GL Hearn
Part of Capita Real Estate

Liverpool SHELMA Appendices

Consultation Draft Report

December 2016

Prepared by

GL Hearn
280 High Holborn
London WC1V 7EE

T +44 (0)20 7851 4900
glhearn.com

Contents

Appendices

List of Figures

List of Tables

APPENDIX A: DEFINING THE HOUSING MARKET AREA & FUNCTIONAL ECONOMIC MARKET AREA

Defining the Housing Market Area & Functional Economic Market Area

Liverpool City Region

Final Report

July 2016

Prepared by

GL Hearn Limited
280 High Holborn
London WC1V 7EE

T +44 (0)20 7851 4900
glhearn.com

Contents

List of Figures

List of Tables

Quality Standards Control

The signatories below verify that this document has been prepared in accordance with our quality control requirements. These procedures do not affect the content and views expressed by the originator.

This document must only be treated as a draft unless it is has been signed by the Originators and approved by a Business or Associate Director.

DATE	ORIGINATORS	APPROVED
July 2016	Aled Barcroft Senior Planner	Nick Ireland Planning Director

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 authorities of the Liverpool City Region (LCR)[1] have jointly commissioned GL Hearn to prepare a Strategic Housing and Employment Land Market Assessment (SHELMA) study for the City Region. The SHELMA is an integrated evidence base which combines the core outputs of a Strategic Housing Market Assessment (SHMA) and Employment Land Review (ELR).

1.2 The National Planning Policy Framework (NPPF) sets out that a SHMA should be prepared for the relevant Housing Market Area (HMA) and ELRs should be prepared for 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. However, it goes on to set out that:

> *"Where Local plans are at different stages of production, local planning authorities can build on the existing evidence base of partner authorities in their housing market area but should co-ordinate future housing reviews so that they take place at the same time."*

1.3 Local Plan timescales within the Liverpool City Region are not currently aligned with one another. There is however a commitment from the LCR authorities to work together to review the definition of the HMA and FEMAs across the City Region and to jointly work together to prepare the SHELMA.

1.4 In advance of this joint work, this paper seeks to:

1. Review previous work which has been undertaken to consider housing market and economic geographies within the Liverpool City Region; and

2. To undertake an initial review of more recent data, including house price data, migration and commuting flow data from the 2011 Census.

1.5 The HMA and FEMA boundaries identified within this report will inform the preparation of the SHELMA. The findings of this report should not be treated as a definitive definition of the Liverpool City Region or wider City Region areas and thus should not be treated as such.

[1] Halton Borough Council, Knowsley Council, Liverpool City Council, Sefton Council, St. Helens Council, West Lancashire Borough Council, and Wirral Council.

National Policy and Guidance

National Planning Policy Framework

1.6 The National Planning Policy Framework (NPPF) sets out that local planning authorities (LPAs) should have a clear understanding of housing needs in their area, and that they should prepare a SHMA to assess their full housing needs, working with neighbouring authorities where housing market areas cross administrative boundaries[2]. In Paragraph 47 it outlines that to significantly boost the supply of housing, local planning authorities should use their evidence base to ensure that their local plan meets the full, objectively-assessed need for market and affordable housing in the housing market area, as far is consistent with the policies set out in the Framework.

1.7 The NPPF emphasises that housing need is expected to be assessed for the Housing Market Area, and that development constraints should not be applied to the assessment of need, although these are relevant considerations in bringing together evidence to set policy targets in plans.

1.8 The NPPF sets out the Government's ambition to ensure that the planning system does everything it can to support sustainable economic growth[3]. It requires local authorities in their plans to set out a clear economic vision and strategy which positively and proactively encourages sustainable economic growth; identifies strategic sites; supports existing business sectors and emerging sectors likely to locate in an area; plans for the location, promotion and expansion of clusters or networks of knowledge-driven, creative or high-tech industries; and supports economic regeneration[4].

Planning Practice Guidance

1.9 Planning Practice Guidance on *Housing and Economic Development Needs Assessments* deals with how geographies might be defined. This provides a definition of a Housing Market Area (HMA) and Functional Economic Market Area (FEMA) and provides guidance on how these should be defined. The PPG outlines what a housing market area is, setting out:

> *"A housing market area is a geographical area defined by household demand and preferences for all types of housing, reflecting the key functional linkages between places where people live and work. It might be the case that housing market areas overlap.*
>
> *The extent of the housing market areas identified will vary, and many will in practice cut across various local planning authority administrative boundaries. Local planning authorities should work with all the other constituent authorities under the duty to cooperate[5]."*

1.10 In addition, the PPG sets out that HMAs can broadly be defined using three different sources of information:

[2] CLG (2012) *National Planning Policy Framework, Paragraph 159*
[3] CLG (2012) *National Planning Policy Framework, Paragraph 19*
[4] CLG (2012) *National Planning Policy Framework, Paragraph 21*
[5] Reference ID: 2a-011-20140306

- **House prices and rates of change in house prices** – providing a market-based definition based on areas with similar house price characteristics;
- **Household migration and search patterns** – considering the extent to which people move house within an area, with a housing market area considered to be that in which typically 70% or more of local moves are contained within (excluding long-distance moves);
- **Contextual data** - such as travel to work areas, retail and school catchments – with travel to work areas providing information regarding commuting.

1.11 The three strands of information look at different aspects of household behaviour, and there is no right or wrong answer regarding what weight should be applied to different factors. What the PPG says is that:

> *No single source of information on needs will be comprehensive in identifying the appropriate assessment area; careful consideration should be given to the appropriateness of each source of information and how they relate to one another. For example, for housing, where there are issues of affordability or low demand, house price or rental level analyses will be particularly important in identifying the assessment area. Where there are relatively high or volatile rates of household movement, migration data will be particularly important. Plan makers will need to consider the usefulness of each source of information and approach for their purposes.*

1.12 The FEMA is considered to reflect the geography of commercial property markets, the PPG outlining that:

> *The geography of commercial property markets should be thought of in terms of the requirements of the market in terms of the location of premises, and the spatial factors used in analysing demand and supply – often referred to as the functional economic market area. Since patterns of economic activity vary from place to place, there is no standard approach to defining a functional economic market area.*

1.13 However the PPG does then go on to list potential factors which should be considered in determining what the relevant FEMA is. These are:

- Extent of any Local Enterprise Partnership within the area;
- Travel To Work Areas;
- Housing Market Area;
- Flow of goods, services and information within the local economy;
- Service market for consumers;
- Administrative area;
- Catchment areas of facilities providing cultural and social well-being; and
- Transport network.

1.14 The PPG outlines that in some cases housing market areas and functional economic market areas may well be the same.

Practical Issues

Housing Market Areas

1.15 The PPG largely reiterates previous advice on defining HMAs set out within the CLG's 2007 Advice Note on *Identifying Sub-Regional Housing Market Areas*. There has been effectively no change in guidance, which continues to emphasise that there is no right or wrong answer as to how an HMA or FEMA should be defined and that the approach should, in effect, reflect local market characteristics and circumstances.

1.16 There are some further practical issues which are dealt with in the Planning Advisory Service (PAS) Technical Advice Note on *Objectively Assessed Need and Housing Targets.*[6] This outlines that in practice, the main indicators used to define HMAs are migration and commuting flows, but goes on to point out that:

> *"One problem in drawing boundaries is that any individual authority is usually most tightly linked to adjacent authorities and other physically close neighbours. But each of these close neighbours in turn is most tightly linked to its own closest neighbours, and the chain continues indefinitely.*
>
> *Therefore, if individual authorities worked independently to define HMAs, almost each authority would likely draw a different map, centred on its own area. This of course would produce nearly as many HMAs as local authorities, with huge overlaps."*

1.17 The PAS Note argues that to address this issue, it is useful to start with a "top down analysis" which looks at the whole country. This is provided by a research study led by the Centre for Urban and Regional Development Studies (CURDS) at Newcastle University to define HMAs across England, which was published by Government in November 2010[7]. This has defined a consistent set of HMAs across England based on migration and commuting data from the 2001 Census.

1.18 Peter Brett Associates (PBA) emphasise that this should be considered 'only a starting point' and should be sense-checked against local knowledge and more recent data, especially on migration and commuting – concluding that more recent data 'should always trump' the national research. GL Hearn agrees with Peter Brett Associates' conclusions in this respect.

1.19 A further practical issue regards the geographical building blocks that housing market areas are built up from. A key purpose of a SHMA is to define the Objectively Assessed Need (OAN) for housing. The PPG is clear that the starting point is the official population and household projections. These are published at a national level, and for local authorities. They are not published below local authority level, nor is the data available (regarding migration and trends in household formation

[6] Peter Brett Associates (PBA) for PAS (July 2015) *Objectively Assessed Need and Housing Targets*
[7] C Jones, M Coombe and C Wong for CLG (Nov 2010) *Geography of Housing Markets, Final Report*

which are key drivers within the projections) below local authority level. On this basis we consider that **Housing Market Areas should be based on the 'best fit' to local authority boundaries** albeit that SHMAs can (and should) recognise cross-boundary influences and interactions. The PAS Guidance supports this, concluding that:

> *"It is best if HMAs, as defined for the purpose of needs assessments, do not straddle local authority boundaries. For areas smaller than local authorities data availability is poor and analysis becomes impossibly complex. There may also be 'cliff edge' effects at the HMA boundary, for example development allowed on one side of a road but not the other."*

1.20 This approach seems widely accepted and is a practical response to data availability and one we would wish to adopt. In practical terms, we are of the view that towards the edges of most housing markets there are likely to be influences from more than one direction and there will inevitably be some overlap between neighbouring housing markets.

Functional Economic Market Areas

1.21 The CLG's 2010 publication *Functional Economic Market Areas – An Economic Note* outlines that a FEMA is the area of which the local economy and its key markets operate, suggesting that this is likely to correspond to sub-regions or city regions.

1.22 The note outlined that the most widely accepted approach to identifying FEMAs is by reference to Travel to Work Areas (TTWAs), the most commonly used definition for which is areas where at least 75% of the economically active population work; and at least 75% of those working in the area also live. The Note outlines that TTWAs are often treated as the default definition of FEMAs. It also emphasises migration data, ultimately concluding that:

> *"There is an argument for analysing Census commuting or migration data, as the most complete and reliable flow data, and supplementing this with data from other key economic markets."*

1.23 A primacy is therefore in effect given to this indicator. This in part reflects data quality issues, with the Note outlining that supply chains are difficult to map; and whilst this can be partly addressed through identification of sector clusters, 'it is questionable whether the information has much value, since it is not based on data about real links.'

1.24 It emphasises that in respect of service markets for consumers, travel patterns to higher order service centres which have a wider catchment area are of most relevance. In respect of transport networks, the Note identifies that in practice, the role of transport links is reflected in commuting flows and TTWA definitions.

1.25 The PAS Technical Advice Note outlines that it is helpful is housing market and functional economic market areas are coterminous, suggesting that both are heavily influenced by commuting patterns

and as such a high level of overlap should be expected; and that there are benefits in terms of convenience for policy making in doing so.

Report Structure

1.26 The remainder of the report presents our analysis and findings regarding the HMA and FEMA geographies operating across the Coastal West Sussex and Greater Brighton Area.

1.27 The remainder of the report is structured as follows:

- Review of previous research;
- Analysing house price data;
- Analysing migration patterns;
- Analysing commuting flows;
- Defining the Functional Economic Market Area;
- Conclusions.

2 REVIEW OF PREVIOUS RESEARCH

2.1 This section of the report reviews existing research which has sought to consider the definition of HMAs and FEMAs.

CLG/ CURDS Study (2009/10)

2.2 National research undertaken for Government by a consortium of academics led by the Centre for Urban and Regional Development Studies (CURDS) at Newcastle University has sought to define housing markets across England. The PAS Technical Advice Note recommends that this is used as a 'starting point' for considering the HMA geography.

2.3 The CURDS Study for CLG considers commuting and migration dynamics (based on 2001 Census data) and house prices[8] (standardised to account for differences in housing mix and neighbourhood characteristics). This information is brought together to define a tiered structure of housing markets, as follows:

- Strategic (Framework) Housing Markets– based on 77.5% commuting self-containment;
- Local Housing Market Areas – based on 50% migration self-containment; and
- Sub-Markets – which would be defined based on neighbourhood factors and house types.

2.4 The two-tier structure (strategic/local) in the CLG research (which is mapped and analysed) is useful at disaggregating strategic housing market areas which are generally used for modelling of issues such as affordability; and more local housing market areas which are of greater relevance in considering issues relating to more local market dynamics and supply-demand balance. However, the practicalities of using each must be considered depending on location, particularly in more urban areas.

2.5 The CLG research defines market areas in two further ways. The first is a 'gold-standard' which is based on an aggregation of ward areas and is therefore more detailed than the second definition the 'silver–standard'. The 'silver-standard' definitions are comprised of local authority areas.

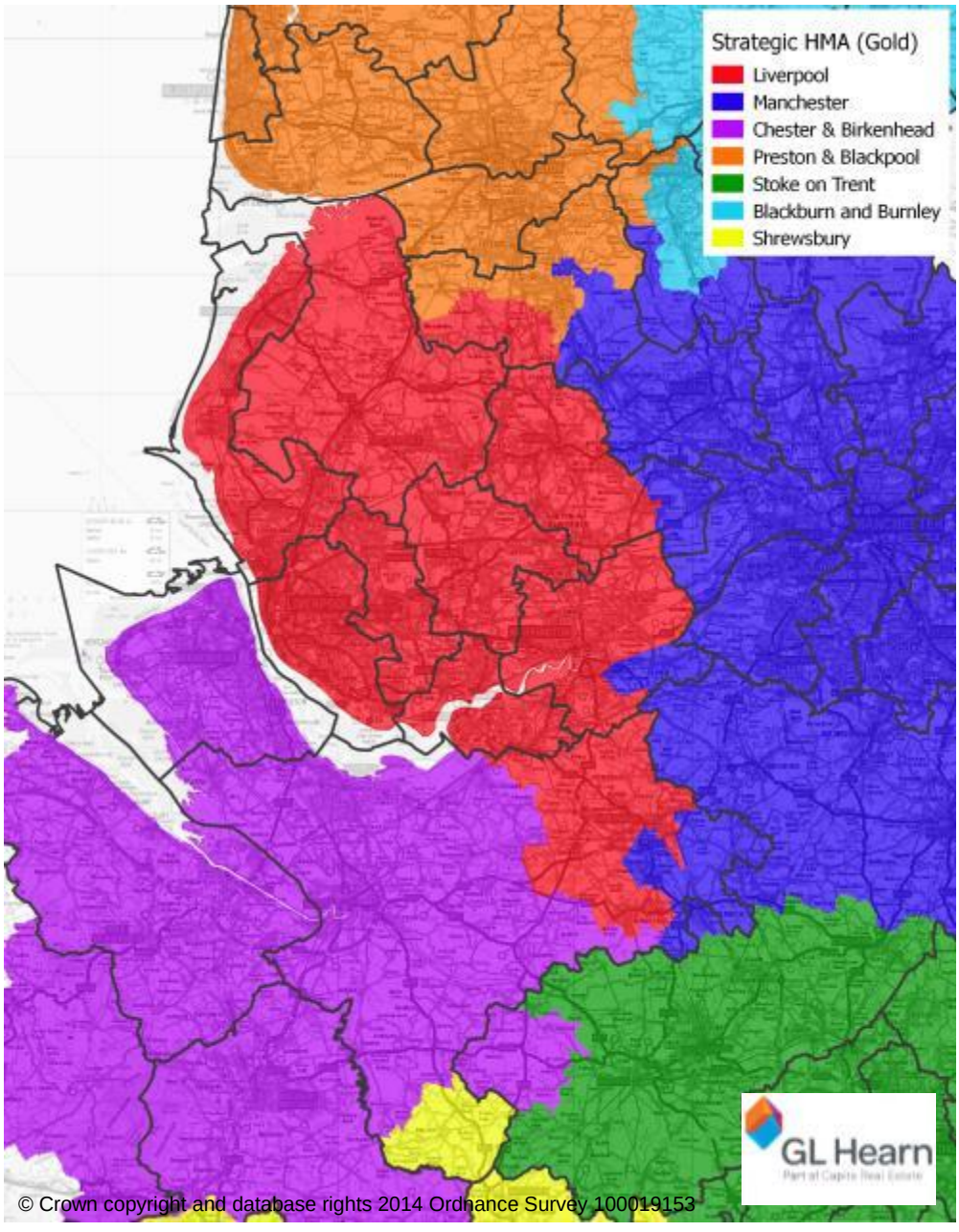
2.6 The Planning Advisory Service (PAS) technical advice note on Objectively Assessed Need and Housing Targets states a preference for the 'silver-standard'. The silver-standard is considered to provide the most appropriate assessment of HMAs, as both the local and the gold standard HMAs result in boundaries that straddle local authority areas. Such a boundary is impractical, given that planning policy is mostly made at the local authority level, and that many of the key datasets – not least as demographic projections – are not published below local authority level.

8 Derived from HMLR 2002 house price data.

2.7 As shown in Figure 1, the CURDS study defines two 'gold standard' Strategic HMAs covering the Liverpool City Region:

- Liverpool – which covers the local authorities of Halton, Knowsley, Liverpool, Sefton, St. Helens and West Lancashire, as well as most of Warrington and Wigan and parts of Cheshire West and Chester and the south western parts of Chorley; and
- Chester and Birkenhead – Which covers Wirral, the majority of Cheshire West and Chester, and parts of North Wales.

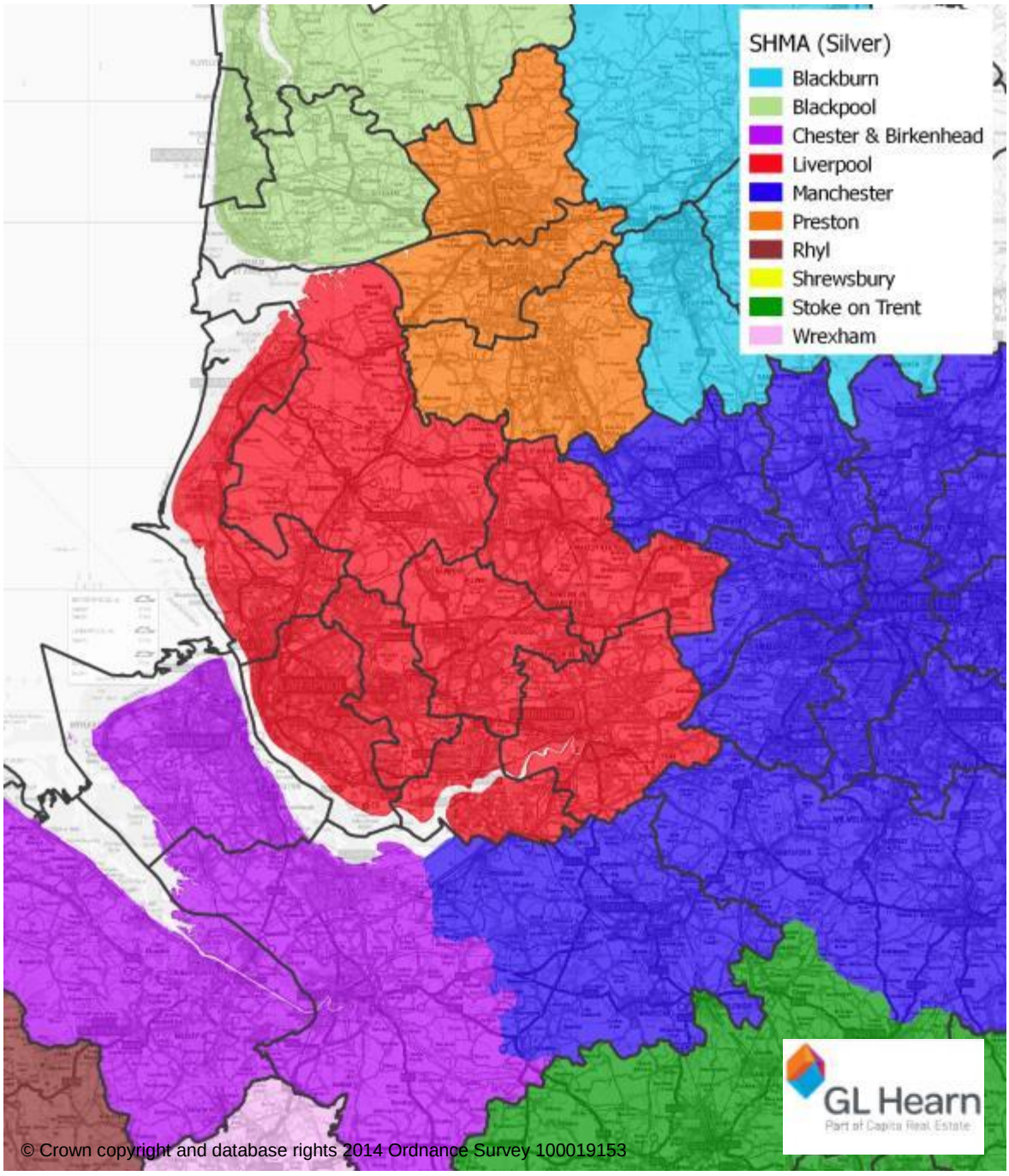
Figure 1: CURDS-Defined Strategic Housing Market Areas – Gold Standard



Source: CLG/CURDS, 2010

2.8 The 'silver-standard' Strategic HMAs (based on local authority boundaries) is shown in Figure 2. This is effectively a best fit to Local Authority areas. The silver-standard Liverpool HMA includes the local authorities of Halton, Knowsley, Liverpool, St. Helens, Sefton, West Lancashire, Warrington, and Wigan. The silver-standard definition includes Wirral in the Chester and Birkenhead HMA.

