport for the North (TfN) commissioned the production of a Freight and Logistics Study for the north of England. Feeding into the Government's Northern Powerhouse initiative, the commission was undertaken by a joint MDS Transmodal-Mott MacDonald team. The key aim of the study was to identify how freight and logistics can contribute to transformational economic growth in the north of England. The finalised study was published in Summer 2016.[32] This will then inform the TfN Northern Transport Strategy.

12.17 Two sets of traffic forecasts were produced for the strategy, namely:

- *Do-minimum* – reflecting recent underlying economic growth alongside minimal investment in transport infrastructure (nothing beyond that already committed) and no other public sector interventions; and
- *Do-something/ Transport for the North Strategy* – reflecting the consultant's strategy, which also reflects the results of an extensive consultation exercise with the freight and logistics industry in the north of England and the public sector. This included substantial transport infrastructure investment (e.g. up-front provision of rail freight capacity), improved connectivity to ports and a substantial growth in rail/water connected distribution facilities across the north of England, alongside other public sector interventions, such as a more favourable planning environment.

12.18 The TfN Strategy Scenario in effect captures the delivery of the Liverpool 2 deep water terminal at the Port of Liverpool, and wider growth of port-related logistics within the City Region.

[32] http://www.transportforthenorth.com/pdfs/TfN-Freight-and-Logistics-Report.pdf

Table 66: Traffic Growth to north of England (million tonnes)

2014	**To north of England**	**To Distribution Centre**	**% to Distribution Centre**
Road	229.5	103.3	45%
Rail	3.6	3.6	100%
Total	*233.1*	*106.9*	*46%*
2033 Do Minimum	**To north of England**	**To Distribution Centre**	**% to Distribution Centre**
Road	260.9	117.4	45%
Rail	5.6	5.6	100%
Total	*266.5*	*123.0*	*46%*
2043 Do Minimum	**To north of England**	**To Distribution Centre**	**% to Distribution Centre**
Road	277.6	124.9	45%
Rail	6.6	6.6	100%
Total	*284.2*	*131.5*	*46%*
2033 TfN Strategy	**To north of England**	**To Distribution Centre**	**% to Distribution Centre**
Road	273.4	123.0	45%
Rail	19.8	19.8	100%
Total	*293.2*	*142.8*	*49%*
2043 TfN Strategy	**To north of England**	**To Distribution Centre**	**% to Distribution Centre**
Road	292.0	131.4	45%
Rail	32.5	32.5	100%
Total	*324.5*	*163.9*	*51%*

Source: MDS Transmodal

12.19 MDS Transmodal have therefore produced two sets of land-use requirement forecasts to 2043; one based on the 'do-minimum' traffic forecasts, and a further forecast reflecting the consultant's recommended strategy for the north of England ('do-something'), in particular the substantial growth in rail/water connected distribution facilities across the north of England. The 'do-minimum' forecast essentially assumes that existing occupiers in the Liverpool City Region area (which are primarily serving the North West market) will over time require new warehouse facilities (to replace life-expired capacity and to handle long term traffic growth) located in broadly the same location. In addition to this, the 'do-something' scenario reflects the north of England (and by extension the Liverpool area) gaining warehouse market share (primarily serving a national market) due to it becoming a more competitive location in which to locate.

12.20 The forecast percentage growth in traffic direct to a large warehouse for each forecast to 2033 and 2043 is shown below.

- Do Minimum
  - Traffic growth to 2033: 15%
  - Traffic growth to 2043: 23%
- TfN Strategy
  - Traffic growth to 2033: 34%
  - Traffic growth to 2043: 53%

12.21 The forecast percentage growth in traffic direct to a large warehouse for each forecast to 2033 and 2043 is shown below.

12.22 These growth rates were subsequently applied to the estimated annual cargo throughput via the existing supply of large scale warehouse capacity in the Liverpool City Region. Then, using the standard conversion factors which relate floor space to cargo throughout, the growth in throughput to 2033 and 2043 was equated as the requirement for additional floor space i.e. the growth build element. This is shown in Table 67.

Table 67: Estimated Requirement for Additional Floor Space (Growth Build Element)

2033	**Do Minimum**	**TfN Strategy**
Tonnes lifted per annum (000s)	32,467	37,700
Growth tonnes lifted (000s)	4,257	9,490
Additional pallets handled per annum (000s)	5,321	11,863
Additional pallets in-stock at any one time (000s)	295	659
Floor space required for growth (000s sq m)	232	517
2043	**Do Minimum**	**TfN Strategy**
Tonnes lifted per annum (000s)	34,715	43,262
Growth tonnes lifted (000s)	6,505	15,052
Additional pallets handled per annum (000s)	8,131	18,815
Additional pallets in-stock at any one time (000s)	451	1,045
Floor space required for growth (000s sq m)	354	820

Source: MDS Transmodal

Total Requirement for Large Scale B8 Land

12.23 By combining the 'replacement build' and 'growth build' elements, the total gross warehouse new-build which can be expected by 2033 and 2043 can be calculated. This is shown in the table below together with the associated land requirements (on the basis that the floor space of a warehouse represents 40% of the total plot footprint).

Table 68: Forecast Large Scale B8 Requirement to 2033 and 2043

	Do Minimum			TFN Strategy		
	2014	2033	2043	2014	2033	2043
Existing floor space (000s sq m)	1,537			1,537		
Replacement build (000s sq m)		768	1,229		768	1,229
Growth Build (000s sq m)		232	354		517	820
Total		**1,000**	**1,584**		**1,285**	**2,049**
Land Required (ha)		**250**	**396**		**321**	**512**

Source: MDS Transmodal

12.24 The calculations used in this section have considered the requirement for large scale B8 uses to 2033 and 2043 in order to align with the Transport for the North Freight and Logistics Strategy. Table 69 shows the land requirement for large scale B8 uses to 2037 (to align with the timeframes used elsewhere in the SHELMA) for both scenarios.

Table 69: Forecast Large Scale B8 Requirement to 2037

	Do Minimum 2037	FTN Strategy 2037
Replacement build (000s sq m)	952	952
Growth Build (000s sq m)	281	638
Land Required (ha)	**308**	**397**

12.25 At this stage, the associated land use requirements do not reflect the amount of 'new land' that will potentially need to be brought forward over time, as it has not taken into account the supply of existing B8 land with consents or that coming forward in the planning 'pipeline'. It simply reflects the amount of land that will be required to accommodate the forecast new build. Some of it will obviously be available at existing plots with B8 consents, while additional land may need to be brought forward through local plans on the basis that existing B8 site supply is less than the forecast land requirement to 2043.

Where will Large-Scale B8 Growth occur?

12.26 At this stage GL Hearn and MDS Transmodal have not disaggregated the large scale B8 need at a local authority level, nor do we consider it appropriate to do so. The market for large-scale warehouse/ distribution development is sub-regional in nature, and growth at a local level is typically supply-driven – it is influenced by the availability of land at attractive locations. This is, to a large extent, the distribution of growth at a more local level is therefore a supply-led issue.