Figure 2: CURDS-Defined Strategic Housing Market Areas – Silver Standard



Source: CLG/CURDS, 2010

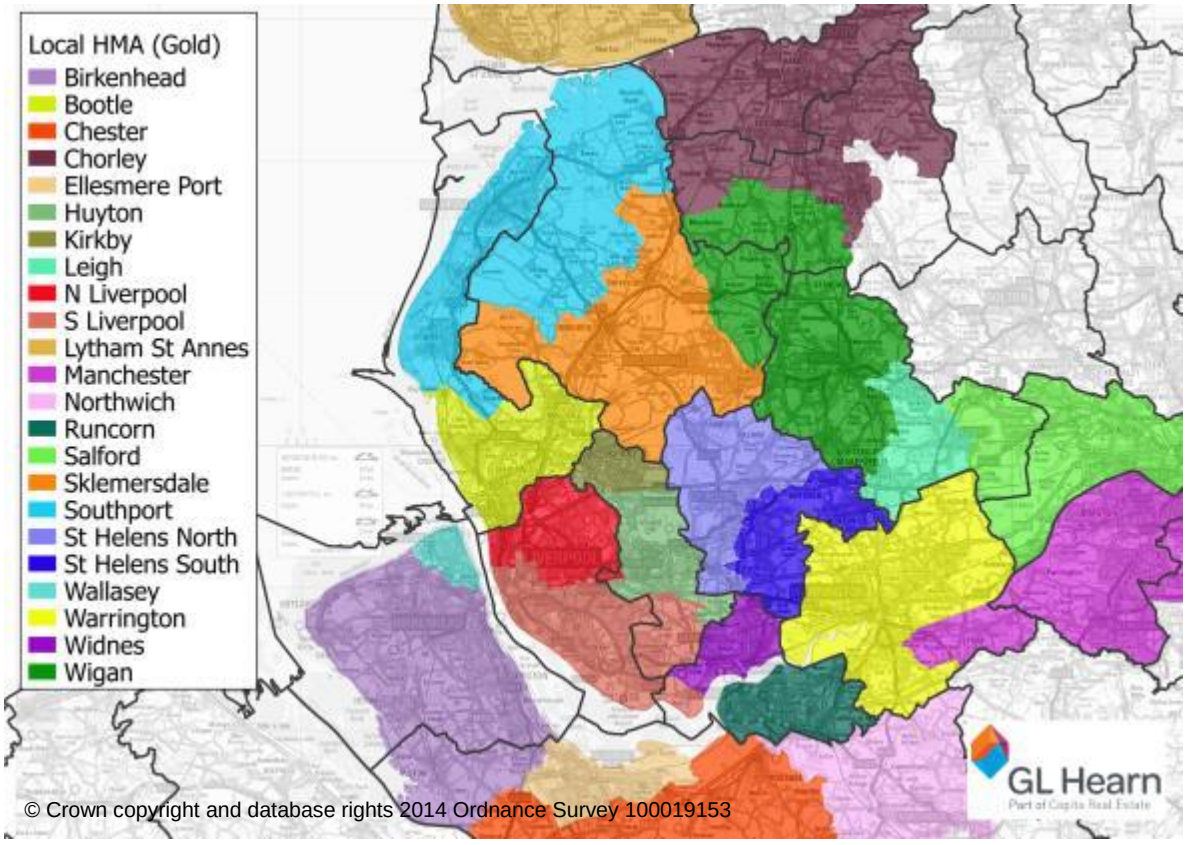
2.9 As illustrated in Figure 3, there are a number of Local Housing Market Areas embedded within the Liverpool Strategic HMA. These (based on 50% migration self-containment) are defined as follows:

- Bootle
- Huyton
- Kirkby
- North Liverpool
- South Liverpool
- Runcorn
- Skelmersdale
- Southport
- St. Helens North
- St. Helens South
- Widnes
- Wigan

2.10 In the Chester and Birkenhead Strategic HMA, there are two identified Local HMAs in Wirral:

- Birkenhead
- Wallasey

Figure 3: CURDS-Defined Local Housing Market Areas



Source: CLG/CURDS, 2010

Administrative Geographies & Liverpool City Region

2.11 The geography of what is described of as the "Liverpool City Region" has varied. The Liverpool City Region was defined in 2004 in *Moving Forward: The Northern Way* as comprising the local authorities of Liverpool, Sefton, Wirral, St. Helens, Knowsley and Halton (i.e. the Merseyside authorities plus Halton). The document however recognised a wider economic area which included overlapping economic centres and the travel to work areas of Ellesmere Port, Warrington, Chester and Deeside.

2.12 In 2009, the local authorities of Halton, Knowsley, Liverpool, Sefton, St. Helens and Wirral signed a Multi-Area Agreement (MAA) with Government, referred to as the MAA for the City Region. In 2010 a Liverpool City Region Local Enterprise Partnership (LEP) was designated which continued to be based on these six local authorities. This six-authority definition was also used in the now revoked North West of England Regional Spatial Strategy, although this also recognised a wider geography/ area of influence.

2.13 Most recently in 2014, Parliament approved the establishment of a Liverpool City Region Combined Authority which again reflects the six-authority geography, and includes West Lancashire and Warrington as associate members.

2007 Liverpool City Region Housing Strategy

2.14 The 2007 Liverpool City Region Housing Strategy defined a wider geography for the City Region, comprising not just the authorities which together form the LCR Combined Authority but authorities in West Cheshire & North East Wales including Wrexham, Flintshire, Ellesmere Port and Neston and Chester, as well as Vale Royal, Warrington and West Lancashire, some of which have since been subject to Local Government reorganisation[9]. To avoid confusion we will refer to these authority areas as the 'wider LCR.'

2.15 Housing market areas were defined through a process which involved five thematic tests. Patterns of movement were examined, including analysis of travel to work and migration over time. The role and function of areas was examined in relation to shopping, employment and educational catchments. Socio-economic and neighbourhood characteristics were analysed and mapped and differences in house prices were examined.

2.16 Drawing these strands of work together, the Strategy defined three functional housing market areas which demonstrated high levels of "functional integrity" or shared characteristics. These were:

[9] Chester and Vale Royal, along with Ellesmere Port and Neston, now form Cheshire West and Chester

- Northern HMA – comprising Liverpool, Sefton, Wirral, Knowsley and West Lancashire;
- Southern HMA – comprising Chester, Flintshire, Wrexham, Ellesmere Port and Vale Royal; and
- Eastern HMA – comprising Warrington, Halton and St. Helens.

2.17 The assessment drew in particular on work undertaken by Ecotec in 2005 to map travel to work flows. This was used to map the area in which more than 5% of people travel to work to destination authorities. This showed a strong pattern of commuting into Liverpool from adjacent districts, but with smaller flows from the south of the wider LCR than other areas. It showed that the areas of influence for Sefton, Wirral, West Lancashire, Knowsley, Halton and St. Helens were all broadly encompassed within that for Liverpool using a 5% threshold.

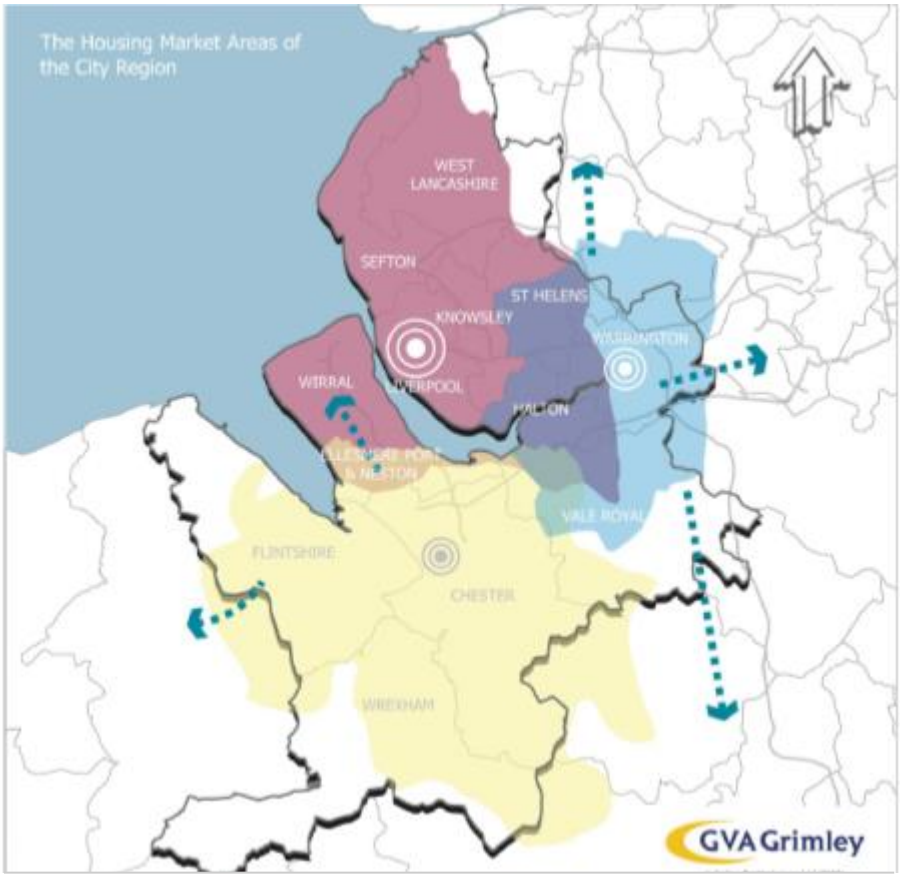
2.18 The Housing Strategy however concluded that the main commuting flows for Liverpool were with Sefton, Knowsley and Wirral; with weaker links with Halton, St. Helens and West Lancashire. It found that in the case of Wirral, there were significant flows both into Liverpool; and south towards Ellesmere Port and Chester. There were however weaker direct commuting links between Wirral and Sefton. Looking at patterns of net migration alongside commuting flows and other data however supported a split into three HMAs.

2.19 The Housing Strategy also recognised “zones of flexibility” or overlap in which there were influences in a number of directions. For Halton and St. Helens, this was due to strong linkages to both Knowsley and Liverpool. Ellesmere Port, Halton and St. Helens were all recognised as within a zone of flexibility/ overlap with the Northern HMA, which is shown spatially in Figure 4 overleaf.

1.1 Key features of the Northern HMA identified in the City Region Housing Strategy included:

- Past trend in population decline and economic restructuring;
- Prevalence of stigmatised markets and areas of low demand / vulnerability;
- Concentrations of social rented housing and small terraced properties;
- Limited provision of larger family homes;
- Affordability pressures linked to low incomes.

Figure 4: Housing Market Areas and Zones of Flexibility



Source: GVA, 2011

2011 Liverpool Strategic Housing Market Assessment

2.20 The 2011 Liverpool SHMA did not seek to review the HMA geography, but did analyse housing market conditions for a number of sub-areas within the City, shown below:

Figure 5: Housing Market Sub-Areas within Liverpool

Source: GVA, 2011

2011 Liverpool City Region Partners Housing & Economic Development Evidence Base Overview Study

2.21 This report did not seek to directly review the definition of the three strategic HMAs defined across the wider City Region in the 2007 LCRHS, but noted strong travel to work flows between Liverpool and Wirral; high self-containment of commuting flows within Sefton; and flows between West Lancashire and the Central Lancashire authorities. Overall it concluded that the Housing Market Geography shown in Figure 4 above would represent an appropriate HMA.

2016 Mid Mersey Strategic Housing Market Assessment

2.22 The 2016 Mid Mersey SHMA was produced by GL Hearn for Halton, St. Helens, and Warrington Councils. The SHMA included a reassessment of the appropriate Housing Market Area and drew on more up to date data – including the ONS Travel to Work Area definitions from the 2011 Census. The report identifies a significant level of integration between these three authorities in terms of housing market dynamics.

2.23 The house price analysis shows a close alignment across the three authorities, with the exception of Lymm in Warrington where prices were significantly higher. The migration data show a strong degree of self-containment for the individual authorities. However, the self-containment rates are stronger for the accumulation of the three Mid Mersey authorities as opposed to individually. In commuting terms, there was a particularly strong relationship with Liverpool, Knowsley and Wigan. The 2011 TTWAs identify a strong relationship between the Mid Mersey authorities and Wigan.

2.24 The SHMA concludes that the evidence strongly supports defining a Mid Mersey Housing Market Area based on Warrington, St. Helens, and Halton Boroughs, but recognising overlaps with surrounding HMAs. Specifically, Knowsley has significant linkages with St. Helens and Halton, creating an overlap between the 2007 LCRHS “Northern HMA” and “Eastern HMA” (Mid Mersey HMA), but has stronger linkages with Liverpool. Wigan also has significant linkages with the Mid Mersey HMA and in particular with St. Helens, but it also exhibits stronger linkages with Bolton and a significant degree of self-containment.

2016 Liverpool Strategic Housing Market Assessment

2.25 The 2016 Liverpool SHMA was also produced by GL Hearn. The SHMA included a reassessment of the appropriate Housing Market Area and drew on more up to date data – including the Travel to Work Area data from the 2011 Census.

2.26 The analysis of house prices across the sub-region indicated that higher house prices were evident in parts of South Liverpool, in West Wirral, North Sefton and the more rural areas. The migration and commuting patterns indicate a strong set of flows between Liverpool and Sefton, Liverpool and Wirral, and Liverpool and Knowsley suggesting that these authorities should be considered within the same HMA. The analysis shows that Wigan relates more strongly in migration terms to Greater Manchester. There are flows between West Lancashire and both Merseyside and Central Lancashire; but the stronger links are towards Liverpool and particularly with Sefton. This supports the inclusion of West Lancashire within a Liverpool-focused HMA. Halton and St. Helens have links both with Liverpool, and with Warrington.

2.27 The SHMA concludes that the analysis broadly reconfirms the conclusions of the 2007 LCRHS which identified a sub-regional HMA which based on the best fit of local authority boundaries comprised Liverpool, Sefton, Wirral, Knowsley and West Lancashire; whilst recognising a degree of overlap in Halton and St. Helens between this and a Mid Mersey HMA.

2016 Wirral Strategic Housing Market Assessment

2.28 The Wirral Strategic Housing Market Assessment 2016, expected to be reported in July 2016, is expected to show a high level of self-containment, based on household surveys undertaken in 2014, but with significant flows to Liverpool and Cheshire West and Chester.

2014 Sefton SHMA

2.29 The 2014 Sefton SHMA was produced by JG Consulting. The report drew on data from 2010 CLG research and the 2013 Draft SHMA for Sefton, and considered data from ONS coving migration and travel to work. This provided an opportunity check previous findings in relation to HMAs in light of the new data.

2.30 The SHMA indicates that there is a relatively high level of self-containment in Sefton, both in terms of migration and commuting. The migration data shows a self-containment (excluding long-distance moves) of 72-75%, while the commuting data for example indicates a self-containment rate of 61%-72%. The Travel to Work data also shows significant flows to and from Liverpool (including a significant net outflow), and West Lancashire.

2.31 On the basis of the high levels of migration self-containment and commuting patterns identified, the SHMA concludes that it is reasonable to consider Sefton as a single HMA.

2010 Knowsley SHMA

2.32 The 2010 Knowsley SHMA was produced by David Couttie Associates. The report is pre-dates the publication of the NPPF or 2011 Census data. It therefore draws on 2001 Census data.

2.33 The study finds that Knowsley has a low self-containment rate, with around 49% of residents of working age living and working within the Borough's boundaries. Migration data shows a self-containment rate of 68.1% in Knowsley when analysing household movements.

2.34 The report also considers 2000 to 2008 household movements data from the National Health Service Central Register (NHSCR). This shows very strong links between Knowsley and Liverpool as well as significant links between Knowsley and Sefton, Knowsley and Wirral, and Knowsley and St. Helens.

2.35 The Study concludes that the commuting and migration data indicate that Knowsley cannot be classed as a standalone Housing Market Area.

2009 West Lancashire Housing Market Assessment

2.36 The 2009 West Lancashire Housing Market Assessment was produced for West Lancashire District Council by Nevin Leather Associates. The report is pre-dates the publication of the NPPF or Census 2011 data.

2.37 Analysis shows that 62% of moves were to destinations within West Lancashire. This is a relatively low level of self-containment in terms of migration. For moves into wards in West Lancashire, 55% were from locations within West Lancashire itself. Again, this is quite a low level of self-containment. The Study shows that the Borough has the strongest migratory linkages with Sefton, followed by Wigan and Liverpool.

2.38 In terms of commuting data, the 2001 Census indicates that West Lancashire is a net exporter of labour, with just over 5,000 net outward commuters. The main flows out from West Lancashire are to Sefton, Liverpool, Wigan, Knowsley and Preston, while the Borough has considerable in-migration from Wigan, St. Helens and Chorley.

2.39 The Study concludes that West Lancashire forms part of the Liverpool City Region in housing market terms, but there are linkages to other areas, notably Wigan and St. Helens to the east and Central Lancashire to the north east.

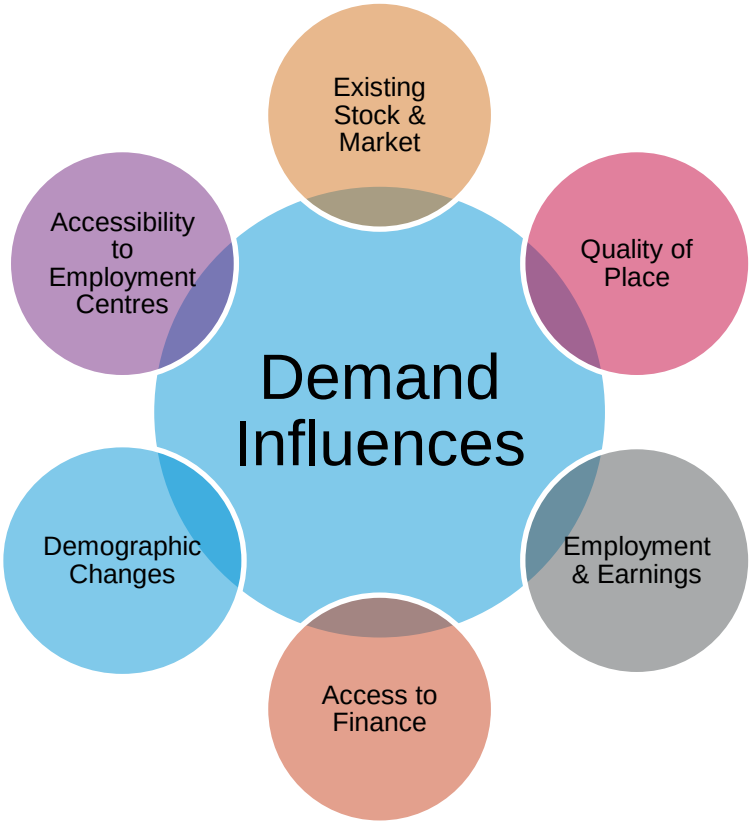
3 ANALYSING HOUSE PRICE DATA

3.1 House prices can be used to provide a 'market based' definition of HMA boundaries, based on considering areas which (as the PPG describes) have clearly different price levels compared to surrounding areas.

Conceptual Framework

3.2 It is important to understand that the housing market is influenced by macro-economic factors, as well as housing market conditions at a regional and local level. There are a number of key influences on housing demand, which are set out in the diagram below:

Figure 6: Understanding Housing Demand Drivers



Source: GL Hearn

3.3 At the macro-level, the market is particularly influenced by interest rates and mortgage availability, as well as market sentiment (which is influenced by national economic performance and prospects). The market is also influenced by the economy at both regional and local levels, recognising that economic and employment trends will influence migration patterns (as people move to and from areas to access jobs) and that the nature of employment growth and labour demand will influence changes in earnings and wealth (which influences affordability).

3.4 Housing demand over the longer-term is particularly influenced by population trends: changes in the size and structure of the population directly influence housing need and demand, and the nature of demand for different housing products.

3.5 There are then a number of factors which play out at a more local level, within a functional housing market and influence demand in different locations. The importance of these local factors is perhaps more pronounced in stable or healthy economic times, when mortgage availability and market liquidity are far less of a constraint on activity. Local factors include:

- quality of place and neighbourhood character;
- school performance and the catchments of good schools;
- the accessibility of areas including to employment centres (with transport links being an important component of this); and
- the existing housing market and local market conditions.

3.6 These factors influence the demand profile and pricing within any given market. At a local level, this often means that the housing market (in terms of the profile of buyers) tends to be influenced by and consequently reinforces to some degree the existing stock profile.

3.7 The important things to recognise here is that we are likely to see localised variations in housing costs which reflect differences in the housing offer, quality of place and accessibility of different areas. Some parts of Liverpool for instance are likely to command higher prices than others reflecting these factors. These are relevant in considering housing sub-markets (the third tier of market using the CURDS definition).

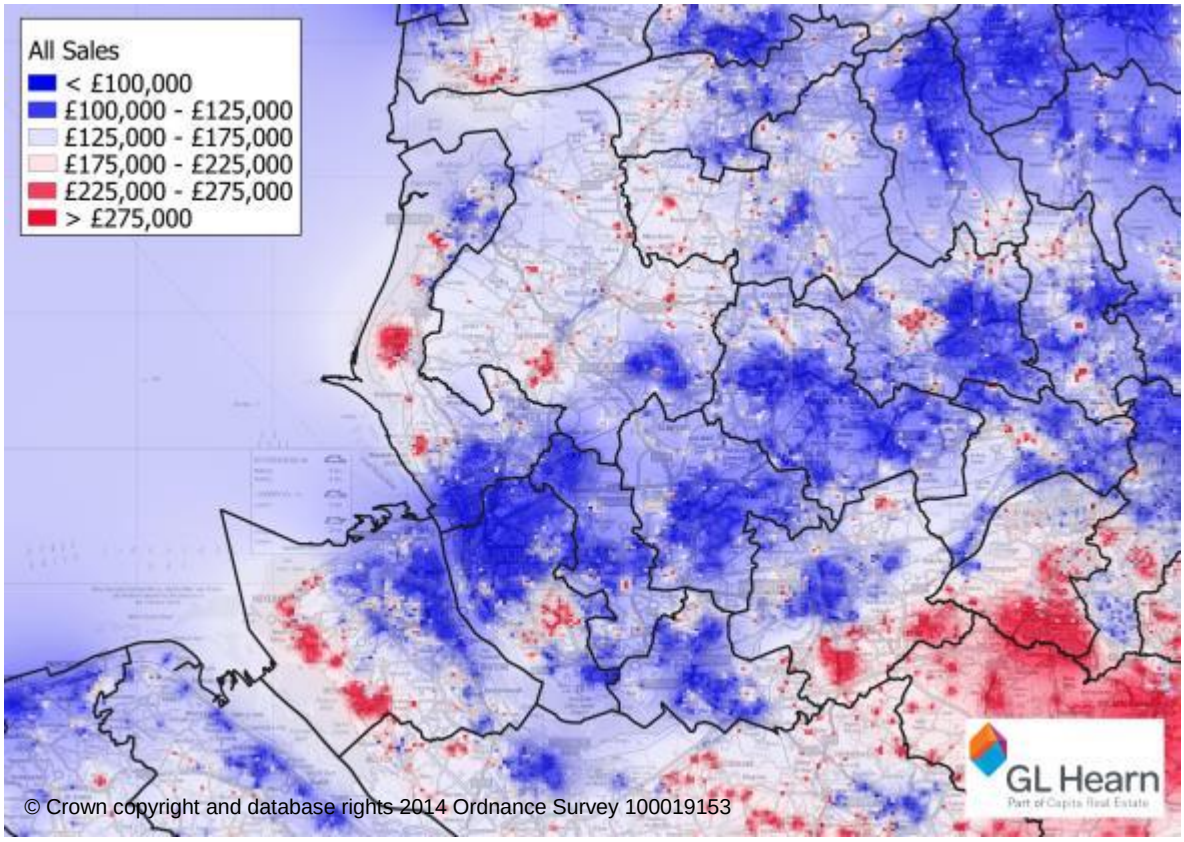
3.8 This paper is focused upon is considering market geographies at a higher spatial level. Consideration of price differentials at a sub-regional and regional level is therefore of most relevance.

3.9 Figure 7 illustrates house prices across a wider area. The house price geography demonstrates:

- A differential between prices in urban and rural areas (with higher prices in the latter);
- Higher house prices in West Wirral and North Sefton, and in parts of West Lancashire;
- Similar prices in many urban areas including Liverpool, Widnes, Warrington, St. Helens, Wigan, Southport, Skelmersdale, Bolton etc for similar products;
- A concentration of higher house prices in South Warrington and Cheshire.

3.10 The analysis points to some differential in housing market terms with parts of Cheshire, south Warrington, and south Trafford where there are concentrations of notably more expensive properties.

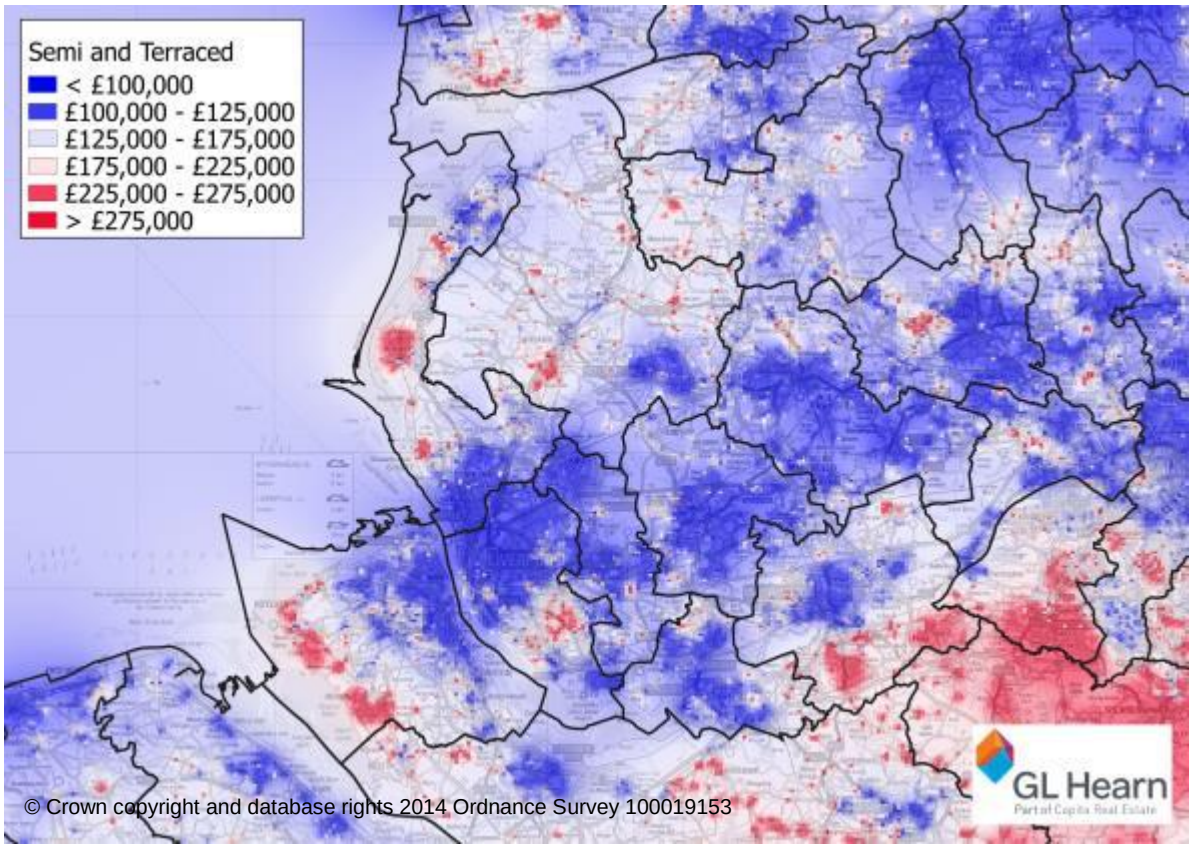
Figure 7: Prices of All Properties, 2015



Source: GLH Analysis of Land Registry's Price Paid Data

3.11 We would expect a degree of price differentiation within an HMA reflecting differences in housing offer and quality of place. Figure 8 therefore moves on to consider house price on a like-for-like basis, considering prices of semi-detached and terraced housing (which are the most dominant average house types within the area). This shows a similar price distribution pattern to that shown in Figure 7.

Figure 8: Prices of Terraced and Semi-Detached Homes, 2015



Source: GLH Analysis of Land Registry's Price Paid Data

3.12 Table 1 shows the change in the median house prices over a 5, 10 and 15-year period at a local authority level. This shows strong growth in house prices over the fifteen year period in all authorities within LCR. Wirral and Liverpool saw a level of growth (in percentage terms) which was roughly in-line with the England and Wales average (154%). The other LCR authorities saw lower growth rates over this period with the lowest growth level in Knowsley (120%).

3.13 House price growth since 2005 has been slower, reflecting the 'credit crunch' in 2008 and the economic downturn which followed. The impact of this was seen across the LCR as well as nationally. The ten year house price change in the LCR authorities is below the level of growth seen nationally (29%). The greatest growth was seen in West Lancashire (19%), Wirral (19%), and Liverpool (18%). Conversely, Knowsley saw zero growth over this ten year period.

3.14 The most recent five year trend again shows price growth in all LCR authorities below the national growth rate (12%). Over this period the greatest growth has been seen in Halton and Wirral (both 7%) while the lowest growth has been seen in St. Helens (zero growth) and Sefton (1%).

Table 1: Changes in Median House Prices, 2000-2015

	2000	2005	2010	2015	15-year change	10-year change	5-year change
Halton	£53,950	£112,000	£119,000	£127,000	135%	13%	7%
Knowsley	£52,250	£115,000	£108,000	£115,000	120%	0%	6%
Liverpool	£46,998	£100,000	£112,500	£118,250	152%	18%	5%
St. Helens	£49,973	£110,000	£117,500	£117,000	134%	6%	0%
Sefton	£60,000	£137,000	£147,500	£148,250	147%	8%	1%
West Lancashire	£69,950	£139,995	£160,000	£167,000	139%	19%	4%
Wirral	£55,750	£120,000	£133,250	£142,500	156%	19%	7%
England & Wales	£80,000	£157,500	£182,000	£203,500	154%	29%	12%

Source: HM Land Registry/ CLG

3.15 This data should be treated with a note of caution as median house prices will reflect the mix of stock being sold. Places with a higher number of larger, detached homes (e.g. rural locations) will generally have higher average house prices than those with a higher number of smaller, flatted homes (e.g. urban areas).

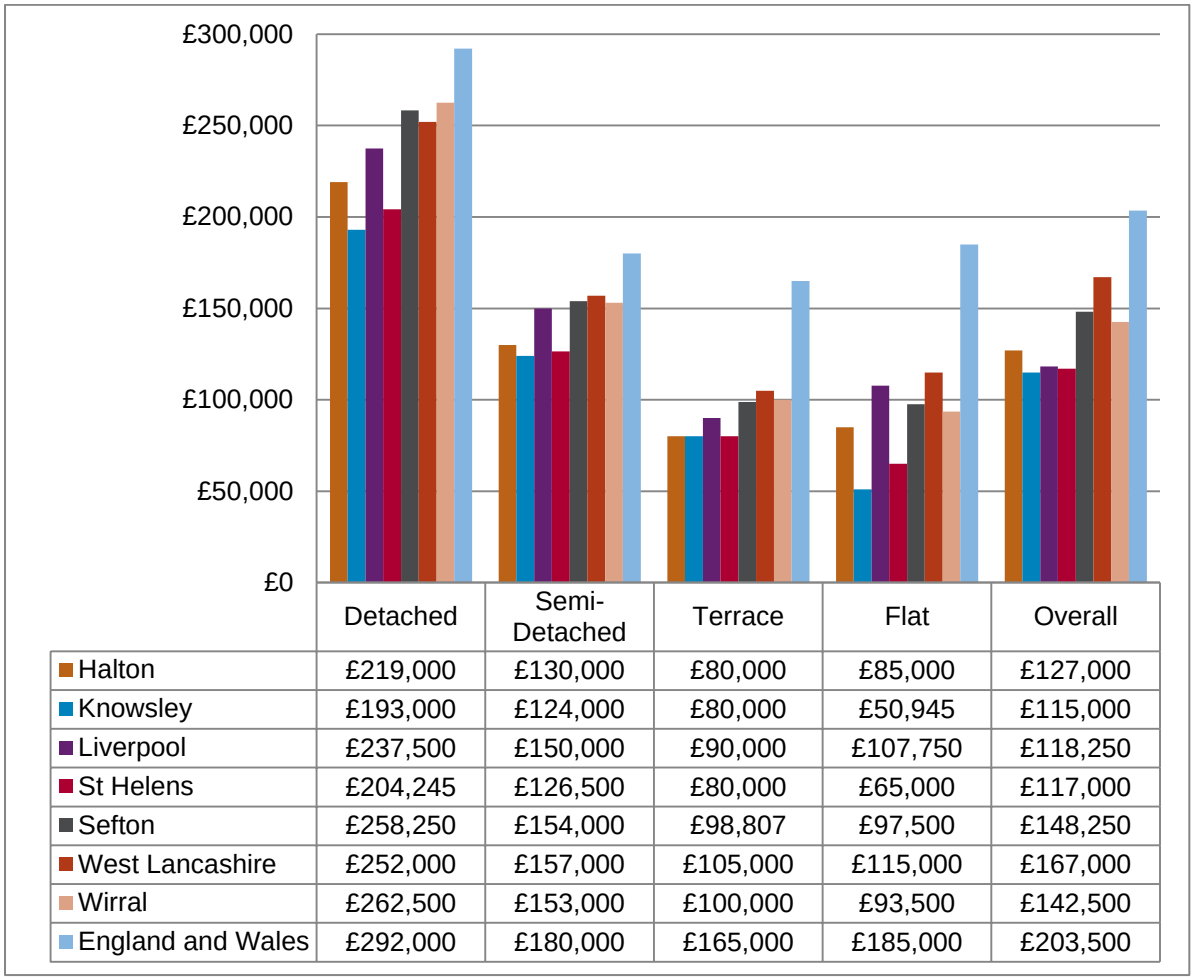
3.16 Figure 9 shows the median house price in each local authority by dwelling type. This provides a closer like for like comparison between areas. This shows that in LCR, for all house types, the median prices are highest in Sefton, West Lancashire, and Wirral; followed by Liverpool; then Halton, Knowsley, and St. Helens.

3.17 For flats, the highest prices are seen in West Lancashire and Liverpool; with prices slightly lower in Halton, Sefton, and Wirral; and lowest in Knowsley and St. Helens.

3.18 For all dwelling types, the national average across England and Wales is notably higher than any of the authorities in the LCR.

3.19 On balance, the analysis of house price data considered in this section does not provide a particularly strong indicator of housing market dynamics in LCR. Nor does it identify significant differences in housing market conditions across the City Region, beyond the usual level of local variance. It is therefore considered to be a less useful indicator for determining HMA boundaries in the City Region.

Figure 9: Median House Prices by Dwelling Type, 2015



	Detached	Semi-Detached	Terrace	Flat	Overall
Halton	£219,000	£130,000	£80,000	£85,000	£127,000
Knowsley	£193,000	£124,000	£80,000	£50,945	£115,000
Liverpool	£237,500	£150,000	£90,000	£107,750	£118,250
St Helens	£204,245	£126,500	£80,000	£65,000	£117,000
Sefton	£258,250	£154,000	£98,807	£97,500	£148,250
West Lancashire	£252,000	£157,000	£105,000	£115,000	£167,000
Wirral	£262,500	£153,000	£100,000	£93,500	£142,500
England and Wales	£292,000	£180,000	£165,000	£185,000	£203,500

Source: GLH Analysis: Land Registry Price Paid Data

Rental Markets

3.20 We have considered the City Region's Broad Rental Market Areas (BRMAs) as produced by the Valuations Office Agency (VOA). A BRMA is an area where a person could reasonably be expected to live taking into account access to facilities and services for the purposes of health, education, recreation, personal banking and shopping (as defined by the VOA).

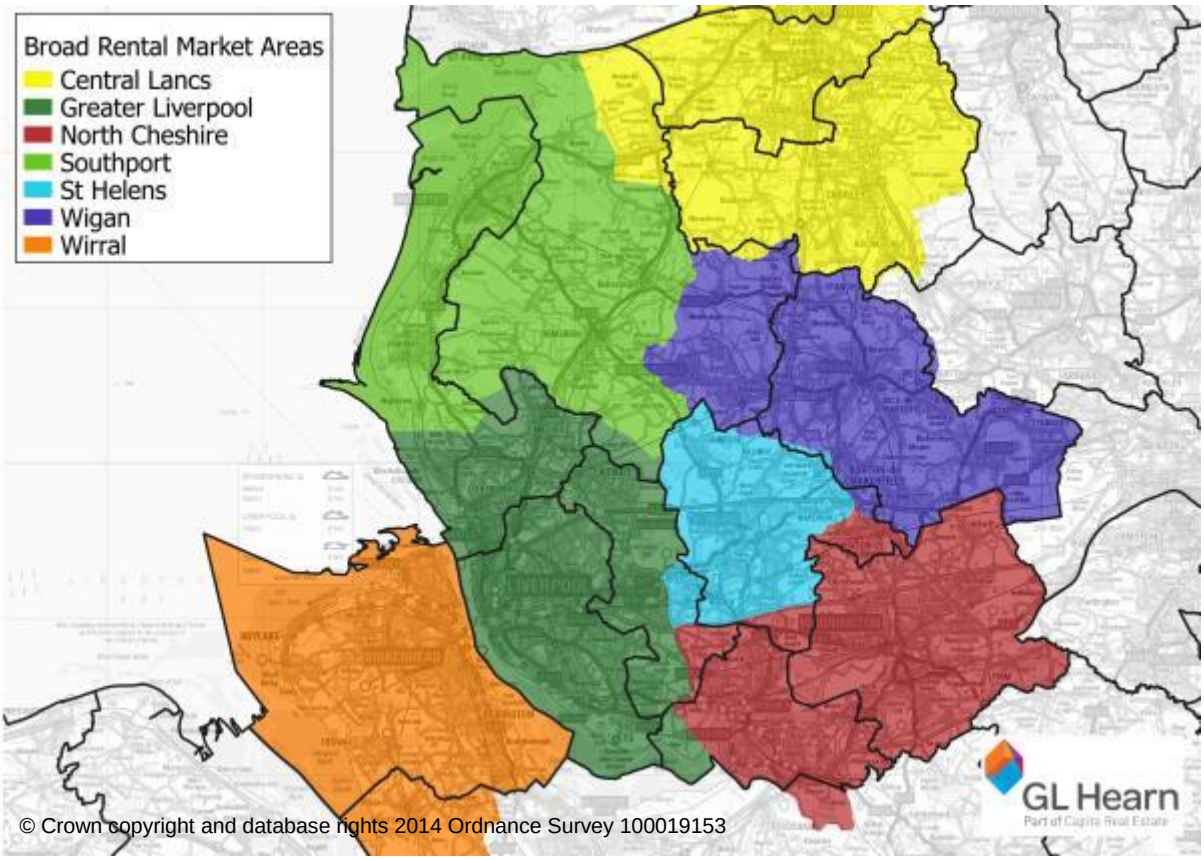
3.21 The VOA identifies five BRMAs which cover the City Region. The Greater Liverpool BRMA covers the whole of Liverpool City authority; the majority of Knowsley – including Kirkby, Huyton, and Halewood; the southern end of Sefton including Bootle, Maghull, and Crosby; and Hale in Halton.

3.22 The St. Helens BRMA covers the majority of St. Helens authority area although the southern and eastern extremities – around Newton-le-Willows and Bold Heath – fall within the North Cheshire BRMA. The St. Helens BRMA also includes Prescot in Knowsley.

3.23 The North Cheshire BRMA covers the whole of Warrington and the majority of Halton authorities as well as the south eastern parts of St. Helens and Knowsley.