12.27 GL Hearn have undertaken a Strategic Sites Assessment of the potential land supply for large scale (5+ ha) B8 development. The Strategic Sites Assessment considers the availability of land; the

suitability of sites to accommodate large-scale B8 development, including their market attractiveness; and issues affecting the deliverability of B8 development, including infrastructure.

12.28 Consideration was given to site characteristics, including site size, available land/ plots, shape and topography; to access to the strategic road network and rail network, labour force and public transport connectivity, as well as local access and internal circulation (for existing sites). Neighbouring activities were considered including local services, as well as uses which could limit the potential for 24 hour operation. Planning status, land ownership and infrastructure requirements were considered. Relative accessibility, as well as network capacity issues on the road and rail networks, was also addressed.

12.29 The findings of the Strategic Sites Assessment (which focuses on land capable of accommodating strategic B8 development) are included in a report which sits alongside this SHELMA document. It is presented separately as it deals with supply, as opposed to need.

12.30 There are policy choices for the local authorities to make regarding additional sites to allocate to meet the need for large-scale B8 development, and it should be borne in mind that the potential allocation of land at Parkside Rail Freight Interchange and other Preferred Option sites in St Helens (most of which currently fall within the Green Belt) have fed into the derivation of the Growth Scenario. GL Hearn consider that there are to some degree therefore policy factors which have informed the Growth Scenario which may need to be revised in time. Ultimately this principally influences the *distribution* of economic growth and housing need across the FEMA rather than the scale of need overall; but it may be necessary to review this in time.

Need for Large-Scale B8 Development – Key Points

- The need for large-scale B8 development (defined as units 9000+ sq.m) has been considered, taking account of the typical replacement of existing warehouse stock in 30-35 years (replacement build) together with growth in demand arising from traffic growth through two scenarios- a 'do minimum' scenario which broadly follows past trends; and a scenario which aligns to the Transport for the North freight strategy which sees the North and the City Region capture a greater share of demand nationally, and takes into account the potential arising from the expansion of the Port of Liverpool and wider SuperPort proposals.

- Over the period to 2037, a need for 308 ha of land for strategic B8 development is identified in the Baseline/ Do Minimum Scenario and 397 ha in the TfN Strategy Scenario. This relates to requirements for land for built warehousing development.

- The market analysis undertaken points to a shortage of large sites capable of accommodating large-scale B8 development within the City Region. There is an evident need to identify additional land.

- An assessment of existing sites with development potential and future candidate sites for allocation is presented in a separate report which sits alongside the SHELMA.

- There are clearly policy choices to be made regarding the location of future allocations to meet this sub-regional demand, which need to take account of market factors, accessibility (including to the port, motorway network and centres of population, and workforce), site characteristics and policy/ environmental designations. A comparative assessment of options for future allocations is likely to be required, in particular to consider whether exceptional circumstances exist for green belt releases in different locations. This may affect the distribution of economic growth within the FEMA, and the housing need associated with job creation.

13 NEED FOR OTHER SPECIALIST EMPLOYMENT LAND

13.1 Sections 11 and 12 have considered the need for B1, B2 and B8 development. In this section we provide further consideration of two specific issues:

- The potential additional land requirements for commodities storage which could arise from port expansion/ freight growth; and
- Whether additional employment land could be required to support major inward investments to the FEMA, and how this might be dealt with.

Land Requirement for Commodities Storage

13.2 MDS Tranmodal have reviewed land requirements for commodities storage, based on the latest Mersey Port Masterplan (June 2011). This includes forecasts for cargo handling by the Port to 2020 and 2030 by commodity. The detailed forecast assumptions for different commodities are outlined in Appendix D.

13.3 The Masterplan envisages growth in container cargos; in trade on the roll-on, roll-off (RoRo) ferries to Ireland and the Isle of Man; in trade of cars (which represents a significant growth opportunity); in animal feedstuffs and biomass; other dry goods; steel and metals; forest products (reflecting the re-emergence of the North American market and increased Far East production); and in other bulk liquids.

13.4 Table 70 summarises the Mersey Ports forecasts for all the listed commodities, predicting a growth in overall tonnes to 2030 of 2.52% CAGR. This is higher than the Government forecasts, which are 1.1% CAGR over the same period. The outperformance of these forecasts is attributed to stronger anticipated growth in the Lo-lo and Ro-Ro sectors, biomass handling, palm oil and other dry bulks.

Table 70: Mersey Ports Forecasts 2020 & 2030

Commodity	2008	2020	2030	CAGR (%)
Containers (Teu)	4.85 (672,000)	14.43 (2,000,000)	21.65 (3,000,000)	7.04
Ro-Ro (Units)	6.82 (513,000)	10.07 (757,000)	13.92 (1,047,700)	3.30
Trade Cars (Units)	0.036 (36,000)	0.20 (200,000)	0.20 (200,000)	8.11
Grain	1.25	1.25	1.25	0.00
AFS & Biomass	1.34	2.40	2.90	3.60
Coal	2.38	2.38	2.38	0.00
Other Dry Bulks	3.85	4.57	5.28	1.45
Steel, Metals and General Cargo	0.80	1.00	1.35	2.41
Forest Products	0.26	0.60	0.75	4.93
Petrochemicals	15.80	15.80	15.80	0.00
Other Bulk Liquids	2.26	2.70	3.10	1.45
Total (Million Tonnes)	39.64	55.40	68.58	2.52

Source: Peel Ports (2011)

13.5 The Mersey Ports Masterplan produces forecasts for the Mersey Ports potential land requirements, based on the forecasts for trade throughput (as shown in Table 70 above) and then estimating future land requirements based on key assumptions with respect to the amount of land that is required for any particular trade or traffic. It is noted in the plan that any development related to commodities will, through port-related activities, create further demand for land.

13.6 The Ports Masterplan concludes in identifying requirement associated with commodities of 57 ha over the period to 2020, and a further 66 ha to 2030, totalling 123 ha. This excludes what it identified as a requirement for port-centric warehousing as this is captured in the SHELMA modelling of demand for B8 warehousing development. A detailed commentary on the forecasts for individual commodities is set out in Appendix D.

13.7 In addition to this, the Ports Masterplan suggests a need for 30 ha to support development of the off-shore wind sector, 18 ha for biomass energy, and 57 ha for processing uses linked to cargos to 2030.

13.8 Set against the requirement therefore for 228 ha of land to 2030 for these activities (together with a need identified in the Port Masterplan for 113 ha for port-centric logistics), the Masterplan identifies a land supply of 302 ha. There is thus a need for additional land identified of 42.5 ha in the Port

Masterplan but it should be recognises that this is to meet an element of the B8 demand identified in the preceeding sections for port-centric logistics.

13.9 Dock Infilling is mentioned as a possible source of additional land provision. The plan states that this has been carried out in the past at Mersey Ports. It is reported, however that all of the remaining docks are in active use for the berthing of vessels, making this an unsustainable solution. Another solution discussed in the plan is the use of off-site land for Port-related purposed: remote operations. Potential areas include the Dunning Bridge Road Corridor which runs for several miles towards the Port entrance at Seaforth. Within this corridor there are a number of potential opportunities although these would need to be weighed in the context of other regeneration aspirations and the implications in respect of Port-related traffic generation. Remote operations for port-associated activities will obviously be limited to certain types of development, as many operations will need to take place within the port area.