3.24 The whole of Wirral authority area is included in Wirral BRMA along with a small part of Cheshire West and Chester.

Figure 10: Broad Rental Market Areas



Source: VOA

3.25 The Southport BRMA covers the northern part of Sefton – including Southport and Formby – as well as the majority of West Lancashire. The eastern edge of West Lancashire is included in neighbouring BRMAs with the south eastern corner around Skelmersdale included in the Wigan BRMA and the north eastern corner included in the Central Lancs BRMA.

4 ANALYSING MIGRATION FLOWS AND PATTERNS

4.1 Migration flows reflect households' movement between areas, and thus is a key factor in considering the geography of housing markets. To test the definition of the HMA, and to understand functional housing market inter-relationships across local authority boundaries, Census data on internal migration flows between the relevant local authority areas has been analysed.

4.2 Our analysis firstly looks at the self-containment rate of movements to and from each of the local authorities, as well as internal movements within the City Region. The guidance suggests that a HMA would typically, although not always, have a self-containment rate of 70% when long distance moves are excluded. Although the term 'long distance' is not defined in the guidance we have defined this as any move to/from the area outside of Lancashire, Greater Manchester, Staffordshire, Cheshire, and North Wales (Denbighshire, Flintshire and Wrexham).

4.3 For each local authority, we have calculated both the percentage of those already living in the authority who moved elsewhere within that authority (outward self-containment), and the percentage of those who moved to the authority who were already residents (inward self-containment).

4.4 Excluding long distance moves, five of the LCR authorities – Liverpool, Wirral, Halton, St. Helens, and Sefton – show self-containment rates above 70% for both inward and outward migration, with Wirral the highest in all categories. Only West Lancashire and Knowsley have inward and outward self-containment rates below 70%.

Table 2: Self-Containment Rates by Local Authority, 2011

	% of those moving from the Borough	% of those moving to the Borough	% of those moving from the Borough	% of those moving to the Borough
	(Outward)	(Inward)	(Outward)	(Inward)
	Including Long Distance		Excluding Long Distance	
Wirral	74.10%	79.10%	83.20%	85.80%
Wigan	71.70%	74.50%	77.70%	79.30%
Liverpool	73.80%	66.60%	82.30%	78.30%
Halton	68.30%	72.70%	74.40%	77.70%
St. Helens	68.40%	70.80%	74.50%	75.50%
Sefton	64.80%	69.20%	72.00%	75.20%
Cheshire West & Chester	62.90%	65.30%	75.00%	75.20%
Warrington	64.60%	66.00%	74.10%	73.30%
West Lancs	57.00%	55.70%	64.30%	63.40%
Knowsley	51.70%	59.70%	55.20%	62.70%

Source: Census, 2011

4.5 The next step is to group the authorities to understand what the self-containment rates would be for the combined areas. This is particularly important to understand the migration linkages for West Lancashire and Knowsley as these authorities are currently below the 70% self-containment threshold. However, it is also important to consider the linkages between the other authorities as well to develop an understanding of flows across the City Region and beyond.

4.6 Table 3 sets out gross migration flows between local authorities. This shows gross migration flows – i.e. the flow in both directions – between two authorities. It also shows gross flows expressed per 1,000 head of the combined population of the two authorities. For this the 2011 census data has been used as the most comprehensive dataset currently available.

Table 3: Average Gross Migration Flows Per Annum (Over 1.0 per 1000) (2011)

Location 1	Location 2	Gross Migration Flow	Combined Population	Gross Per '000 Head
Knowsley	Liverpool	4,257	612,308	7.0
Liverpool	Sefton	4,522	740,205	6.1
Sefton	West Lancashire	1,414	384,475	3.7
Liverpool	Wirral	2,400	786,198	3.1
Knowsley	St. Helens	874	321,201	2.7
Halton	Warrington	878	327,974	2.7
Wirral	Cheshire West and Chester	1,718	649,391	2.6
St. Helens	Wigan	1,163	493,157	2.4
St. Helens	Warrington	839	377,536	2.2
West Lancashire	Wigan	892	428,534	2.1
Knowsley	Sefton	817	419,683	1.9
Halton	Liverpool	972	592,161	1.6
West Lancashire	Chorley	336	217,840	1.5
Liverpool	Cheshire West and Chester	1,159	796,023	1.5
Halton	Knowsley	389	271,639	1.4
Liverpool	St. Helens	902	641,723	1.4
Halton	Cheshire West and Chester	599	455,354	1.3
West Lancashire	South Ribble	287	219,742	1.3
Liverpool	Manchester	1,261	969,542	1.3
Halton	St. Helens	336	301,054	1.1
West Lancashire	Preston	260	250,887	1.0
Liverpool	West Lancashire	581	577,100	1.0
Liverpool	Warrington	648	668,643	1.0

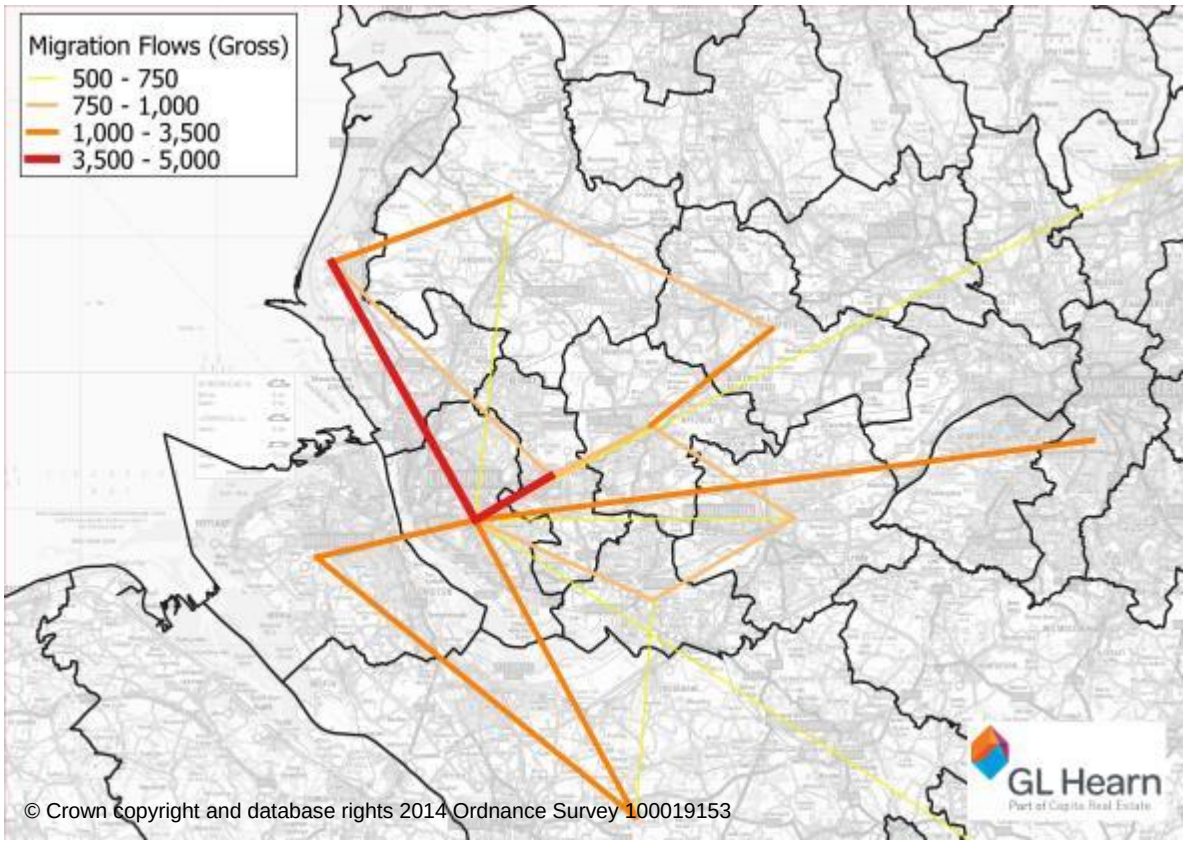
Source: Census, 2011

4.7 The analysis confirms a complex set of interactions and flows across the City Region with particularly strong links between Knowsley and Liverpool and between Liverpool and Sefton both in terms of gross migration flow and gross flow per head. There are also strong linkages between Sefton and West Lancashire and between Liverpool and Wirral.

4.8 In addition, the data shows strong flows beyond the City Region between Halton and Warrington, and St. Helens and Warrington; and between Wirral and Cheshire West and Chester, Liverpool and Cheshire West and Chester, and Halton and Cheshire West and Chester. West Lancashire also has strong links (in terms of gross flow per head) to Chorley, South Ribble, and Preston albeit the gross migration flow is lower between these authorities reflecting their lower populations.

4.9 The gross migration flows are shown in Figure 11. This highlights the geographical linkages across the city region and beyond.

Figure 11: Gross Migration Flows (2011)



Source: ONS, 2011

4.10 The above data provides the basis for grouping the authorities to test the combined self-containment. This process involves grouping the authorities starting with those with the strongest migration links then recalculating the self-containment rate for the combined authorities.

4.11 There is a particularly strong migration link between Knowsley and Liverpool. By combining these two areas we can see that the self-containment of the two areas increases to 85% (outward) and 83% (inward).

Table 4: Self-Containment Rate for Liverpool and Knowsley, 2011

	% of those moving from the area (Outward)	% of those moving to the area (Inward)
Liverpool and Knowsley	85%	83%

4.12 The migration data shows West Lancashire has the strongest links with Sefton. By combining these two areas we can see that the self-containment of the two areas combined is 75% (outward) and 77% (inward).

Table 5: Self-Containment Rate for Sefton and West Lancashire, 2011

	% of those moving from the area (Outward)	% of those moving to the area (Inward)
Sefton and West Lancashire	75%	77%

4.13 By combining Liverpool with Knowsley and combining Sefton with West Lancashire, we attain a self-containment rate above the 70% threshold for all areas.

Table 6: Areas with 70+% Self-Containment Rate, 2011

	% of those moving from the area (Outward)	% of those moving to the area (Inward)
Liverpool and Knowsley	85%	83%
Wirral	83%	86%
Halton	74%	78%
St. Helens	75%	76%
Sefton and West Lancashire	75%	77%

4.14 While this analysis indicates that a number of authorities could be considered Housing Market Areas in their own right, this would ignore the broader alignment between the wider groups of authorities. Indeed, the PAS guidance suggests that:

> *"As well as the 70% containment test the final definition of the HMA should meet a common-sense test, which is important though impossible to specify rigorously – that the areas in the HMA should be more closely linked to each other than to areas outside the HMA."*

4.15 Considering the strongest migration flows across the City Region, as set out in Table 3, suggests that further agglomeration and testing of the new self-containment rate is appropriate.

4.16 Liverpool, Knowsley and Sefton combined have a self-containment rate of 87% (inward) and 88% (outward). Adding Wirral to these three authorities produces a self-containment rate of 90% (both inward and outward). This provides strong justification for these four authorities to form a HMA.

4.17 Next we consider the other authorities of the LCR. Adding Halton to the above four authorities does not appreciably change the self-containment rate which stays at 90% for both inward and outward migration. The same is true for St. Helens (and excluding Halton), with both inward and outward self-containment staying at 90%. Considering all six authorities combined shows the outward self-

containment remains at 90% with the inward self-containment increasing slightly to 91%. This provides weaker justification for these authorities to be included within a single LRC HMA.

4.18 Next considering the associate members of the LCR Combined Authority: West Lancashire and Warrington. Considering the self-containment of West Lancashire with the four authorities of Liverpool, Knowsley, Sefton and Wirral does not appreciably change the self-containment rate which stays at 90% for both inward and outward migration. This provides weaker justification for West Lancashire to be included within the HMA. For Warrington, the self-containment rate drops to 89% (inward) and 88% (outward) reflecting Warrington's weaker relationship with many of the LCR authorities, and suggesting that Warrington should not be included within a wider LCR HMA.

Table 7: Migration Self-Containment Rates, 2011

Area	Outward	Inward
Liverpool Knowsley Sefton	88%	87%
Liverpool Knowsley Sefton Wirral	90%	90%
Liverpool Knowsley Sefton Wirral Halton	90%	90%
Liverpool Knowsley Sefton Wirral St. Helens	90%	90%
Liverpool Knowsley Sefton Wirral Halton St. Helens	90%	91%
Liverpool Knowsley Sefton Wirral West Lancashire	90%	90%
Liverpool Knowsley Sefton Wirral Warrington	89%	88%

4.19 The above analysis shows high levels of self-containment in many of the authorities themselves, as well as self-containment rates rising as multiple authorities are considered jointly. This shows strong migration links across the wider City Region. However it also captures the high level of self-containment of many of the authorities in their own right. Considering the self-containment of multiple such authorities results in a growing level of overall self-containment even though links between the two authorities may be relatively modest. As we consider larger areas there may be increasingly weak links between some authorities being considered together even though the overall self-containment remains high.

4.20 We have therefore used the Census data to analyse the hierarchy of flows between different local authorities. This is shown in Table 8. Liverpool is the primary destination for out-migrants from Halton, Sefton, Knowsley and Wirral; and flows with these four authorities also represent four of the top six flows for those migrating out of Liverpool (along with Cheshire West and Chester and Manchester). The migration analysis suggests that it is these authorities which have the strongest links.

4.21 There are considerable flows from Wirral to Cheshire West and Chester, which is the second strongest flow from Wirral after Liverpool. However, considering the flows from Cheshire West and Cheshire shows considerably stronger flows to Wales, and slightly stronger flows to Cheshire East than to Wirral.

4.22 Flows from West Lancashire are split, with flows from both the Liverpool City Region, Greater Manchester, and Central Lancashire authorities; although the scale of flows is stronger between West Lancashire and the Liverpool City Region authorities. Its strongest individual flow is with Sefton.

4.23 An analysis looking at Wigan indicates that this has stronger migration links with areas within Greater Manchester, particularly Bolton and Salford. Conversely, the strongest flows from Warrington are to Halton, Manchester and St. Helens. Warrington is a key destination for migration from Halton as well as from St. Helens, while Wigan is the highest destination for flows from St. Helens but there is a weaker link between Wigan and Halton. This suggests that while both Warrington and Wigan have strong links to the LCR (particularly Halton and St. Helens) as well as Greater Manchester, Wigan has stronger links to Greater Manchester and Warrington has stronger links to LCR.

Table 8: Analysis of Key Migration Flows to Destinations Listed – Flows of Over 250 Persons, 2010-11

Destination	Origin								
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th
Halton	Liverpool (441)	Warrington (337)	Cheshire West (258)						
Liverpool[10]	Sefton (2467)	Knowsley (2354)	Wirral (1322)	Cheshire West (586)	Manchester (561)	Halton (531)	St. Helens (489)	Leeds (379)	Warrington (350)
Sefton	Liverpool (2055)	West Lancs (722)	Knowsley (466)						
Knowsley	Liverpool (1903)	St. Helens (355)	Sefton (351)						
West Lancashire	Sefton (692)	Wigan (425)	Liverpool (276)						
Wirral	Liverpool (1078)	Cheshire West (788)	Wales (468)	Sefton (252)					
St. Helens	Wigan (543)	Knowsley (519)	Warrington (430)	Liverpool (413)					
Warrington	Halton (501)	Manchester (420)	St. Helens (409)	Cheshire West (372)	Wigan (360)	Liverpool (298)	Salford (270)	Cheshire East (264)	
Cheshire West & Chester	Wales (1910)	Cheshire East (1011)	Wirral (930)	Liverpool (573)	Warrington (346)	Halton (341)	Manchester (323)		
Wigan	Bolton (804)	Salford (640)	St. Helens (620)	West Lancs (467)	Warrington (332)	Manchester (319)			

Source: 2011 Census

[10] Only Flows over 350 included.

4.24 ONS also provides data on what it considers to be the statistically significant migration flows to and from each area. Table 9 shows the significant migration flows into and out from each local authority area over the period from the year ending June 2011 to year ending June 2014.

4.25 This shows that Liverpool has significant migration (both inward and outward) with Sefton and Knowsley, as well as strong outward migration to Wirral. Both Sefton and Knowsley show significant inward and outward migration with Liverpool, while Wirral also has strong links with Cheshire West and Chester.

4.26 Halton has significant migration links (inward and outward) with Warrington, St. Helens, Knowsley, Liverpool, and Cheshire West and Chester. St. Helens has significant migration links (inward and outward) with Wigan, Warrington, and Liverpool and has significant outward migration to Halton. West Lancashire has significant migration (inward and outward) between Liverpool, Sefton, and Wigan.

4.27 Table 9 also shows a much larger number of statistically significant flows (both inward and outward) for Cheshire West and Chester, Warrington, and Wigan. This highlights the complex linkages of these areas which have links in multiple directions towards Liverpool City Region, Greater Manchester, Cheshire, and Lancashire.

Table 9: Significant Migration Flows, 2011-2014

	Inward Migration	Outward Migration
Liverpool	Sefton Knowsley	Sefton Knowsley Wirral
Knowsley	Liverpool	Liverpool
Sefton	Liverpool	Liverpool
Wirral	Liverpool Cheshire West and Chester	Liverpool Cheshire West and Chester
Halton	Warrington St. Helens Knowsley Liverpool Cheshire West and Chester	Warrington St. Helens Knowsley Liverpool Cheshire West and Chester
St. Helens	Wigan Warrington Liverpool	Wigan Warrington Liverpool Halton
West Lancashire	Liverpool Sefton Wigan	Liverpool Sefton Wigan
Cheshire West and Chester	Wrexham Flintshire Wirral Liverpool Halton Warrington Manchester Cheshire East	Wrexham Flintshire Wirral Liverpool Manchester Cheshire East
Warrington	Liverpool St. Helens Wigan Salford Trafford Manchester Cheshire East Cheshire West and Chester Halton	Liverpool St. Helens Wigan Salford Trafford Manchester Cheshire East Cheshire West and Chester Halton Leeds
Wigan	Bolton Salford Manchester Warrington St. Helens West Lancashire	Bolton Salford Manchester Warrington St. Helens West Lancashire Chorley

Source: ONS

4.28 Wirral has a high level of self-containment in its own right and also shows strong links with both Liverpool but also with Cheshire West and Chester. The self-containment rates between these areas are shown below, all of which exhibit high levels of self-containment. However the grouping of Wirral with Liverpool, Knowsley, and Sefton has the highest rate.

Table 10: Wirral Migration Self-Containment, 2011

Area	Outward	Inward
Wirral	83%	86%
Wirral Cheshire West and Chester	82%	84%
Wirral Cheshire West and Chester Flintshire	84%	86%
Wirral Liverpool Knowsley Sefton	90%	90%

4.29 Overall, the migration analysis provides a clear rationale for including Liverpool, Sefton, Knowsley, and Wirral within a single HMA. This results in a 90% self-containment level, excluding long-distance moves. There is however a good justification for including West Lancashire as well, given its stronger relationship with Merseyside than to either Central Lancashire or Greater Manchester.

4.30 Including St. Helens and Halton with the wider group does not appreciably increase the self-containment percentage while including Warrington results in a lower self-containment rate than for the wider group in its own right. This reaffirms that although there is a relationship with these authorities the definition of a separate Mid Mersey/ Eastern HMA might be a more pragmatic approach.

4.31 Table 11 shows the self-containment rates for Halton, St. Helens, Warrington, and Wigan. This shows that the various authority groupings produce rates between 76% and 83%.

Table 11: Migration Self-Containment of Halton, St. Helens, Warrington and Wigan, 2011

Area	Outward	Inward
Halton St. Helens	76%	78%
Halton St. Helens Warrington	80%	81%
Halton St. Helens Wigan	80%	81%
Halton St. Helens Warrington Wigan	82%	83%

4.32 However the flows data suggests that Wigan has stronger links towards Greater Manchester. Calculating the self-containment for the western Greater Manchester authorities (Wigan, Bolton, Salford, Trafford, and Manchester) shows a self-containment of 85-86%.

4.33 Conversely, while Warrington has flows in multiple directions, the data shows it has stronger links with the Mid Mersey authorities. This suggests that a Mid Mersey HMA comprising Halton, St. Helens, and Warrington is justified.

4.34 The Mid Mersey area has a lower self-containment rate, of 81%, reflecting flows within this area and other parts of the LCR, Greater Manchester and Cheshire. Given the area's strategic location between two major cities, we would perhaps expect lower self-containment.

4.35 An analysis of net flows shows a similar picture to that which we find in most areas in and around core cities across the UK. These cities tend to attract in migrants from across the country and internationally, but then see a net out-migration to surrounding areas. The cities tend to have a younger population structure. Net out-migration to surrounding areas partly reflects a lifestyle model, with middle aged households from cities moving to more suburban and rural environments.

5 COMMUTING FLOWS

5.1 Liverpool is the sub-region's key employment centre and can be expected to have a significant catchment area. Of all of the local authorities in the North West, it has the second highest workplace population (at 210,000) behind Manchester. The third ranked authority is Cheshire East, with a significantly lower 147,000 persons.

5.2 Table 12 analyses where Liverpool City's workforce is drawn from. This shows that 56.6% is drawn from the City itself, with the strongest inflows coming from:

- Sefton: 11.5% of the workforce
- Knowsley: 9.4% of the workforce; and
- Wirral: 8.6% of the workforce.

5.3 These authorities (above) each have a flow of 18,000 – 24,000 persons per day commuting to Liverpool.

5.4 There are then smaller scale flows (2,000 – 5,100 persons daily) from St. Helens, Halton, Cheshire West and Chester, West Lancashire and Warrington into Liverpool. These in effect reflect the wider Liverpool City Region geography as defined in the 2007 LCRHS.

Table 12: Commuting Flows to Liverpool, 2011

Origin	Number	Work in Liverpool % Workforce drawn from Authority	Cumulative % of Workforce
United Kingdom	209,735		
Liverpool	118,413	56.5%	
Sefton	24,208	11.5%	68.0%
Knowsley	19,655	9.4%	77.4%
Wirral	18,094	8.6%	86.0%
St. Helens	5,053	2.4%	88.4%
Halton	4,518	2.2%	90.6%
Cheshire West and Chester	3,754	1.8%	92.4%
West Lancashire	3,042	1.5%	93.8%
Warrington	2,628	1.3%	95.1%
Wigan	1,584	0.8%	95.8%
Wales	1,372	0.7%	96.5%
West Midlands	830	0.4%	96.9%
Manchester	666	0.3%	97.2%
Cheshire East	604	0.3%	97.5%

Source: 2011 Census

5.5 Table 13 ranks the workplace population in different local authorities by size. This identifies secondary employment centres within the LCR and surrounding areas. A number of these authorities have multiple employment centres.

Table 13: Workplace Population of Local Authorities, 2011

	Workplace Population
Liverpool	209,735
Cheshire West and Chester	131,364
Warrington	99,646
Wigan	95,852
Wirral	91,428
Sefton	84,047
Preston	78,483
St. Helens	54,774
Halton	50,370
Knowsley	49,158
West Lancashire	40,466

Source: 2011 Census

5.6 In considering commuting patterns, we have drawn from the ONS Travel to Work Areas (TTWAs) which were published in late 2015. These are the only official and nationally consistent definition of Travel to Work Areas.

5.7 In terms of self-containment rates the notional target for a Travel to Work Area (the target ONS use) is that at least 75% of the area's resident workforce work in the area and at least 75% of the people who work in the area also live in the area in most instances. The area must also have had a working population of at least 3,500. However, for areas where the working population in excess of 25,000, self-containment rates as low as 66.66% were accepted.

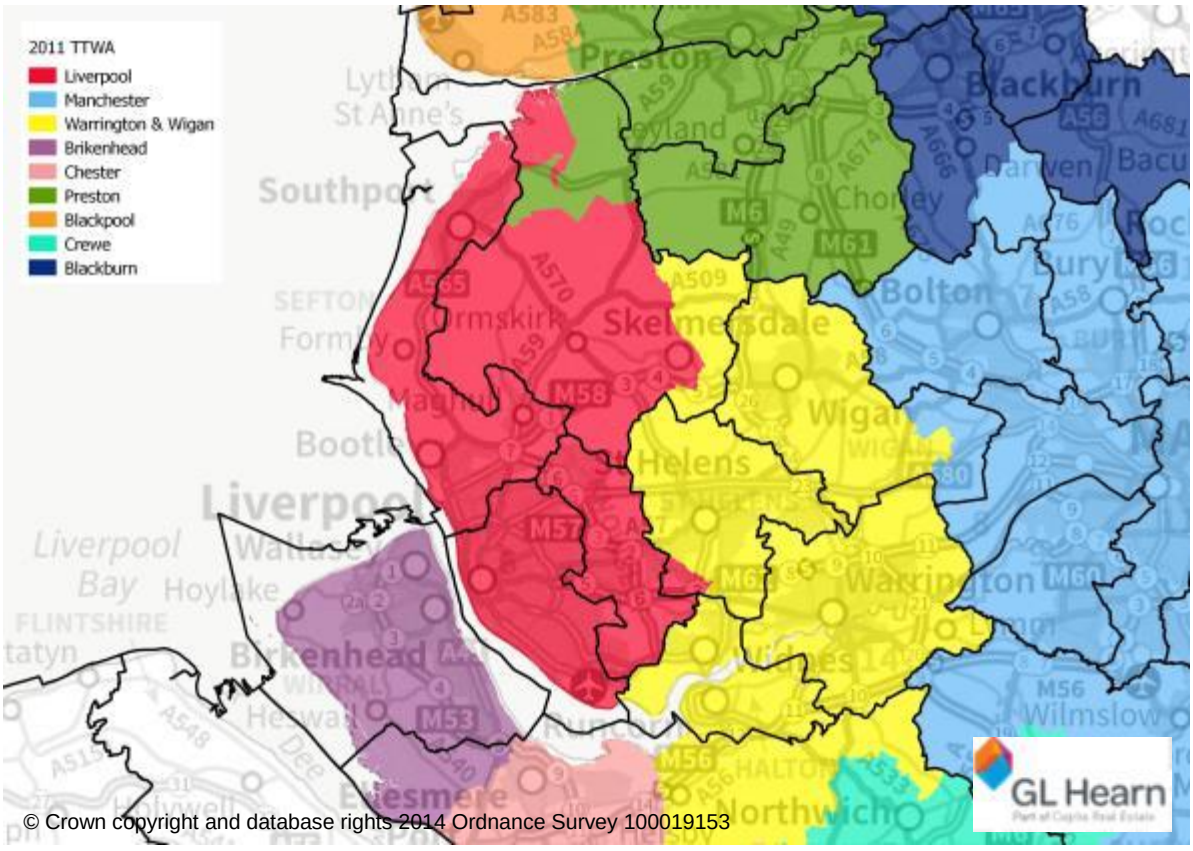
5.8 The ONS TTWAs were an attempt to identify self-contained labour market areas in which the majority of commuting occurs within the boundary of the area. It should however be recognised that in practice, it is not possible to divide the UK into entirely separate labour market areas as commuting patterns are too diffuse.

5.9 The TTWAs were developed as approximations to self-contained labour markets, i.e. areas where most people both live and work. As such they are based on a statistical analysis rather than administrative boundaries. The areas were produced by analysing commuting flows from the 2011 Census.

5.10 As illustrated in Figure 12 there are four ONS TTWAs covering the Liverpool City Region:

- Liverpool TTWA – covering the authorities of Liverpool, Knowsley, and Sefton in their entirety as well as the majority of West Lancashire – including the towns of Skelmersdale, Ormskirk, and Burscough – and Rainhill in St. Helens;
- Birkenhead TTWA – covering the entirety of Wirral along with Neston in Cheshire West and Chester;
- Warrington and Wigan TTWA – covering Warrington and Halton in their entirety plus the majority of St. Helens (excluding Rainhill) and Wigan (excluding Atherton and Tyldesley). The northern extent of the TTWA includes Up Holland and Appley Bridge in West Lancashire and Frodsham and Helsby in Cheshire West and Chester;
- Preston TTWA – includes Hesketh Bank in West Lancashire.

Figure 12: Travel to Work Areas (2011)



Source: Census 2011

5.11 Merseytravel have undertaken further analysis on the description of the City Regions' Travel to Work areas using the 2011 TTWA data. This work uses the TTWA data to consider the best way of representing the city regions of the North of England. This considers commuting flows into a given city represented as a percentage total of all travel-to-work journeys into that city. Districts with flows of 0.5% or higher were therefore included within that city region. Where districts satisfy this criterion

for more than one city – and could therefore be included in more than one city region – the two-way flows were considered to determine the stronger links.

5.12 The Merseytravel work identifies a Wider Liverpool City Region which includes the six authorities of the Liverpool City Region Combined Authority – Halton, Knowsley, Liverpool, St. Helens, Sefton, and Wirral – along with Cheshire West & Chester, Warrington, and West Lancashire.

Table 14: Commuting Self-Containment (2011)

	Live in the area	Work in the area	Live and work in the area	Residents based Self-Containment	Workplace based Self-Containment
Halton	50,338	50,370	27,270	54%	54%
Knowsley	53,432	49,158	18,500	35%	38%
Liverpool	169,515	209,735	118,413	70%	56%
Sefton	102,733	84,047	55,569	54%	66%
St. Helens	68,226	54,774	32,661	48%	60%
West Lancashire	42,457	40,466	20,637	49%	51%
Wirral	118,469	91,428	74,137	63%	81%
Mid Mersey HMA	203,723	204,790	133,898	66%	65%
Central LCR HMA	486,606	474,834	406,632	84%	86%
Liverpool City Region	562,713	539,512	464,599	83%	86%
Wider Liverpool City Region	822,857	810,988	707,272	86%	87%

Source: Census 2011

5.13 Across the Liverpool City Region the commuting self-containment rate is relatively high with a residents based self-containment – i.e. the percentage of all residents living in an area who also work in that area – of 83%. The City Region also has a high workforce based self-containment – i.e. the percentage of workers in an area who also live in that area – of 86%.

5.14 The Wider City Region has a slightly higher commuting self-containment rate with a residents based self-containment rate of 86% and a workplace based self-containment of 87%.

5.15 At the local authority level the self-containment rates are understandably lower. The highest residents based self-containment rate is in Liverpool where 70% of residents also work in the area. Liverpool's workplace based self-containment rate is lower (56%) due to the large numbers of people commuting into the city from surrounding areas. This is reflected in the residents based self-containment rates for most of the other LCR authorities – and most notably Knowsley – with all areas seeing a larger number of residents commuting into Liverpool.

5.16 Wirral has a relatively high self-containment rate for both the residents based (63%) and workplace based (81%) measures, reflecting lower levels of commuting linkages with other authorities in the City Region, although with a substantial number commuting to Liverpool. The data also shows

considerable commuting from Wirral to Cheshire West and Chester, with substantial numbers of workers at the Vauxhall Motors plant in Ellesmere Port residing in Wirral.

5.17 We can also consider the self-containment rates of two HMAs which have previously been defined in the City Region. The Mid Mersey HMA has a residents based self-containment of 64% and a workplace based self-containment of 67%. The Liverpool HMA has a residents based self-containment of 84% and a workplace based self-containment of 86%. Both therefore exceeding the 67% threshold for at least one measure.

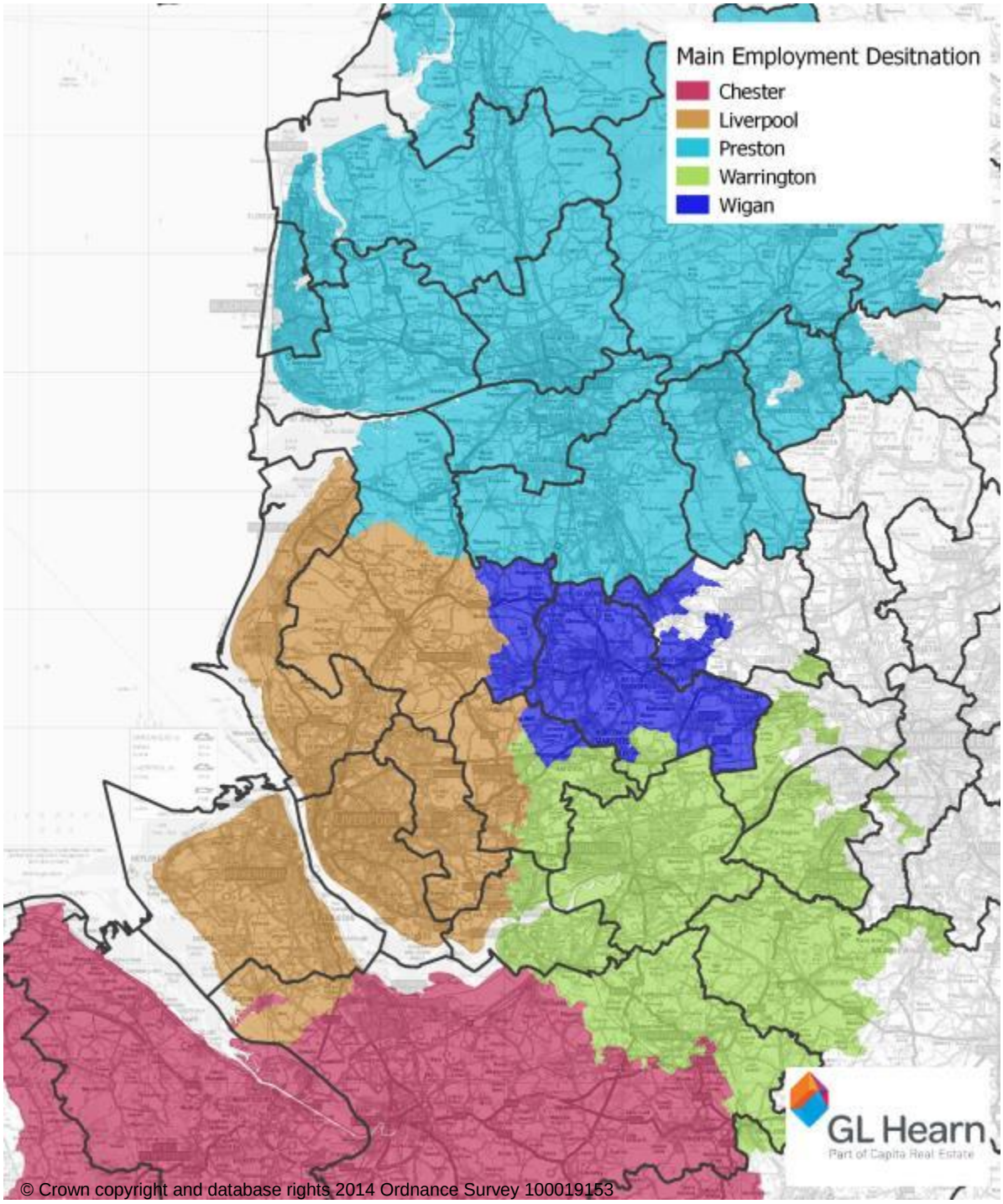
5.18 Figure 13 shows the catchment areas for the main employment destinations in the region – namely Liverpool, Chester, Preston, Warrington, and Wigan. For each ward across the sub-region, the most common commuting destination is shown. This shows, at a sub-district level, the catchment areas for each of the main employment destinations.

5.19 Liverpool is the most common main employment destination for all wards in Knowsley, Liverpool, Sefton, and Wirral. Liverpool is the most common main employment destination for the southern half of West Lancashire – including Ormskirk and Skelmersdale – while Preston is more common for the northern part of the authority, and Wigan in the east.

5.20 Liverpool is also the most common main employment destination for the western part of St. Helens authority – including the western half of St. Helens town – and Liverpool is also the most common destination for commuters from the western half of Runcorn in Halton. For the eastern halves of St. Helens and Halton the most common main employment destination is Warrington.

5.21 This highlights the complex nature of commuting patterns in the City Region and shows that although Halton and St. Helens are included within the Warrington and Wigan TTWA there are clearly strong commuting links with Liverpool and strong overlaps between the two areas which need to be recognized.

Figure 13: Main Employment Destinations



Source: Census 2011

5.22 Consideration of the Travel to Work Areas, based on the 2011 Census, shows that the LCR is covered by 4 TTWAs, although the majority of the area is covered by the Liverpool TTWA – which includes Liverpool, Knowsley, Sefton, and the majority of West Lancashire; the Birkenhead TTWA –

which includes Wirral and extends into Cheshire West and Chester; and the Warrington and Wigan TTWA. The commuting self-containment data and main employment destination data, both also drawn from 2011 Census data, highlight the considerable overlaps between the TTWAs. This highlights that Halton, St. Helens, and Wirral – although not contained within the Liverpool TTWA – clearly all have strong commuting links with Liverpool which should be recognized.

5.23 On balance, considering the commuting data alongside the migration data, there is evidence to support two HMAs covering the LCR: Halton and St. Helens being included with Warrington in a Mid Mersey HMA. While Liverpool, Knowsley, Sefton, and West Lancashire forming a separate HMA. The commuting and migration data both suggest that Wirral could arguably form a separate stand-alone HMA. However, on balance and given the strength of links between Wirral and Liverpool it is justified to include it within a LCR focused HMA.

6 THE FUNCTIONAL ECONOMIC MARKET AREA

6.1 The purpose of this section is to assess the relevant Functional Economic Market Area(s) (FEMA) within the Liverpool City Region.

6.2 PPG on *Housing and Economic Development Needs Assessments* sets out what functional economic market areas are and provides guidance on how these should be defined. Factors for consideration in defining an areas FEMA include:

- Extent of any Local Enterprise Partnership (LEP) within the area;
- Travel to work areas;
- Housing market area;
- Flow of goods, services and information within the local economy;
- Service market for consumers;
- Administrative area;
- Catchment areas of facilities providing cultural and social well-being;
- Transport network.

6.3 There is no standard approach or data source which can be used to define a FEMA. The approach intended is to consider the issues identified in PPG, and assess what could be considered locally appropriate.

6.4 Importantly, a key component in defining the FEMA is the evidence and findings which define the HMA, particularly with regard to commuting dynamics. A considerable amount of the evidence for defining the FEMA has therefore already been considered in the preceding sections of this report, including:

- Travel to work areas – considered in Section 5;
- Housing market areas – considered in Sections 2 to 5;
- Administrative areas – throughout Section 2.

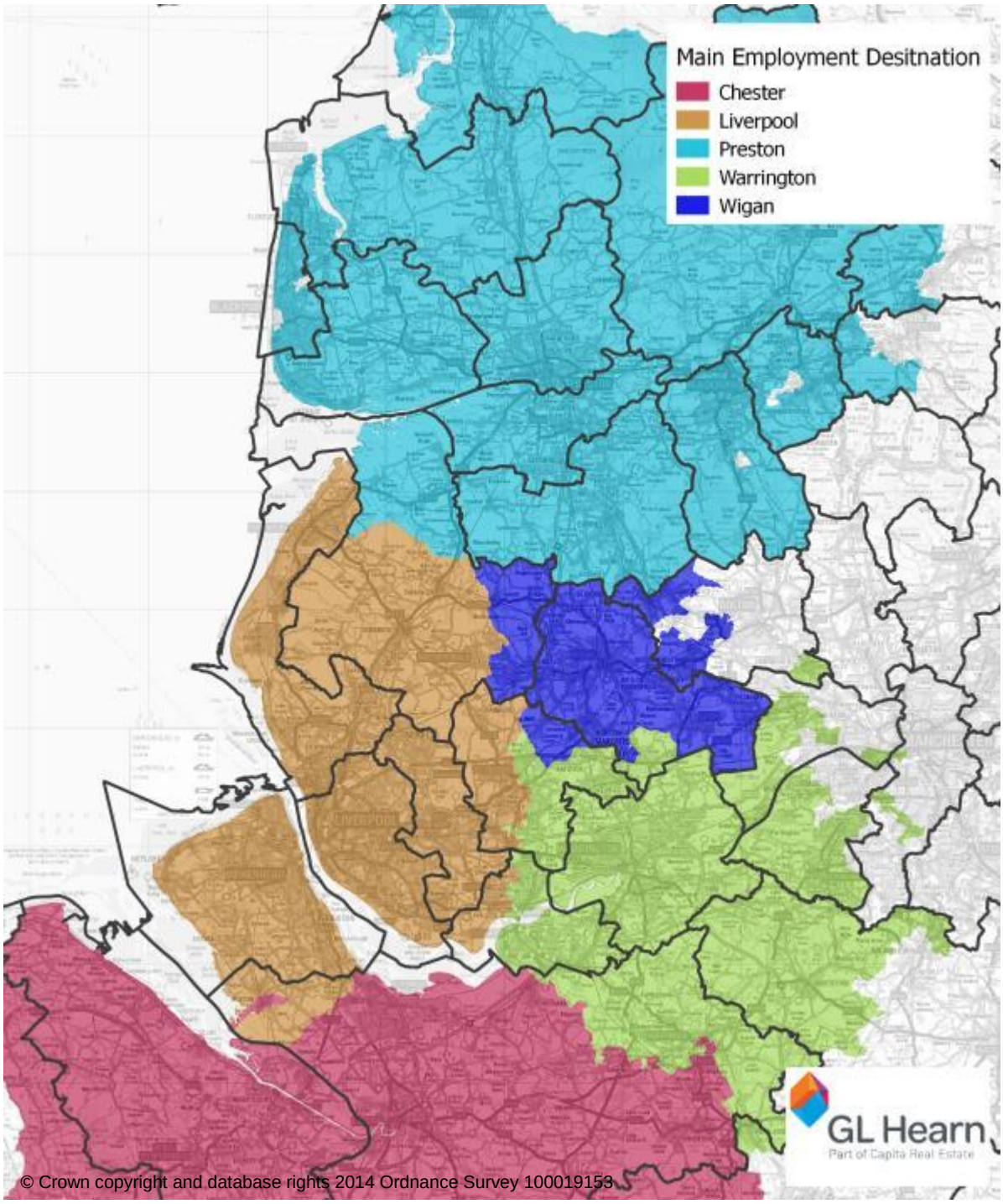
6.5 It should however be noted that it is not a requirement to review each and every factor and for some indicators there is no appropriate source of data. For example, the flow of goods and services is difficult to quantify on a robust basis, given available datasets.