Land Requirements for Commodities Storage – Key Points

- The commodities forecasts presented within the Mersey Ports Masterplan identify a need for around 340 ha of land to 2030. This includes land for Port-related logistics (113 ha) which will overlap with the demand forecasts for B8 warehouse development. The TfN Strategy Scenario in particular includes an assumption of growth in warehousing at rail and water-connected sites.
- The forecasts appear to be optimistic in comparison to those presented by the Government, with a 1.4% CAGR difference to 2030. However, it is worth noting that the Ports Plan will be far more detailed and 'personal' due to the more in depth knowledge of the local markets and the future areas for expansion within the ports market particular to the Mersey Ports.
- It is also noteworthy that these forecasts require large quantities of land going forward to 2020 and 2030. Although the plan designates particular areas for development in the future, there is still a 12% gap in the overall land requirement if needs for port-related logistics are to be met in/ close to the Port, meaning that there are still 105 acres of unidentified land. This is equivalent to around 42.5 hectares. This will not however necessarily be additional to the wider modelling undertaken (in particular for strategic B8 development).
- Of the sites identified in the Masterplan, it is important to stress that not all the land identified is readily available and/or deliverable without further activity, notably planning consent and in some cases acquisition.

Inward Investment Sites

13.10 The forecast employment land requirements considered in the previous sections in this SHELMA Report are based on projecting forward past trends and taking into account future planned or potential development/ regeneration schemes (for example at Liverpool2). In addition to this, there are potential opportunities to attract inward investment into the City Region from footloose firms considering location or relocation across a national or international area of search.

13.11 Some, if not most, of the specific needs which might arise will be able to be met through the 'regular' employment land supply. However potential requirements for larger scale single occupier sites will be less easily accommodated.

13.12 It may be prudent therefore to consider an additional supply of larger 'shovel ready' sites which could be safeguarded to meet future arising inward investment opportunities. Such sites would need to be considered additional to the employment land requirement identified in this report, and their identification and safeguarding would be a policy decision. However, by definition, forecasting the scale of future demand for such sites is difficult.

13.13 The West Midlands Strategic Employment Sites Study (PBA and JLL, September 2015) considers the demand for international inward investment opportunities across the West Midlands. Several of the report's findings are equally applicable to the Liverpool City Region. The study suggests that the UK's comparative advantage against other parts of Europe lie in:

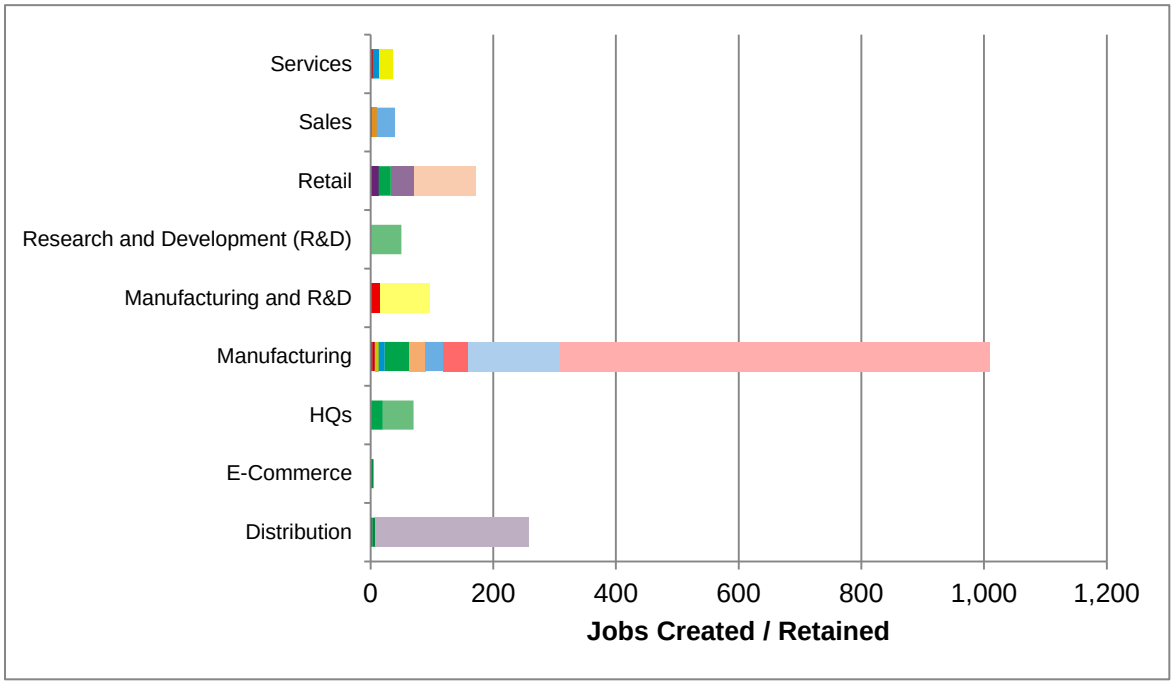
- Services, including those that occupy industrial space (for example logistics/distribution) and many that do not;
- Consumer products such as food;
- The automotive industry;
- Expansion at existing sites, as opposed to new standalone projects.

13.14 The study, published in September 2015, found that attracting occupiers to such sites has become more difficult, due mainly to greater competition from other countries, the result of increasing globalisation and the enlargement of the EU. Since publication of the Study, in June 2016 the UK voted by referendum to leave the EU. As a result of this there is considerable uncertainty surrounding the UK economy and as a result, many companies have delayed making decisions regarding future expansion, relocation, or hiring, pending greater economic certainty. Greater economic certainty relies to a large extent on the terms of the renegotiated trade agreements between the UK and the EU and other nations. At this stage, it is too early to predict what implications this may have on the UK or the Liverpool City Region in terms of their attractiveness for international firms.

13.15 This notwithstanding, data from Liverpool LEP shows that they have been involved with 35 successful foreign direct investment (FDI) opportunities in the year 2015-16. This is up on 16 recorded in 2014-15; 30 recorded in 2-13-14; and 23 recorded in 2012-13. Of the recorded FDI successes, 48% were for expansions of existing businesses in the LCR and 38% were new investments.

13.16 Figure 67 overleaf shows the number of jobs created or retained as a result of FDIs in the LCR. The data is broken down by sector and shows that with the City Region the manufacturing sector has seen the greatest number of jobs arising from FDI.

Figure 67: Foreign Direct Investment Jobs by Sector



Source: Liverpool LEP

13.17 Where foreign-owned businesses do take up large employment spaces (industrial or distribution), their requirements seem no different from those of other 'big box' occupiers, and their location decisions respond to the same factors as other businesses. The key difference is that they may have a wider choice of location, which extends beyond national boundaries. But this does not apply to industries that need to be close to their customers, such as most services – including logistics – and some consumer industries.