Travel to Work Areas

6.6 The 2011-based Travel to Work Areas are considered in greater detail in Section 5 of this report. They show the LCR is covered by 4 TTWAs, although the majority of the area is covered by the Liverpool TTWA – which includes Liverpool, Knowsley, Sefton, and the majority of West Lancashire; the Birkenhead TTWA – which includes Wirral and extends into Cheshire West and Chester; and the Warrington and Wigan TTWA.

6.7 Section 5 also sets out the main employment destinations in the region. This shows, at a sub-district level, the catchment areas for each of the main employment destinations. This is replicated in Figure 14.

Figure 14: Main Employment Destinations



Source: Census 2011

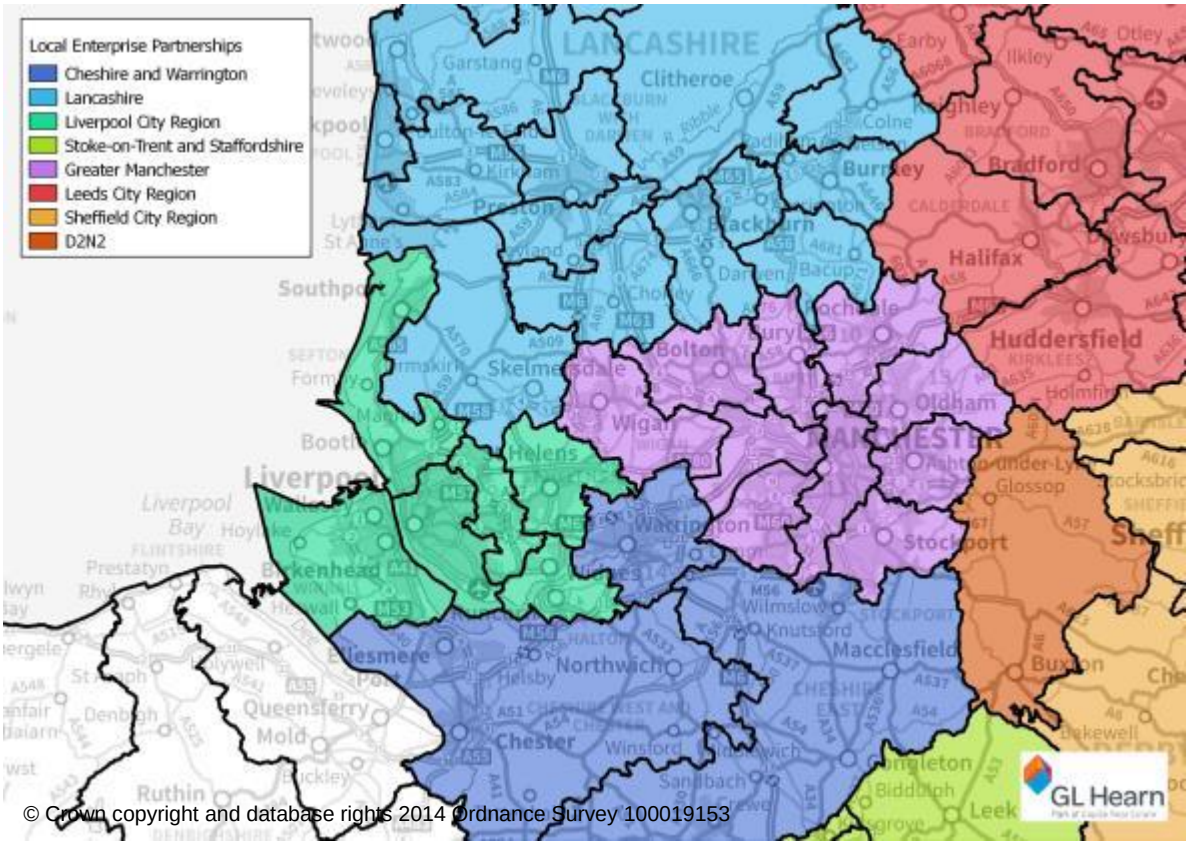
6.8 This highlights the complex commuting patterns and considerable overlap between the TTWAs across the City Region. In terms of the most popular main employment destinations the authorities of West Lancashire, St. Helens, and Halton are split highlighting the influence of multiple large employment centres in relative proximity.

6.9 The main employment destination data suggests that West Lancashire should be included within a Liverpool FEMA. This corroborates the findings of the 2011-based TTWA. The main employment destination data also suggests that Halton and St. Helens could be included within a Liverpool FEMA, although similarly an argument could be made to include these authorities within a Warrington FEMA. The data does suggest however that neither Warrington nor Wigan should be included within a Liverpool focused FEMA.

Local Enterprise Partnership Areas

6.10 Figure 15 shows the extent of the LEP administrative geographies. The Liverpool City Region LEP covers the local authorities of Halton, Knowsley, Liverpool, Sefton, St. Helens, and Wirral. West Lancashire is included within the Lancashire LEP area. Other neighbouring LEPs include the Greater Manchester LEP which covers the Greater Manchester authorities including Wigan; and the Cheshire and Warrington LEP which includes the local authorities of Warrington and Cheshire West and Chester.

Figure 15: Local Enterprise Partnership (LEP) Areas



Transport Network

6.11 The Merseyrail public transport network extends out from Liverpool through Wirral via Birkenhead to Ellesmere Port and Chester; north from the City to Southport, Ormskirk in West Lancashire, and to Kirkby; and west to Wigan and Warrington.

Figure 16: Merseyrail Network Map

Source: Merseyrail

6.12 The motorway network in Merseyside enters the City of Liverpool at Broad Green where the M62 starts. A number of other motorways surround the City, linked to the city via A-roads. Acting effectively as a bypass to the city the M57 links the M62 (which links Liverpool to Hull) with the M58 (which links the northern Liverpool suburbs in Sefton with the M6). The M58 is also the main access road to the Strategic Road Network from the Liverpool docks area and Bootle. The M53 is the closest motorway to Liverpool City Centre via one of the Mersey tunnels with links to the Wirral docklands and Birkenhead. The M53 links Wirral with Eastham Docks, Ellesmere Port and Chester and the M56 which again connects to the M6 south of the M62.

6.13 Liverpool John Lennon Airport is situated seven miles South East of Liverpool City Centre. The airport provides flights to destinations in the UK and across Europe and serves a regional catchment. It is the 12th busiest airport in the UK.

Figure 17: Liverpool Motorway and Strategic A-Road Network

Source: GL Hearn

Influence of the SuperPort

6.14 In 2014 NAI Global produced a report for Liverpool City Region LEP which provides a market analysis of the Liverpool SuperPort proposals and considers the impacts, in terms of employment demand and supply, arising from the SuperPort development. The report considered a number of assets in the City Region including:

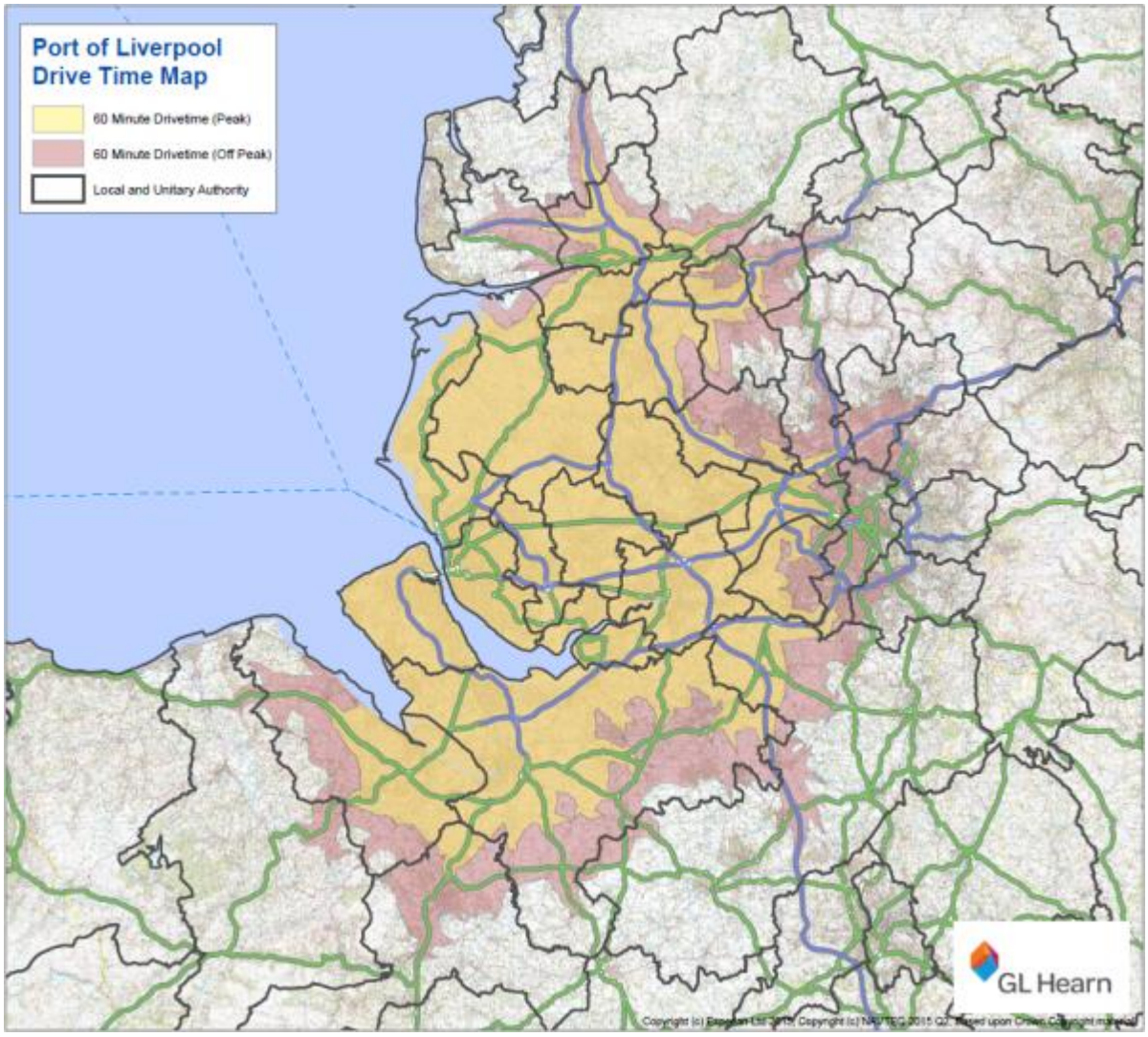
- The Port of Liverpool
- The Seaforth Rail Freight Terminal
- Manchester Ship Canal
- Mersey Gateway
- Road Infrastructure
- The Mersey MultiModal Gateway
- Potter Logistics Rail Freight Terminal
- Garston Freightliner Terminal
- ABP Garston
- Liverpool John Lennon Airport (LJLA)

6.15 The aim of the SuperPort is to create *"the most effective and cost efficient environment for freight cargo logistics and passenger transit in the UK"* serving a catchment covering the North West Region and beyond.

6.16 The study considers the employment land requirements resulting from the SuperPort developments. The identified demand is predominantly for large scale distribution warehouses able to handle the increased throughput of cargo to be transported throughout the North West and beyond. The study identifies the locational requirements of such uses:

- Must have ready access to the Port and other key hubs/transport infrastructure, with a drive time no more than 60 minutes from the Port (and within 20 minutes of the motorway network)
- A population centre in close proximity (but not within 200m or beyond 1km)

Figure 18: Port of Liverpool Drive Time Map



6.17 The report identified a catchment which includes the six local authorities situated within the Liverpool City Region and three adjoining authorities of Cheshire West and Chester, Warrington, and West Lancashire.

6.18 However, as shown in Figure 18, the 60 minute drive time catchment from the Port of Liverpool extends well beyond these authorities and covers an area which includes Manchester and the western half of Greater Manchester and extends along the M6 north to beyond Preston and Blackburn and south to Sandbach as well as along the M53 / M56 to Chester and beyond.

6.19 This not only highlights the wide catchment of the SuperPort, but also highlights the complex nature of the region's economic geography with numerous economic centres within close proximity to each other.

6.20 Liverpool's urban area extends beyond the boundary of the City Council's authority area – north to Crosby and the start of the M58 in Sefton, and east to the M57 corridor and the start of the M62 in Knowsley. A number of the existing large employment sites are located within these key transport corridors outside of the city's urban area and future employment provision will likely have to look beyond the city's urban fringe. This is particularly important in light of the increased demand for large scale distribution centres arising from the SuperPort development.

6.21 Therefore, considering the LCR's existing development pattern, the Motorway and Strategic A-Road network, and administrative boundaries, it is appropriate to consider that Knowsley, the south south-east parts of Sefton, and the western parts of Halton and St. Helens would be appropriate locations to consider meeting future employment needs. Accordingly, it would be appropriate to include these areas within a single FEMA.

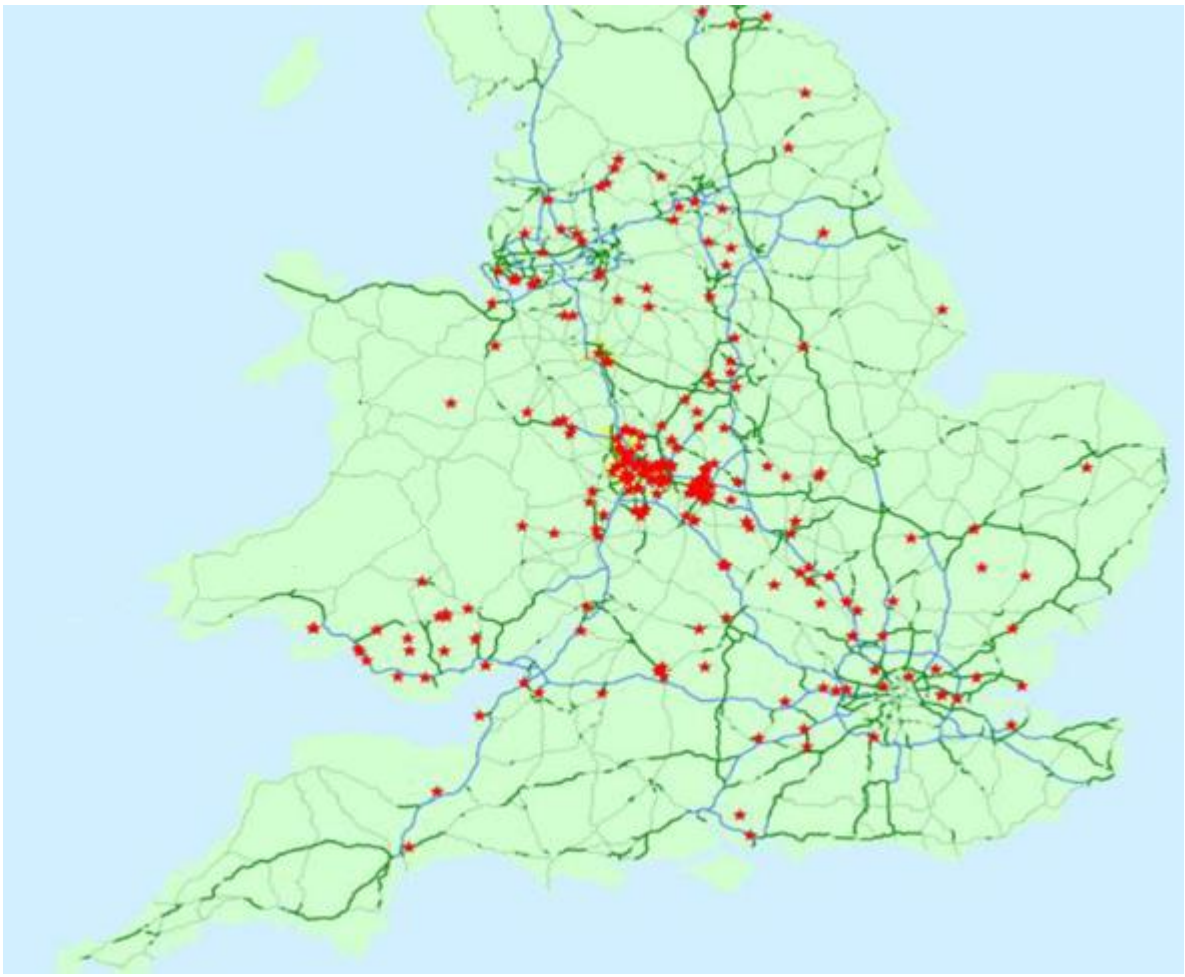
Jaguar Land Rover

6.22 Jaguar Land Rover (JLR) are one of the key employers in the LCR. The JLR manufacturing plant at Halewood employs 4,200 workers directly on site. JLR has three vehicle assembly plants in the UK- Halewood, Solihull, and Castle Bromwich.

6.23 JLR launched the Range Rover Evoque in 2011 which created 2,500 jobs at its Halewood plant and JLR estimates this had a knock on effect on the supply chain creating 10,000 supply chain jobs in the UK.

6.24 Figure 19 shows the location of JLR's supply chain expenditure in the UK. Clearly there is a focus in the West Midlands, where more than 50% of JLR's UK supply base is located. Figure 19 shows a modest number of JLR's supply base are located in the LCR. The level of supply base representation in LCR is roughly similar to that of other that of other locations with similar proximity to the Motorway and Strategic A-Road network.

Figure 19: JLR Purchasing Activity in the UK



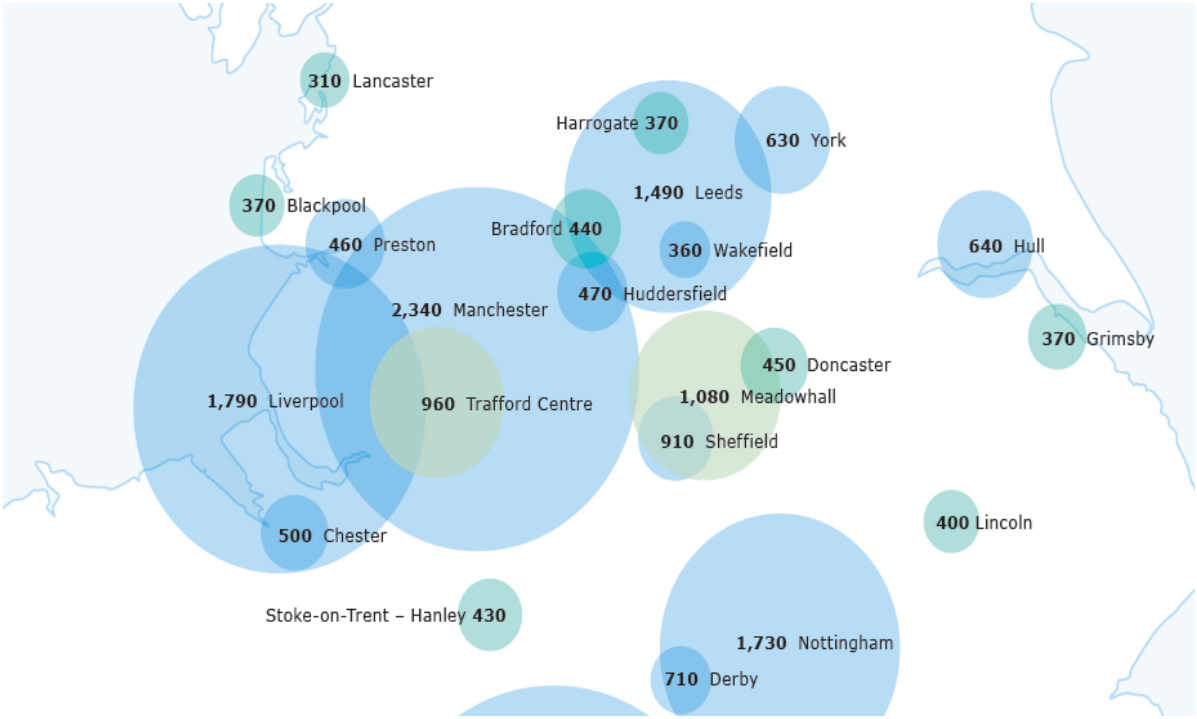
Source: JLR Business Update

Service Market for Consumers

6.25 Figure 20 shows the main retail destinations in the North of England by expenditure (£millions). This shows that the primary retail destination in the sub-region is Liverpool City Centre. Retail expenditure in Liverpool's was £1,790million (2011 prices) and is second only to Manchester in the North of England.

6.26 Other retail destinations influencing the City Region include Manchester City Centre (£2,340million) and the Trafford Centre (£960million) – these destinations draw significant trade from the City Region, particularly the eastern authorities of Halton and St. Helens as well as from areas such as Warrington and Wigan. Other retail destinations include Preston (£460million) to the north of the City Region, and Chester (£500million) to the south.

Figure 20: Retail Centres in Northern England (Expenditure in £millions)



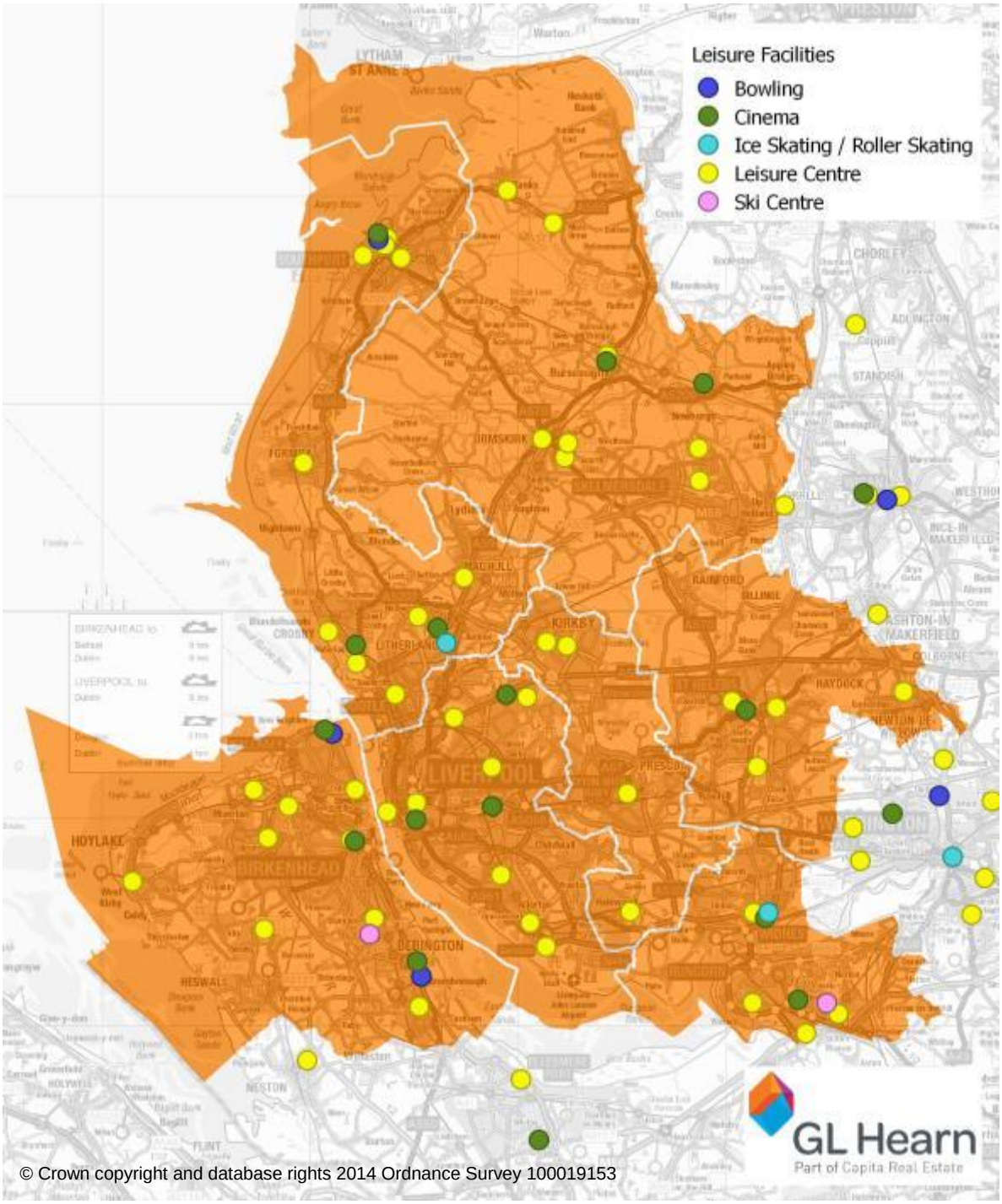
Source: CACI Retail Footprint (2011)

Cultural / Social Facilities Catchment Areas

6.27 Figure 21 plots the key leisure facilities in the City Region, including bowling alleys, cinemas, ice skating / roller skating rinks, leisure centres, and ski centres. Museums are also considered in the assessment however the vast majority are located in Liverpool City Centre. Due to the high number of museums in a small area these are not mapped in Figure 21.

6.28 The map shows a generally higher density of leisure facilities in the south of the City Region in Wirral, Liverpool, and Halton and the southern end of Sefton, where local populations are highest. There is also a concentration of leisure uses in Southport. Figure 21 also shows a concentration of leisure facilities in Warrington and, to a lesser extent, in Wigan.

Figure 21: Leisure Facilities



Source: GL Hearn (2016)

6.29 Table 15 sets out the key leisure destinations for residents identified in each of the authorities' various local retail studies. This reflects the key leisure destinations within the local authority area and beyond. For cinemas and bowling alleys, the pattern of leisure expenditure in each local

authority area was generally focused on the larger centres within that area. However, in areas with a lack of provision for these leisure uses, the evidence shows people traveling to the nearest such facility outside of the authority.

Table 15: Key Leisure Destinations

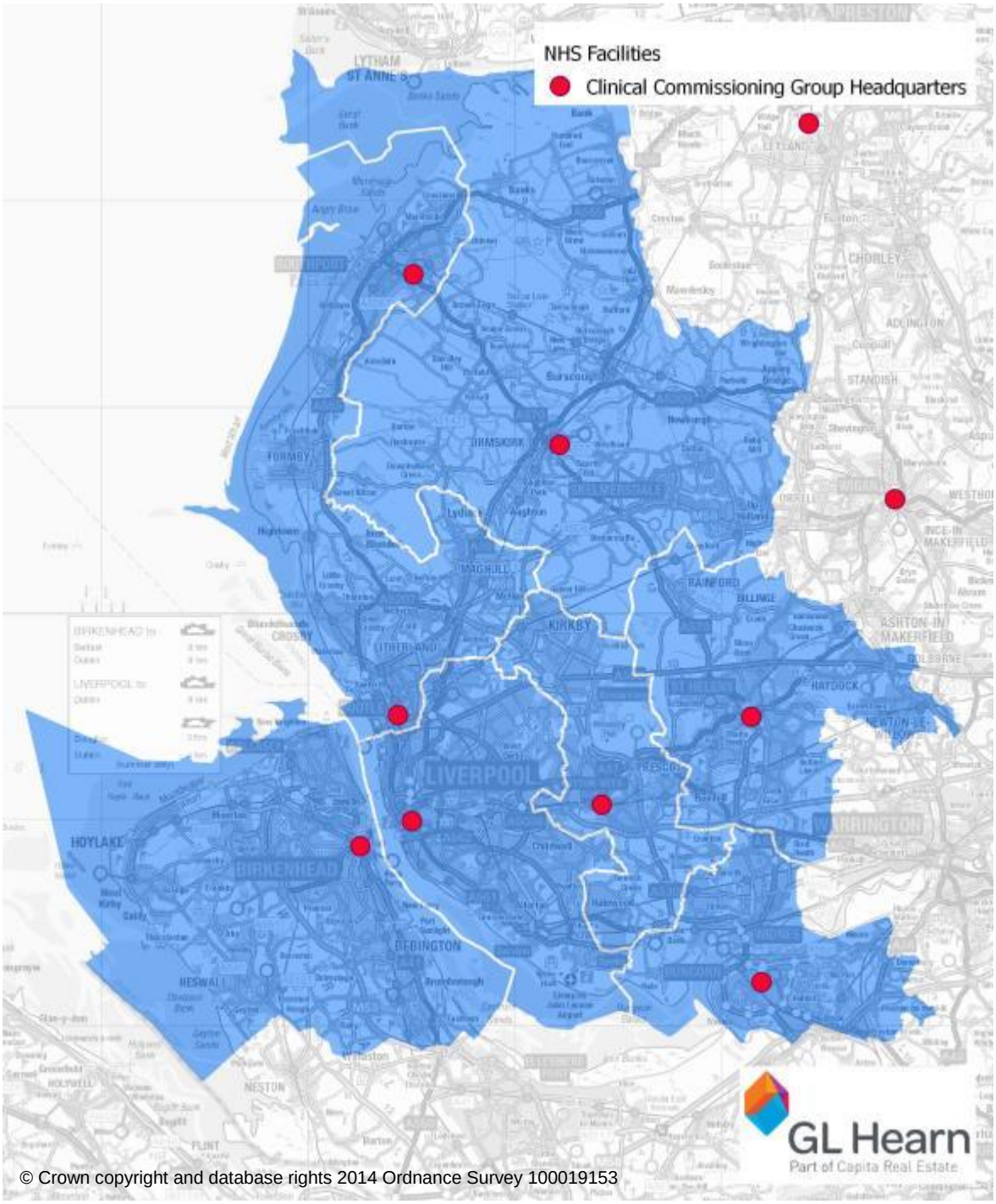
	Key Leisure Destinations Within the Borough	Key Leisure Destinations Beyond the Borough	Source
Halton	Widnes Runcorn	Warrington St. Helens Liverpool Ellesmere Port Frodsham	Halton Borough Council Retail & Leisure Study (GVA, 2009)
Knowsley	Kirkby Prescot Huyton	Liverpool St. Helens Wigan Warrington	Knowsley LDF: Town Centres and Shopping Study (RTP, 2010)
Liverpool	Liverpool City Centre Edge Lane Retail Park West Derby New Mersey Retail Park	Bootle	Draft Liverpool Retail and Leisure Study (GLH, 2016)
Sefton	Southport Crosby Waterloo	Edge Hill Liverpool	Sefton Retail Strategy Review (WYG, 2015)
St. Helens	St. Helens Earlestown	Warrington Manchester Liverpool Winwick Quay	St. Helens & Earlestown Retail and Town Centre Uses Study (WYG, 2012)
Wirral	Heswall West Kirby Birkenhead Bromborough Wallasey	Liverpool	Strategy for Retail, Town Centres and Commercial Leisure (RTP, 2009)

6.30 For bars, restaurants, and nightclubs there is a greater propensity for people to travel to the larger town/city centres in the region – Liverpool, Warrington, St. Helens, and Manchester – to make use of the greater combined leisure offer in these larger centres. For museums, Liverpool was clearly the most important destination.

6.31 In addition to retail and leisure facilities, we have considered healthcare provision. Figure 22 shows the location of NHS Clinical Commissioning Groups in the City Region. The Clinical Commissioning

Groups replaced the Primary Care Trusts and provide the latest geography for local NHS health services. Generally there is one per local authority with the exception of Sefton where there are two.

Figure 22: NHS Clinical Commissioning Groups



Source: NHS & GL Hearn (2016)

7 CONCLUSIONS

7.1 This paper has sought to consider the geography of the Housing Market Areas (HMAs) and Functional Economic Market Areas (FEMAs) in the Liverpool City Region. It 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 the Strategic Housing and Employment Land Market Assessment (SHELMA).

Previous Research & Geographies

7.2 The City Region has previously been defined as having two housing market areas. The Northern Housing Market Area, comprising the local authorities of Liverpool, Sefton, Wirral, Knowsley and West Lancashire; and a Mid Mersey HMA comprising Halton, St. Helens and extending into Warrington.

7.3 National research undertaken by CURDS has suggested a slightly different HMA geography 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.

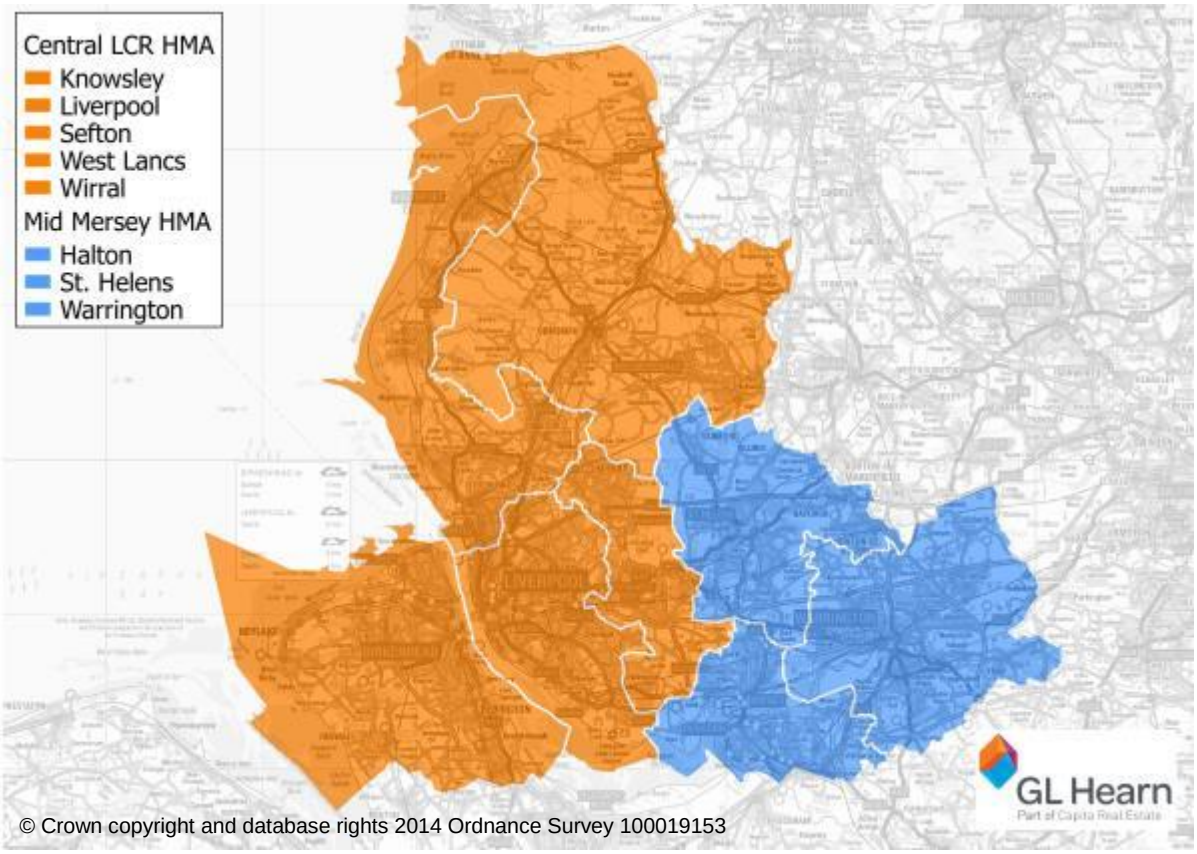
7.4 In respect of administrative geographies, in 2010 a Liverpool City Region Local Enterprise Partnership was designated covering the local authorities of Halton, Knowsley, Liverpool, Sefton, St. Helens and Wirral – suggesting that Government considers this an appropriate functional economic geography.

Defining the HMA

7.5 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.

7.6 This 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'. This recognises a degree of overlap between these two HMAs as well as with surrounding areas, as is the case with all HMAs.

Figure 23: Identified Housing Market Areas



7.7 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 HMA.

7.8 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.

7.9 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.

7.10 The self-containment rates of each of the authorities shows that most have exceed the typical 70% threshold for an HMA in their own right. The strong flows between Knowsley and Liverpool, and Sefton and West Lancashire also give a joint self-containment for these pairs of authorities above the HMA threshold. However, strong flows between the other authorities suggests that further

agglomeration is justified. This is particularly the case for Liverpool, Wirral, Knowsley, Sefton, and West Lancashire which together have a self-containment of around 90%.

7.11 There is also a strong case for the grouping of St. Helens and Halton along with Warrington and, to a lesser extent, Wigan. St. Helens, Halton and Warrington together have a self-containment of around 80%. Again this exceeds the typical thresholds.

7.12 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.

Defining the Functional Economic Area (FEMA)

7.13 GL Hearn have assessed the factors necessary, as set out in the PPG, for defining an FEMA. These factors include the extent of any Local Enterprise Partnership (LEP) within the area; Travel to Work Areas; the flow of goods, services and information within the local economy; the service market for consumers; administrative areas; catchment areas of facilities providing cultural and social well-being; and the transport network.

7.14 The 2011 Census based data shows the LCR divided into four TTWAs – 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.

7.15 However, consideration of the evidence suggests 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 LCR with the highest level of retail expenditure, and the City is identified as a key leisure destination for all of the LCR authorities.

7.16 The Liverpool City Region LEP area covers the authorities of Halton, Knowsley, Liverpool, Sefton, and Wirral. Analysis of LCR's existing development pattern and Motorway / Strategic A-Road network suggests that key strategic A-Road and Motorway corridors along the M58, M57, and M62 will likely be vital to meeting the increased distribution needs arising from the SuperPort.

7.17 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.

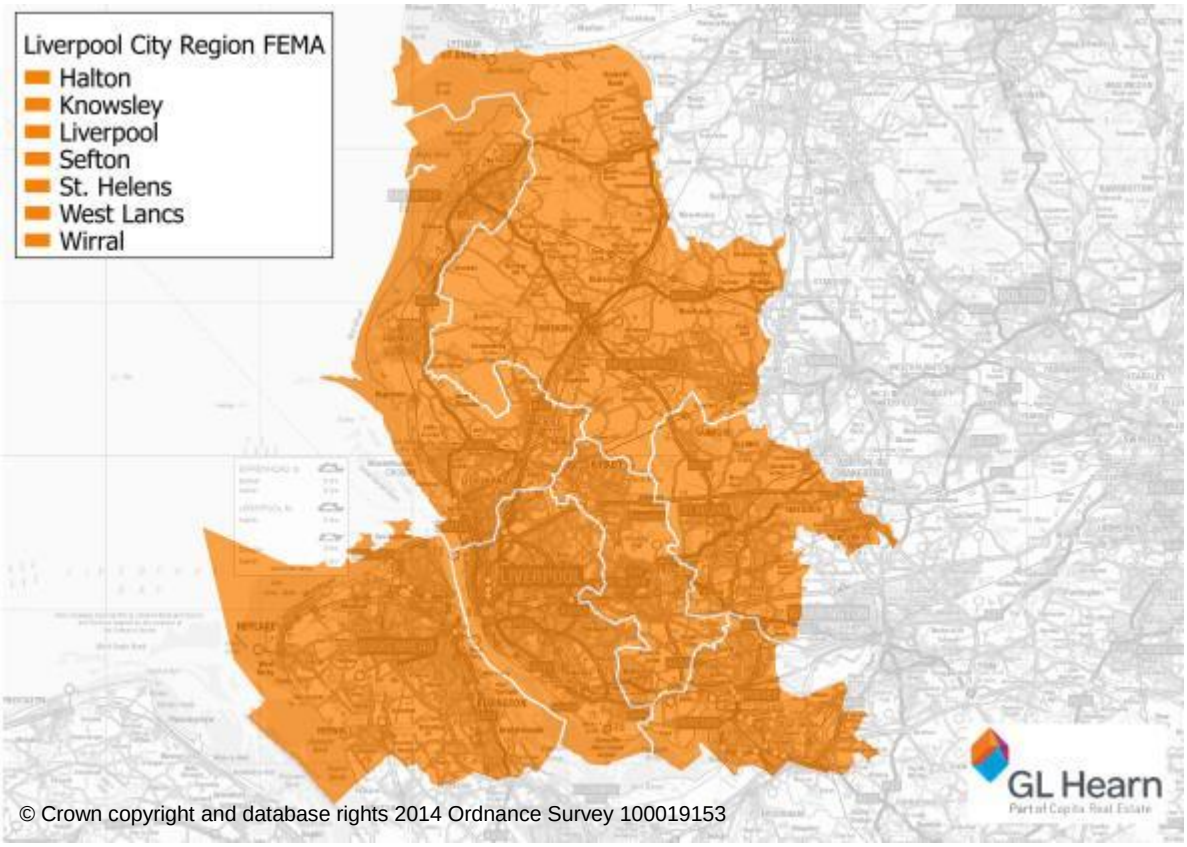
7.18 However, in undertaking this assessment for the LCR we consider that there is a strong basis for defining non-coterminous HMAs and FEMA. This reflects factors set out in this report which identified distinctions between the Mid Mersey authorities and the rest of the City Region in terms of housing 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.