13.18 To support potential future inward investment opportunities it may therefore be beneficial to include provision of land (say a site or sites of 40+ hectares) which is safeguarded to support a major inward investment at a more commercially attractive location within the City Region. Such a site would be safeguarded to ensure a supply of land was available to accommodate a future large-scale inward investment opportunities, should such an opportunity arise.

13.19 Such a site would need to be distinguished from the 'regular' employment land supply insofar as small-scale piecemeal development would be restricted. However, this is unlikely to be possible unless the site is under public sector ownership.

13.20 Whether an additional site or sites should be safeguarded for future investment opportunities is therefore inherently a policy decision dependent to be made through the preparation of a City Region Spatial Framework and/or local plans; and would be reliant on the supply of public sector owned sites in commercially attractive locations which do not already form part of the City Region's

employment land supply. We would recommend that consideration is given by the Councils as to whether such sites could be safeguarded so that the City Region will be better positioned to take advantage of any future large scale investment opportunities.

Inward Investment – Key Points

- Opportunities for major inward investment do not come along often; however to capture such opportunities against competition from elsewhere in the UK and internationally, it is obviously important to have suitable 'shovel ready' land where development can take place. There are clearly wider considerations from costs of goods and labour to incentives, trade barriers etc.

- Consideration could potentially be given to identifying a large site (40+ ha) at a prime location which could accommodate a major inward investment, however if this is to be retained for this purpose it is likely to need to be in public sector ownership.

14 CONCLUSIONS

14.1 This report provides analysis of issues related to:

- Review and identify the Housing Market Area and Functional Economic Market Area geographies;
- Identify the Objectively Assessed Need (OAN) for housing over the period 2012 - 2037 across the City Region and set out an approach to distribute the City Region OAN to each of the local authorities;
- Consider the scale and distribution of economic growth across the City Region, taking account of past trends and baseline forecasts; as well as committed investment projects which may influence the scale/ distribution of growth – including Superport, Atlantic Gateway, and improved rail connectivity;
- Model the need for employment land across the City Region, taking account of the economic data and commercial market dynamics and the expansion of the Port of Liverpool; providing outputs on employment land needs at a local authority level where relevant based on demand-side considerations.

Housing and Functional Economic Market Areas

14.2 In advance of the preparation of the SHELMA, GL Hearn has undertaken an assessment of the relevant Housing Market Area (HMA) and Functional Economic Market Area (FEMA) boundaries in the Liverpool City Region. This is set out in the report *Defining the Housing Market Area and Functional Economic Market Area.*

14.3 In drawing conclusions on HMA boundaries, the report assesses up-to-date data on house prices, migration flows, and commuting flows, as well as reviewing existing studies on the subject. The HMA analysis is focussed on the definition of HMAs at a strategic level, reflecting the sub-regional scope of the SHELMA.

14.4 The migration and commuting patterns data indicates strong migration and commuting inter-relationships between Knowsley and Liverpool, Liverpool and Sefton, and Liverpool and Wirral and to Sefton and West Lancashire. There is also a strong case for the grouping of St Helens and Halton along with Warrington. St. Helens, Halton and Warrington together have a high self-containment rate.

14.5 The analysis broadly confirms the conclusions of the 2007 Liverpool City Region Housing Strategy as well as the 2016 Liverpool SHMA and 2016 Mid Mersey SHMA. These identify a HMA which, based on the best fit to local authority boundaries, comprises Liverpool, Sefton, Wirral, Knowsley and West Lancashire – the 'Central LCR HMA'; Halton and St. Helens form a separate HMA with Warrington – the 'Mid Mersey HMA'. There is a degree of overlap between these two HMAs as well as with surrounding areas, as is the case with all HMAs.

14.6 In drawing conclusions on the FEMA boundaries the report draws on the commuting and migration data as well as taking account of LEP geographies, travel to work and housing market areas, administrative geographies, flows of goods, catchment areas for shopping and services, and the transport network.

14.7 On the balance of evidence, our analysis suggests the definition of a Functional Economic Market Area (FEMA) which covers Halton, Knowsley, Liverpool, Sefton, St Helens, West Lancashire, and Wirral.

14.8 GL Hearn recognises that in many cases housing market and functional economic market areas are coterminous, and that there can be practical benefits associated with aligning the two. However, in undertaking this assessment for the LCR, GL Hearn consider that there is a strong basis for defining non-coterminous HMAs and FEMA.

Liverpool City Region's Economy

14.9 Across the Liverpool Functional Economic Market Area there were a total of 720,000 jobs in 2014. The local authority with the greatest number of total jobs is Liverpool with 258,000 – equivalent to 36% of the FEMA total, and considerably more than any other single authority area. This highlights the City's role as an economic centre for the wider FEMA. Wirral and Sefton are the authorities with the next highest number of jobs with 112,000 (16%) and 102,000 (14%) jobs respectively. The remaining four local authorities all have lower numbers of jobs: 68,000 jobs (9%) in St. Helens; 67,000 jobs (9%) in Knowsley; 60,000 jobs (8%) in Halton; and 53,000 jobs (7%) in West Lancashire.

14.10 The sectors with the largest numbers of total jobs across the FEMA are Human health and social work (124,700 jobs) and Wholesale and retail trade (108,900 jobs). There are also considerable number of jobs in Education (66,500 jobs) and Manufacturing (62,000). Location quotient analysis shows the FEMA has a relatively high number of jobs in the public sector compared to North West and UK levels. The FEMA also has a higher proportion of jobs in Transport and storage than the regional or national figures.

14.11 Since 1991 there has been considerable growth in the number of jobs in the health and education sectors as well as the professional and business support sectors. During this period there has seen considerable net losses of jobs in the manufacturing and financial and insurance sectors. However, the short term (5 year) trend shows strong growth in some manufacturing sub-sectors such as the manufacture of motor vehicles, pharmaceuticals, plastics, and other non-metal products.

14.12 Across the FEMA, the employment rate among working age persons (aged 16 to 64) is 68%. This is below the North West rate of 71% and the national rate of 74%. Within the FEMA, Halton has the

highest employment rate at 75%. Sefton (73%) and West Lancashire (72%) also have employment rates marginally above the North West average. The lowest employment rates in the FEMA are in Liverpool (61%). Whilst GL Hearn would expect some difference in employment rates between more urban and rural areas, a comparison with LEP areas focused on metropolitan areas in the North and Midlands points to a clear potential for higher employment rates to be supported.

14.13 GL Hearn's analysis would suggest that there is potential for the employment rate to increase in all of the local authorities in the City Region through increasing both the number of available jobs and the density of employment (and before any allowance is made for pensionable age changes and wider trends towards increased economic participation).

Future Economic Growth Potential

14.14 To estimate the future economic growth potential in the FEMA we have drawn on economic forecasts produced by Oxford Economics and Liverpool City Region Local Enterprise Partnership (LEP). We consider two scenarios:

- A Baseline Scenario; and
- A Growth Scenario.

14.15 The Baseline Scenario is based on Oxford Economics' baseline model. The Growth Scenario is based on additional information provided by the Liverpool City Region LEP and each of the FEMA local authorities. Liverpool City Region LEP provided Oxford Economics with a set of growth ambitions and targets, centred on a number of sectors that have been identified as having significant growth potential. In addition, local authority officials responsible for regeneration in each local authority provided details on future development proposals for each respective area. The jobs growth of the Baseline and Growth Scenarios is shown in the table below.

Table 71: Total Employment Jobs Growth – 2012-37

	Baseline Scenario	Growth Scenario	Difference
Halton	3,800	12,400	8,600
Knowsley	9,000	12,300	3,300
Liverpool	28,700	67,600	38,900
Sefton	2,500	6,500	4,000
St. Helens	3,200	17,100	13,900
Wirral	5,800	11,400	5,600
West Lancashire	6,000	6,800	800
FEMA	**58,900**	**134,100**	**75,200**

Trend-Based Demographic Projections

14.16 Demographic-based housing need essentially contains two components. Firstly, there are population projections. ONS publishes population projections every two years (the subnational population projections (SNPP)) as well as providing an annual estimate of population change (by

age and sex) – the mid-year population estimates (MYE). Secondly, population figures are converted into estimates of the number of households by CLG in their household projections (again issued every two years).

Population Projections

14.17 The latest population projections are the 2014-based Subnational Population Projections (SNPP), published by ONS on the 29th May 2016. Subnational population projections provide estimates of the future population of local authorities, assuming a continuation of recent local trends in fertility, mortality and migration which are constrained to the assumptions made for the 2014-based national population projections. The new SNPP are largely based on trends in the 2009-14 period (2008-14 for international migration trends).

14.18 GL Hearn's interrogation of the SNPP concludes that the 2014-based SNPP is a sound population projection in terms of the methodology employed by ONS. It is however limited by the fact that it is based on short-term trends (i.e. trends over the past 5-6 years). The 2014-based SNPP has been rebased to take account of the 2015 ONS Mid-Year Population Estimates, meaning it is not necessary to project population growth 2014-15. Post 2015, this latter projection uses the birth and death rates in the SNPP along with the actual levels of migration.

14.19 The 2014-based SNPP rebased for MYE shows that the population of the study area is projected to increase by about 135,700 (7.4%) from 2012 to 2037. The growth rate is slightly higher in the Mid Mersey HMA (9.0%) compared to 6.8% growth in the Liverpool HMA.

14.20 To provide a sensitivity analysis, two longer-term migration trend scenarios have been modelled, considering trends over the 14-year period to 2015 (i.e. 2001-15) and over the past 10-years (2005-15). Both of these figures are lower than either of the 2014- SNPP based scenarios: The 10-year migration scenario shows that the population of the study area is projected to increase by about 116,000 (6.4%) by 2037. The 14-year migration scenario shows that the population is projected to increase by about 104,700 (5.7%) by 2037.

14.21 As well as looking at migration, the analysis can consider the impact of Unattributable Population Change (UPC). UPC is an adjustment made by ONS to mid-year population estimates where Census data has suggested that population growth had either been over- or under-estimated in the inter-Census years.

14.22 The 10-year migration scenario with UPC adjustment shows that the population of the study area is projected to increase by about 152,200 (8.3%) by 2037, while the 14-year migration scenario with UPC adjustment shows that the population is projected to increase by about 150,800 (8.3%) by 2037. Given the uncertainties about UPC, it is better to express any needs as a range of outputs

from no UPC adjustment to a 100% UPC allowance. Alternatively, and for the purposes of comparison a midpoint between these figures can be considered. The midpoint of the two 10-year based projections is population growth of 7.3% (across the LCR), whilst the 14-year projections show a figure of 7.0%. These compare with figures in the SNPP 7.2%-7.4% depending on whether or not the MYE is included.

14.23 On balance, the various projections all point towards a similar level of population growth across the City Region (something in the range of 7.0%-7.4%).

Household Formation

14.24 The latest Household Projections (2014-based) were published by CLG on the 12th July 2016. It is evident from the analysis that household formation amongst households in their late 20s and early 30s fell slightly over the 2001-11 decade. The projections however anticipate that household formation rates for this age group will increase moving forwards. The 2014-based household projections also expect household formation rates amongst older age groups to fall over time. Given improving life expectancy this looks to be reasonable.

14.25 The headship rates in the 2014-based CLG household projections should not be used uncritically. When looking specifically at data for Liverpool City Region, it is clear that the only age group where household formation fell between 2001-11 was for people aged 25-34. However moving forward from 2011, the rate remains fairly flat. However, it is not clear if the changes in the rates are due to market factors or due to the change in ethnic structure reflective of international migration.

14.26 A detailed interrogation of household formation rates suggests that for Halton and West Lancashire there is local evidence that more positive household formation amongst those aged 25-34 and 35-44 would be a reasonable planning assumption.

Demographic-based Housing Need

14.27 Demographic-based housing need can be calculated using the outputs in terms of housing need using the headship rates discussed above and the full range of demographic scenarios developed. To convert households into dwellings the data includes an uplift to take account of vacant / second homes. This results in the projected demographic-based housing needs shown in Table 72.

Table 72: Projected housing need – range of demographic based scenarios – by local authority (all figures per annum)

		2014-based SNPP	2014-based SNPP (+MYE)	10-year migration	14-year migration	10-year migration (+UPC)	14-year migration (+UPC)
Halton	2014-headship	234	**235**	237	221	386	394
	Adjusted headship	254	**254**	257	241	408	416
Knowsley	2014-headship	266	**280**	321	300	211	180
Liverpool	2014-headship	1,680	**1,739**	1,338	1,429	1,955	2,184
Sefton	2014-headship	534	**540**	509	442	458	375
St. Helens	2014-headship	415	**416**	390	368	281	245
Warrington[33]	2014-headship	765	**762**	834	745	802	711
West Lancashire	2014-headship	169	**175**	196	220	145	168
	Adjusted headship	193	**200**	221	246	170	193
Wirral	2014-headship	673	**664**	592	515	836	819
Mid-Mersey HMA	Adjusted headship	1,434	**1,432**	1,480	1,354	1,490	1,372
Liverpool HMA	Adjusted headship	3,346	**3,423**	2,981	2,932	3,630	3,751
Total	Adjusted headship	4,780	**4,855**	4,462	4,286	5,121	5,123

14.28 Consideration of the different projections suggests that the 2014-based SNPP rebased using the 2015 MYE is the most reasonable projection of housing need. This suggests a demographic-based need for 1,432 dwellings per annum in the Mid-Mersey HMA and for 3,423 dwellings per annum in the Liverpool HMA.

Housing and Economic Growth

14.29 The starting point for considering what housing provision may be required to support economic growth is the expected growth in employment using the Baseline and Growth Scenarios. This then factors in 'double jobbing' (the proportion of people with more than one job) and commuting ratios in order to identify the expected changes in the resident workforce over the 2012-37 period.

14.30 The next step is calculating the number of dwellings which would be required to support the expected growth in the resident workforce. To consider this GL Hearn has undertaken further analysis of the potential for improvements in employment rates. Within the two HMAs, all areas besides Warrington have an employment rate which is below the national average. The greatest scope for improvement in the employment rate, as identified is in Liverpool and Knowsley. The modelling for the Growth Scenario therefore assumes improvements in the economic activity rate over the forecast period.

[33] The figures for Warrington are based on the same demographic projections as the Mid Mersey SHMA Update – Warrington Addendum (GL Hearn, May 2017). The differences between the demographic figures in that report and those shown in table above are due to the different periods covered – the Mid Mersey SHMA Update covers a period from 2015-37.

14.31 Taking these factors together produces the following economic-led housing need figures:

Table 73: Projected Economic-Driven Housing Need (Dwellings per Annum, 2012-37)

	Baseline Scenario	Growth Scenario
Halton	326	565
Knowsley	271	373
Liverpool	862	1,791
Sefton	454	587
St Helens	397	855
Warrington	949	973
West Lancashire	221	241
Wirral	536	737
Mid Mersey HMA	1,671	2,393
Liverpool HMA	2,343	3,729
City Region (+Warrington+West Lancs)	4,015	6,122

14.32 At a HMA level, the quantum of housing required to support the Baseline Economic Growth Scenario would imply a need for 2,343 homes per annum across the Liverpool HMA, which is below the trend-based (2014-based) demographic projections. In the Mid Mersey HMA the Baseline Economic Growth Scenario would imply a need for 1,671 homes per annum, which is 17% greater than the trend-based demographic projections for the HMA. This is modelled assuming the commuting ratio remains constant, and the employment rate 16+ falls modestly from 60.4% to 59.7% between 2012-37.

14.33 At a local authority level, the Baseline Economic Growth Scenario points to a higher level of housing need relative to the trend-based (2014-based) demographic projections in Halton, Warrington and West Lancashire.

14.34 The Growth Scenario results in a higher level of housing need in both HMAs, with a need for 2,393 dpa in the Mid Mersey HMA and 3,729 dpa in the Liverpool HMA (2012-37). At a local authority level, the Growth Scenario also results in a higher level of housing need in each authority area. This takes account of enhanced sector performance, planned/ potential development and regeneration projects; and assumes that half of the difference in economic participation between local authorities and that nationally is made up over the period to 2037.

Affordability and Housing Market Signals

14.35 The SHELMA provides analysis of housing market dynamics and considering if there is a case for adjustment to overall housing provision to improve affordability. This includes a review of land values; house prices and sales trends; trends in the private rental sector; affordability ratios; overcrowding; and rates of development:

- Land values across the City Region are below the national average, with only Halton exceeding the north west average. Median prices across the main towns fall below £125,000, and overall across both HMAs prices are on average a third below the national average – a significant differential.
- Lower quartile (entry level) house prices are below the national average, and only significant above the North West average in West Lancashire and Warrington. Relative to incomes, lower quartile prices are below the national average in both HMAs. They are highest in West Lancashire at 6.9 in 2015.
- House price growth has exceeded the regional average in the longer-term in West Lancashire, Wirral and Sefton in absolute terms; but in proportional terms only in the Wirral. Growth in all areas has fallen below the national average.
- Rents are relatively low relative to national benchmarks, with no particularly high cost rental areas relative to the regional average. Rental growth since 2011 in all areas has been below regional/ national benchmarks.
- Whilst there is evidence of under-delivery of housing, this is principally 2008-13, which correlates to a national slump in housing delivery influenced by macro-economic factors which saw demand fall.

14.36 The SHELMA has not specifically assessed the need for affordable housing. However affordable housing needs evidence is a consideration in drawing conclusions on the overall objectively assessed housing need.

14.37 Based on the affordable needs evidence it is necessary to consider an adjustment to enhance the delivery of affordable housing, but that this does not need to be necessarily done in a mechanical way whereby the affordable need on its own dictates the OAN figure. Nonetheless it is clear that affordable housing need may result in upwards adjustments to the OAN, but with consideration given to the overall deliverability of housing.

14.38 The analysis concludes that substantial uplifts to the OAN figures are clearly unreasonable, and what must be borne in mind is that additional households are required to occupy homes; and it is really only concealed and homeless households which overall will be additional. Moreover any adjustments made from the demographic starting point – either to headship rates, to address market signals or to support economic growth – will deliver additional market and affordable housing.

14.39 On the basis of the affordability and housing market it is considered that it is appropriate to apply an affordability uplift of 10% in Sefton, West Lancashire, and Wirral.

Calculating Objectively Assessed Housing Need (OAN)

14.40 Table 74 sets out the draft conclusions on OAN at local authority and HMA level. The OAN figure for each local authority is calculated by considering which is higher of the demographic-based housing need figure or the economic-led housing need figures.

14.41 In Halton, Warrington, and West Lancashire the Economic Baseline suggests a higher housing need than suggested by the demographic-based modelling. In these authorities it is appropriate therefore to consider the housing need resulting from the Economic Baseline Scenario as the minimum basis for calculation of OAN.

14.42 In Knowsley, Liverpool, Sefton, St Helens, and Wirral the demographic-based housing need figure is higher than that suggested by the Economic Baseline Scenario. In these authorities it is appropriate therefore to consider the demographic modelling as the minimum basis for calculation of OAN.

14.43 Drawing these factors together results in the OAN for housing at a local authority and HMA level shown in Table 74.

14.44 Also shown in Table 74 is the dwelling requirement resulting from the Economic Growth Scenario. For all authorities this is higher than either the Economic Baseline or demographic modelling. The Growth Scenario reflects jobs growth which could result from development projects and policies which are expected to be implemented over the study period. For some local authorities it may be appropriate to plan for the additional growth of the Growth Scenario. However, it is important to recognise that this scenario represents a level of economic growth which is above trend, and in some areas – particularly St Helens and Liverpool – it takes account of site options or potential policy interventions.

14.45 Accordingly, the OAN figures are calculated based on the demographic based need with an uplift where appropriate to support the economic growth shown in the Baseline Scenario. The OAN figures shown in Table 74 should be treated as minimum figures.

14.46 The affordability evidence suggests that in Sefton, West Lancashire, and Wirral it would be appropriate to apply an uplift in some local authority areas to improve affordability. An affordability uplift of 10% of the demographic-based need figure is deemed appropriate in these authorities. In Sefton and Wirral the demographic-led need with 10% affordability uplift is sufficient to support economic growth and so forms the basis of OAN. However, in West Lancashire the economic evidence suggests a higher a level of housing need and so this forms the basis of OAN there.

Table 74: Objectively Assessed Housing Need

		Demographic Based Need	Economic Baseline Scenario	Demographic Need with Affordability Uplift	OAN
Halton	Adjusted headship	254	**326**	-	**326**
Knowsley	2014-headship	**280**	271	-	**280**
Liverpool	2014-headship	**1,739**	862	-	**1,739**
Sefton	2014-headship	540	454	**594**	**594**
St Helens	2014-headship	**416**	397	-	**416**
Warrington[34]	2014-headship	762	**949**	-	**949**
West Lancashire	Adjusted headship	200	**221**	220	**221**
Wirral	2014-headship	664	536	**730**	**730**
Mid Mersey HMA					**1,691**
Liverpool HMA					**3,564**

Older Persons' Housing Needs

14.47 In the Liverpool City Region (as in many areas) a growing older person population is likely to have some impact on the future need and demand for homes. Factors influencing the housing needs of older persons include:

- A rising population of older people – which is a key influence on housing need;
- Many older households are equity rich and are able to exercise housing choice;
- An increased diversity of specialist housing to reflect different levels of care/ support needs; and
- A move away from residential institutions towards providing care support in someone's home through adaptation and visiting support.

14.48 Future changes in the population of older persons are considered using data from the 2014-based SNPP and looks over the 2012-37 period to be consistent with projections developed in this report. The data shows that the study area (in line with other areas) is expected to see a notable increase in the older person population with the total number of people aged 65 and over projected to increase by 52% over the 25-years to 2037; this compares with overall population growth of 7% and

[34] The OAN for Warrington differs from that identified in the Mid Mersey SHMA Update – Warrington Addendum (GL Hearn, May 2017) due to the use of different jobs growth forecasts used. The Mid Mersey SHMA Update OAN is based on the jobs growth planned for in the Cheshire and Warrington Devolution Deal, which results in an OAN for Warrington of 1,113 dpa.

a modest decrease in the Under 65 population. Given the ageing population and higher levels of disability and health problems amongst older people there is likely to be an increased requirement for specialist housing options moving forward. The analysis draws on data from the Housing Learning and Information Network (Housing LIN) along with our demographic projections to provide an indication of the potential level of additional specialist housing that might be required for older people in the future.

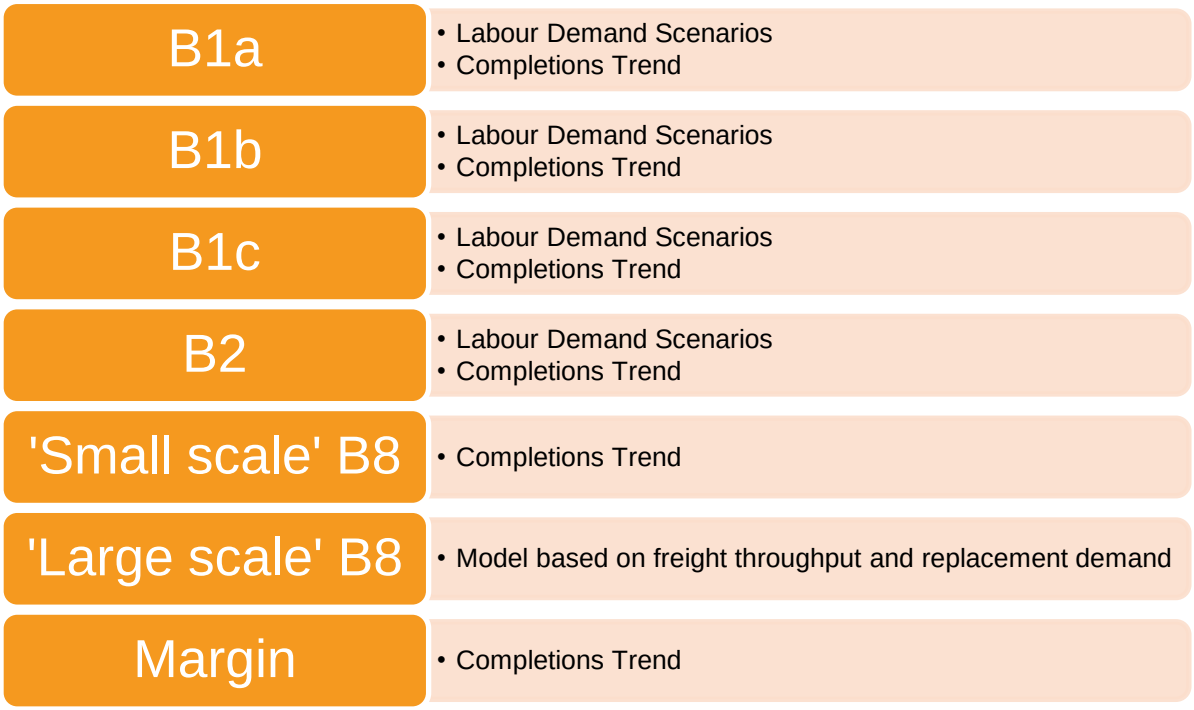
14.49 The analysis identifies over the 2012-37 period that there may be a need for 754 specialist units of accommodation for older people (generally considered to be sheltered or extra-care housing) per annum. Such provision would be within a C3 use class and would therefore be part of the objective assessment of need.

14.50 Additionally, the analysis highlights a potential need for an additional 358 registered care bedspaces per annum for older people (aged 75 and over) in the 2012-37 period. As these would be in use class C2, they would be in addition to the estimates of housing need from demographic modelling.

Need For Employment Land

14.51 The SHELMA considers demand for employment land and floorspace over the plan period from 2012-37 based on the following basis:

Figure 68: Components of Employment Land Need



14.52 The analysis of 'demand' for employment land therefore does not take account of any supply-side factors such as existing employment land allocations or commitments.

Labour Demand Scenarios

14.53 The labour demand scenario estimates the land which would be required to support projected jobs growth. This is based on econometric forecasts produced by Oxford Economics and Liverpool City Region LEP. Two forecasts have been considered:

- Baseline Scenario; and
- Growth Scenario.

14.54 To these figures we have applied standard employment densities and plot ratios to identify the overall land requirements to support the net jobs growth. In identifying how much land to allocate for development, we have included a 'margin' in addition to the labour demand based figures above in order to provide for some flexibility.

14.55 An alternative forecast approach has been considered, based on projecting forward past gross completions of employment floorspace development. The completions trend includes B1, B2, and small scale B8 developments. Large scale B8 developments have been stripped out as these are considered separately. The employment land requirement resulting from an extrapolation of the past completions trend is shown below. This identifies a requirement at FEMA level for 235.7ha for B1; 437.3ha for B2 uses; and 118.2ha for small scale B8 uses.

14.56 These approaches identify a need for B1 development of between 160 ha (in the baseline labour demand scenario) to 236 ha (based on past completions) across the FEMA. The Growth Scenario sits at the higher end of this range (232 ha) and in particular models significant stronger office floorspace demand in Liverpool. Delivery of this will to some degree be influenced by the availability of suitable land in/ around Liverpool City Centre, and potentially public-sector support for development.

14.57 For B2 industrial floorspace, a need for 140 – 155 ha is identified in the labour demand scenarios, and a significant 437 ha based on past completions across the FEMA.

14.58 The evidence shows that historically the job losses in the manufacturing sector have not correlated to a corresponding decrease in industrial floorspace across the City Region, suggesting there is a disconnect between jobs growth and industrial floorspace requirements. This suggests that for industrial floorspace the completions trend forecasts may provide a more realistic assessment of future land requirements. Overall, this suggests that the requirement for industrial land is towards the higher end of the range.

14.59 However, the completions trend figures include an element of re-provisioning of dated industrial stock, which in some areas has been considerable. This should be taken into account when considering the overall requirement. This is an assessment of gross requirements to meet modern business needs, and does not necessarily imply that poorer quality older industrial sites will meet these needs. Local employment land studies consider the quality of existing sites/ allocations.

14.60 A need for 118 ha of land across the FEMA capable of accommodating small-scale B8 warehouse/ distribution development in units of under 9,000 sq.m is identified (i.e. sites of less than c. 2.5 ha).

Table 75: Employment Land Requirements (Excluding Strategic B8) by Authority, 2012-37

	Baseline Scenario		Growth Scenario		Completions Trend		
	B1	B2	B1	B2	B1	B2	Small Scale B8
Halton	28.1	20.9	39.8	21.1	63.0	62.3	26.2
Knowsley	24.4	33.0	26.8	33.0	20.7	88.0	15.7
Liverpool	39.7	29.4	70.0	29.4	79.2	117.8	12.7
Sefton	14.2	6.1	18.4	6.1	24.2	15.0	9.5
St Helens	11.6	13.7	28.8	27.3	6.3	44.8	10.3
Wirral	27.6	29.1	33.8	30.1	26.1	89.0	14.5
West Lancs	14.5	7.7	14.9	7.7	16.3	20.4	29.2
FEMA	**160.1**	**139.8**	**232.5**	**154.8**	**235.7**	**437.3**	**118.2**

14.61 These figures need to be treated with some caution given they build in a degree of policy aspirations in respect of future sectoral performance and the delivery of potential strategic sites.

14.62 In addition to providing for the demand for new employment land, there will inevitably be losses of existing employment land to other uses where existing sites are no longer suitable or commercially attractive to support continued employment uses. Local authorities should therefore continue to identify any such sites and provide a suitable level of land to replace these losses.

14.63 In identifying the overall requirements for employment land, the need for 'Strategic B8' will need to be added to the above figures. Additionally, the local authorities may wish to consider identifying additional employment land to support commodities storage and to support inward investment opportunities.

Need for Large Scale B8 Warehousing Development

14.64 A 'large scale' warehouse is defined as an individual unit over 9,000 square metres or approximately 100,000 square feet, this being the standard recognised definition within the commercial property sector.

14.65 The approach to forecasting future warehouse new-build takes into account the fact that demand for new-build warehousing is a combination of two factors, namely:

- The requirement to continually replace existing warehouse capacity which is 'life expired' (replacement build); and
- The need for additional floor space to handle long-term growth in traffic volumes (growth build).

14.66 For the Growth Build calculation, two sets of traffic forecasts were produced for the strategy, namely:

- *Do-minimum* – reflecting recent underlying economic growth alongside minimal investment in transport infrastructure (nothing beyond that already committed) and no other public sector interventions; and
- *Do-something/ Transport for the North Strategy* – reflecting the consultant's strategy, which also reflects the results of an extensive consultation exercise with the freight and logistics industry in the north of England and the public sector. This included substantial transport infrastructure investment (e.g. up-front provision of rail freight capacity), improved connectivity to ports and a substantial growth in rail/water connected distribution facilities across the north of England, alongside other public sector interventions, such as a more favourable planning environment.

14.67 By combining the 'replacement build' and 'growth build' elements, the total gross warehouse new-build requirement can be calculated. This is shown in the table below together with the associated land requirements (on the basis that the floor space of a warehouse represents 40% of the total plot footprint).

Table 76: Forecast Large Scale B8 Requirement to 2037

	Do Minimum 2037	FTN Strategy 2037
Replacement build (000s sq m)	952	952
Growth Build (000s sq m)	281	638
Land Required (ha)	**308**	**397**

Where will Large-Scale B8 Growth occur?

14.68 At this stage GL Hearn and MDS Transmodal have not disaggregated the large scale B8 need at a local authority level, nor do we consider it appropriate to do so. The market for large-scale warehouse/ distribution development is sub-regional in nature, and growth at a local level is typically supply-driven – it is influenced by the availability of land at attractive locations. This is, to a large extent, the distribution of growth at a more local level is therefore a supply-led issue.

14.69 GL Hearn have undertaken a Strategic Sites Assessment of the potential land supply for large scale (5+ ha) B8 development. The Strategic Sites Assessment considers the availability of land; the suitability of sites to accommodate large-scale B8 development, including their market attractiveness; and issues affecting the deliverability of B8 development, including infrastructure.

14.70 Consideration was given to site characteristics, including site size, available land/ plots, shape and topography; to access to the strategic road network and rail network, labour force and public transport connectivity, as well as local access and internal circulation (for existing sites).

Neighbouring activities were considered including local services, as well as uses which could limit the potential for 24 hour operation. Planning status, land ownership and infrastructure requirements were considered. Relative accessibility, as well as network capacity issues on the road and rail networks, was also addressed.

14.71 The findings of the Strategic Sites Assessment (which focuses on land capable of accommodating strategic B8 development) are included in a report which sits alongside this SHELMA document. It is presented separately as it deals with supply, as opposed to need.

14.72 There are policy choices for the local authorities to make regarding additional sites to allocate to meet the need for large-scale B8 development. There are various considerations which need to feed into this including

Need for Other Specialist Employment Land

Land Requirements for Commodities Storage

14.73 MDS Tranmodal have reviewed land requirements for commodities storage, based on the latest Mersey Port Masterplan (June 2011). This includes forecasts for cargo handling by the Port to 2020 and 2030 by commodity.

14.74 The commodities forecasts presented within the Mersey Ports Masterplan identify a need for around 340 ha of land to 2030. This includes land for Port-related logistics (113 ha) which will overlap with the demand forecasts for B8 warehouse development. The TfN Strategy Scenario in particular includes an assumption of growth in warehousing at rail and water-connected sites.

14.75 The plan designates particular areas for development in the future, however there is still a 12% gap in the overall land requirement if needs for port-related logistics are to be met in/ close to the Port, meaning that there are still 105 acres of unidentified land. This is equivalent to around 42.5 hectares. This will not however necessarily be additional to the wider modelling undertaken (in particular for strategic B8 development).

Inward Investment Sites

14.76 There are potential opportunities to attract inward investment into the City Region from footloose firms considering location or relocation across a national or international area of search. Some, if not most, of the specific needs which might arise will be able to be met through the 'regular' employment land supply. However potential requirements for larger scale single occupier sites will be less easily accommodated.

14.77 Opportunities for major inward investment do not come along often; however to capture such opportunities against competition from elsewhere in the UK and internationally, it is obviously important to have suitable 'shovel ready' land where development can take place. There are clearly wider considerations from costs of goods and labour to incentives, trade barriers etc.

14.78 Consideration could potentially be given to identifying a large site (40+ ha) at a prime location which could accommodate a major inward investment, however if this is to be retained for this purpose it is likely to need to be in public sector ownership.