7.19 In considering suitable FEMA boundaries, we have taken account of the wider criteria set out in PPG. 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 extends across the wider City Region and doesn't justify multiple FEMAs.
- Key sectors, particularly the warehouse / distribution sector, operates 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.

7.20 On the balance of evidence, the data supports the definition of a FEMA which covers Halton, Knowsley, Liverpool, Sefton, West Lancashire, and Wirral. As such we have identified a wider FEMA which is not coterminous with the identified HMAs.

Figure 24: The Identified Functional Economic Market Area



APPENDIX B: DETAILED DEMOGRAPHIC TABLES

Table 1: Components of population change, mid-2001 to mid-2015 – Liverpool City Region

Year	Natural change	Net internal migration	Net international migration	Other changes	Other (unattributable)	Total change
2001/2	-1,174	-2,202	60	312	2,607	-397
2002/3	-850	-2,601	1,678	76	2,517	820
2003/4	227	-2,491	1,979	-237	2,461	1,939
2004/5	657	-2,641	3,053	-243	2,376	3,202
2005/6	1,637	-1,651	593	-152	2,388	2,815
2006/7	2,050	-2,615	400	178	2,371	2,384
2007/8	2,383	-2,690	1,778	85	2,232	3,788
2008/9	2,666	-1,789	2,374	34	2,178	5,463
2009/10	3,298	-2,377	3,792	-64	2,062	6,711
2010/11	3,679	-2,790	4,491	-160	1,822	7,042
2011/12	4,032	-1,099	3,172	12	0	6,117
2012/13	2,046	-1,560	2,555	6	0	3,047
2013/14	3,221	494	2,803	335	0	6,853
2014/15	1,743	2,511	4,969	-63	0	9,160

Source: ONS

Table 2: Components of population change, mid-2001 to mid-2015 – Mid-Mersey

Year	Natural change	Net internal migration	Net international migration	Other changes	Other (unattributable)	Total change
2001/2	402	-359	-238	171	135	111
2002/3	533	-120	-38	1	88	464
2003/4	837	-241	-149	-146	72	373
2004/5	894	412	-169	17	60	1,214
2005/6	1,108	283	949	-88	76	2,328
2006/7	1,189	498	670	71	64	2,492
2007/8	1,277	759	617	-38	16	2,631
2008/9	1,439	740	466	96	24	2,765
2009/10	1,691	210	472	-40	16	2,349
2010/11	1,644	477	466	-79	14	2,522
2011/12	1,530	-36	115	13	0	1,622
2012/13	1,033	453	258	98	0	1,842
2013/14	1,338	1,090	155	87	0	2,670
2014/15	655	582	609	19	0	1,865

Source: ONS

Table 3: Components of population change, mid-2001 to mid-2015 – Liverpool HMA

Year	Natural change	Net internal migration	Net international migration	Other changes	Other (unattributable)	Total change
2001/2	-1,576	-1,843	298	141	2,472	-508
2002/3	-1,383	-2,481	1,716	75	2,429	356
2003/4	-610	-2,250	2,128	-91	2,389	1,566
2004/5	-237	-3,053	3,222	-260	2,316	1,988
2005/6	529	-1,934	-356	-64	2,312	487
2006/7	861	-3,113	-270	107	2,307	-108
2007/8	1,106	-3,449	1,161	123	2,216	1,157
2008/9	1,227	-2,529	1,908	-62	2,154	2,698
2009/10	1,607	-2,587	3,320	-24	2,046	4,362
2010/11	2,035	-3,267	4,025	-81	1,808	4,520
2011/12	2,502	-1,063	3,057	-1	0	4,495
2012/13	1,013	-2,013	2,297	-92	0	1,205
2013/14	1,883	-596	2,648	248	0	4,183
2014/15	1,088	1,929	4,360	-82	0	7,295

Source: ONS

Table 4: Components of population change, mid-2001 to mid-2015 – Halton

Year	Natural change	Net internal migration	Net international migration	Other changes	Other (unattributable)	Total change
2001/2	159	-425	-54	-6	555	229
2002/3	205	-276	-58	-14	533	390
2003/4	317	70	-154	6	543	782
2004/5	369	-202	-257	-4	530	436
2005/6	504	-157	-17	-4	553	879
2006/7	448	-218	-8	-4	547	765
2007/8	443	-129	1	3	549	867
2008/9	447	-274	-2	-18	576	729
2009/10	616	-53	-3	-4	610	1,166
2010/11	471	-318	66	6	695	920
2011/12	408	-404	-46	12	0	-30
2012/13	419	-100	-57	16	0	278
2013/14	415	-5	-26	0	0	384
2014/15	302	-176	32	16	0	174

Source: ONS

Table 5: Components of population change, mid-2001 to mid-2015 – Knowsley

Year	Natural change	Net internal migration	Net international migration	Other changes	Other (unattributable)	Total change
2001/2	259	-645	-69	-2	-275	-732
2002/3	182	-546	-25	-8	-314	-711
2003/4	201	-383	-93	7	-311	-579
2004/5	453	-240	-182	-9	-338	-316
2005/6	415	-60	-127	9	-349	-112
2006/7	366	-464	-134	-14	-354	-600
2007/8	549	-485	-21	-9	-400	-366
2008/9	464	-741	-58	-6	-411	-752
2009/10	473	-684	-21	-7	-433	-672
2010/11	525	-650	72	22	-464	-495
2011/12	641	-657	38	11	0	33
2012/13	323	-214	20	21	0	150
2013/14	381	-122	59	3	0	321
2014/15	414	317	90	3	0	824

Source: ONS

Table 6: Components of population change, mid-2001 to mid-2015 – Liverpool

Year	Natural change	Net internal migration	Net international migration	Other changes	Other (unattributable)	Total change
2001/2	-312	-1,090	1,066	157	2,105	1,926
2002/3	-186	-2,740	1,860	129	2,113	1,176
2003/4	-2	-1,849	3,020	-140	2,102	3,131
2004/5	200	-2,247	4,382	-236	2,088	4,187
2005/6	602	-1,780	-91	-56	2,102	777
2006/7	890	-2,837	268	117	2,089	527
2007/8	827	-2,878	885	-27	2,079	886
2008/9	1,106	-1,483	1,405	-30	2,057	3,055
2009/10	1,044	-1,661	2,486	2	2,009	3,880
2010/11	1,432	-2,112	3,213	-134	1,854	4,253
2011/12	1,713	-419	2,792	-52	0	4,034
2012/13	1,170	-2,254	2,305	-131	0	1,090
2013/14	1,636	-2,060	2,537	180	0	2,293
2014/15	1,469	425	3,738	-125	0	5,507

Source: ONS

Table 7: Components of population change, mid-2001 to mid-2015 – Sefton

Year	Natural change	Net internal migration	Net international migration	Other changes	Other (unattributable)	Total change
2001/2	-953	-599	-232	-12	-222	-2,018
2002/3	-944	132	95	-18	-218	-953
2003/4	-508	-58	-268	17	-243	-1,060
2004/5	-704	-573	-353	-2	-264	-1,896
2005/6	-619	-277	54	-9	-254	-1,105
2006/7	-351	-28	-178	12	-222	-767
2007/8	-545	-50	282	178	-215	-350
2008/9	-455	-254	345	-5	-213	-582
2009/10	-206	-350	421	-17	-181	-333
2010/11	-233	73	369	14	-74	149
2011/12	-356	-29	108	5	0	-272
2012/13	-480	-1	0	-9	0	-490
2013/14	-212	565	-23	-6	0	324
2014/15	-624	599	183	18	0	176

Source: ONS

Table 8: Components of population change, mid-2001 to mid-2015 – St.Helens

Year	Natural change	Net internal migration	Net international migration	Other changes	Other (unattributable)	Total change
2001/2	-70	-39	-69	-5	-348	-531
2002/3	-6	69	5	-10	-356	-298
2003/4	76	101	-74	5	-367	-259
2004/5	69	121	-188	1	-380	-377
2005/6	240	-49	29	-5	-377	-162
2006/7	300	-115	-11	-7	-396	-229
2007/8	308	104	160	-13	-423	136
2008/9	209	300	83	0	-426	166
2009/10	384	-114	128	-9	-458	-69
2010/11	434	150	113	9	-504	202
2011/12	435	224	34	16	0	709
2012/13	182	-108	23	10	0	107
2013/14	297	599	51	20	0	967
2014/15	3	281	124	16	0	424

Source: ONS

Table 9: Components of population change, mid-2001 to mid-2015 – Warrington

Year	Natural change	Net internal migration	Net international migration	Other changes	Other (unattributable)	Total change
2001/2	313	105	-115	182	-72	413
2002/3	334	87	15	25	-89	372
2003/4	444	-412	79	-157	-104	-150
2004/5	456	493	276	20	-90	1,155
2005/6	364	489	937	-79	-100	1,611
2006/7	441	831	689	82	-87	1,956
2007/8	526	784	456	-28	-110	1,628
2008/9	783	714	385	114	-126	1,870
2009/10	691	377	347	-27	-136	1,252
2010/11	739	645	287	-94	-177	1,400
2011/12	687	144	127	-15	0	943
2012/13	432	661	292	72	0	1,457
2013/14	626	496	130	67	0	1,319
2014/15	350	477	453	-13	0	1,267

Source: ONS

Table 10: Components of population change, mid-2001 to mid-2015 – West Lancashire

Year	Natural change	Net internal migration	Net international migration	Other changes	Other (unattributable)	Total change
2001/2	-111	550	-41	-2	-126	270
2002/3	-97	740	27	-5	-142	523
2003/4	10	506	-70	0	-131	315
2004/5	8	426	-69	-1	-146	218
2005/6	83	309	260	2	-152	502
2006/7	86	330	177	-7	-174	412
2007/8	160	-245	219	-1	-187	-54
2008/9	77	-216	265	-13	-196	-83
2009/10	92	-81	401	-2	-230	180
2010/11	72	-242	313	7	-296	-146
2011/12	83	-4	223	6	0	308
2012/13	29	118	238	4	0	389
2013/14	-36	427	214	21	0	626
2014/15	6	438	358	0	0	802

Source: ONS

Table 11: Components of population change, mid-2001 to mid-2015 – Wirral

Year	Natural change	Net internal migration	Net international migration	Other changes	Other (unattributable)	Total change
2001/2	-459	-59	-426	0	990	46
2002/3	-338	-67	-241	-23	990	321
2003/4	-311	-466	-461	25	972	-241
2004/5	-194	-419	-556	-12	976	-205
2005/6	48	-126	-452	-10	965	425
2006/7	-130	-114	-403	-1	968	320
2007/8	115	209	-204	-18	939	1,041
2008/9	35	165	-49	-8	917	1,060
2009/10	204	189	33	0	881	1,307
2010/11	239	-336	58	10	788	759
2011/12	421	46	-104	29	0	392
2012/13	-29	338	-266	23	0	66
2013/14	114	594	-139	50	0	619
2014/15	-177	150	-9	22	0	-14

Source: ONS

Table 12: Projected population growth (2012-2037) – 2014-based SNPP

	Population 2012	Population 2037	Change in population	% change
Halton	125,692	131,126	5,434	4.3%
Knowsley	145,936	151,496	5,560	3.8%
Liverpool	469,690	523,715	54,025	11.5%
Sefton	273,697	282,197	8,500	3.1%
St.Helens	176,114	187,939	11,825	6.7%
Warrington	203,652	232,414	28,762	14.1%
West Lancashire	110,925	116,171	5,246	4.7%
Wirral	320,229	332,473	12,244	3.8%
Mid Mersey	505,458	551,478	46,020	9.1%
Liverpool HMA	1,320,477	1,406,053	85,576	6.5%
Liverpool City Region	1,825,935	1,957,531	131,596	7.2%

Source: Derived from ONS data

Table 13: Projected population growth (2012-2037) – 2014-based SNPP (+MYE)

	Population 2012	Population 2037	Change in population	% change
Halton	125,692	131,145	5,453	4.3%
Knowsley	145,936	152,333	6,397	4.4%
Liverpool	469,690	527,105	57,415	12.2%
Sefton	273,697	282,217	8,520	3.1%
St.Helens	176,114	187,866	11,752	6.7%
Warrington	203,652	232,168	28,516	14.0%
West Lancashire	110,925	116,979	6,054	5.5%
Wirral	320,229	331,860	11,631	3.6%
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	1,825,935	1,961,673	135,738	7.4%

Source: Derived from ONS data

Table 14: Pre- and post-recession migration averages (per annum) – Halton

	Internal net	International net	Total net
2001-8	-191	-78	-269
2008-15	-190	-5	-195
Post 2008 change	1	73	74

Source: ONS

Table 15: Pre- and post-recession migration averages (per annum) – Knowsley

	Internal net	International net	Total net
2001-8	-403	-93	-496
2008-15	-393	29	-364
Post 2008 change	10	122	132

Source: ONS

Table 16: Pre- and post-recession migration averages (per annum) – Liverpool

	Internal net	International net	Total net
2001-8	-2,203	1,627	-576
2008-15	-1,366	2,639	1,273
Post 2008 change	837	1,012	1,849

Source: ONS

Table 17: Pre- and post-recession migration averages (per annum) – Sefton

	Internal net	International net	Total net
2001-8	-208	-86	-293
2008-15	86	200	287
Post 2008 change	294	286	580

Source: ONS

Table 18: Pre- and post-recession migration averages (per annum) – St.Helens

	Internal net	International net	Total net
2001-8	27	-21	6
2008-15	190	79	270
Post 2008 change	163	101	263

Source: ONS

Table 19: Pre- and post-recession migration averages (per annum) – Warrington

	Internal net	International net	Total net
2001-8	340	334	673
2008-15	502	289	791
Post 2008 change	162	-45	117

Source: ONS

Table 20: Pre- and post-recession migration averages (per annum) – West Lancashire

	Internal net	International net	Total net
2001-8	374	72	446
2008-15	63	287	350
Post 2008 change	-311	216	-95

Source: ONS

Table 21: Pre- and post-recession migration averages (per annum) – Wirral

	Internal net	International net	Total net
2001-8	-149	-392	-541
2008-15	164	-68	96
Post 2008 change	313	324	636

Source: ONS

Table 22: Projected population growth (2012-2037) – 10-year migration

	Population 2012	Population 2037	Change in population	% change
Halton	125,692	131,391	5,699	4.5%
Knowsley	145,936	155,081	9,145	6.3%
Liverpool	469,690	505,147	35,457	7.5%
Sefton	273,697	280,734	7,037	2.6%
St.Helens	176,114	186,299	10,185	5.8%
Warrington	203,652	236,441	32,789	16.1%
West Lancashire	110,925	118,727	7,802	7.0%
Wirral	320,229	328,151	7,922	2.5%
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 23: Projected population growth (2012-2037) – 14-year migration

	Population 2012	Population 2037	Change in population	% change
Halton	125,692	130,443	4,751	3.8%
Knowsley	145,936	153,767	7,831	5.4%
Liverpool	469,690	509,509	39,819	8.5%
Sefton	273,697	276,636	2,939	1.1%
St.Helens	176,114	184,991	8,877	5.0%
Warrington	203,652	230,794	27,142	13.3%
West Lancashire	110,925	120,780	9,855	8.9%
Wirral	320,229	323,720	3,491	1.1%
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

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

	Population 2012	Population 2037	Change in population	% change
Halton	125,692	140,207	14,515	11.5%
Knowsley	145,936	148,410	2,474	1.7%
Liverpool	469,690	540,126	70,436	15.0%
Sefton	273,697	277,750	4,053	1.5%
St.Helens	176,114	179,771	3,657	2.1%
Warrington	203,652	234,525	30,873	15.2%
West Lancashire	110,925	115,395	4,470	4.0%
Wirral	320,229	341,978	21,749	6.8%
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%

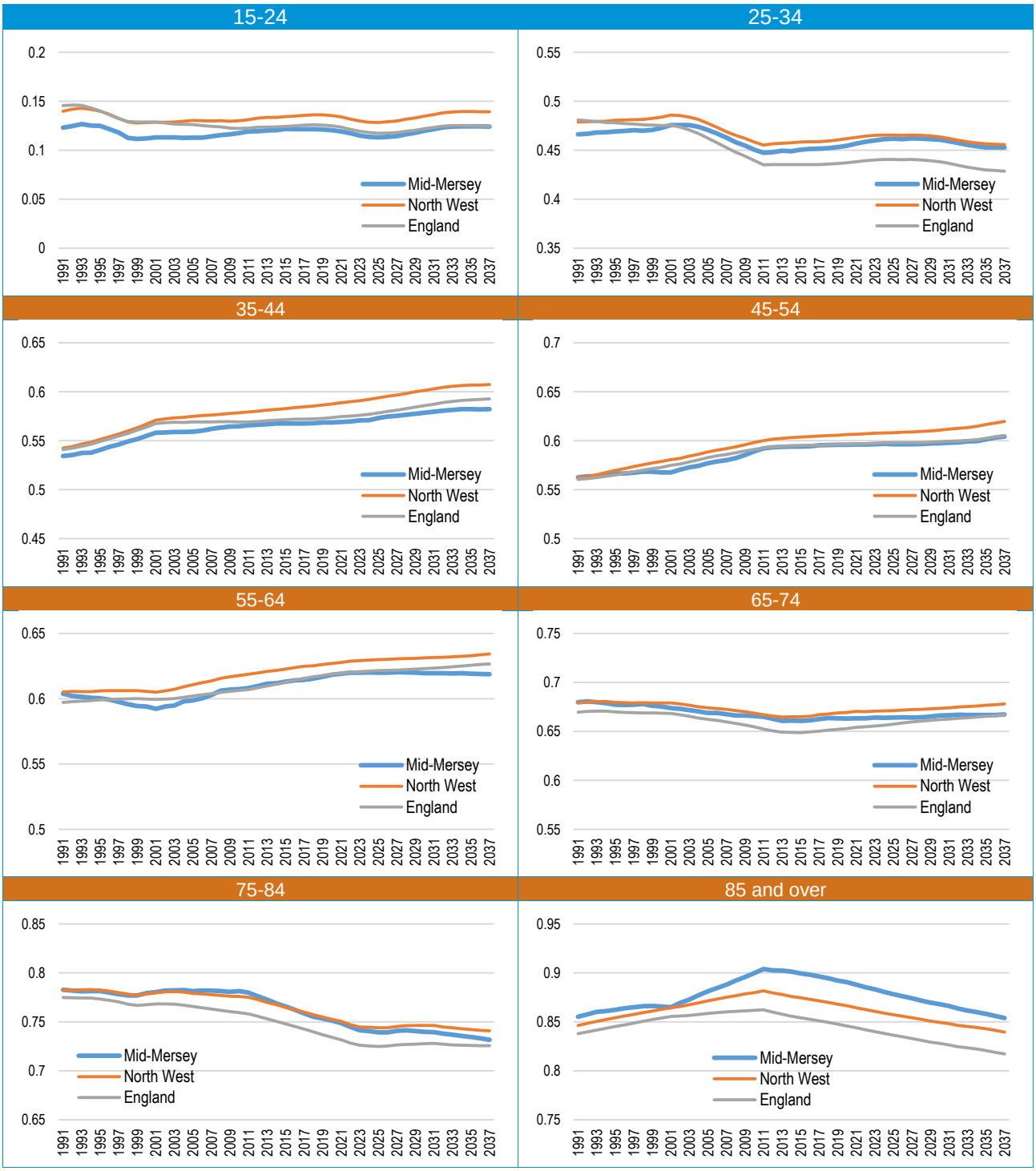
Source: Derived from ONS data

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

	Population 2012	Population 2037	Change in population	% change
Halton	125,692	140,720	15,028	12.0%
Knowsley	145,936	146,463	527	0.4%
Liverpool	469,690	552,252	82,562	17.6%
Sefton	273,697	272,716	-981	-0.4%
St.Helens	176,114	177,621	1,507	0.9%
Warrington	203,652	228,741	25,089	12.3%
West Lancashire	110,925	117,308	6,383	5.8%
Wirral	320,229	340,911	20,682	6.5%
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%

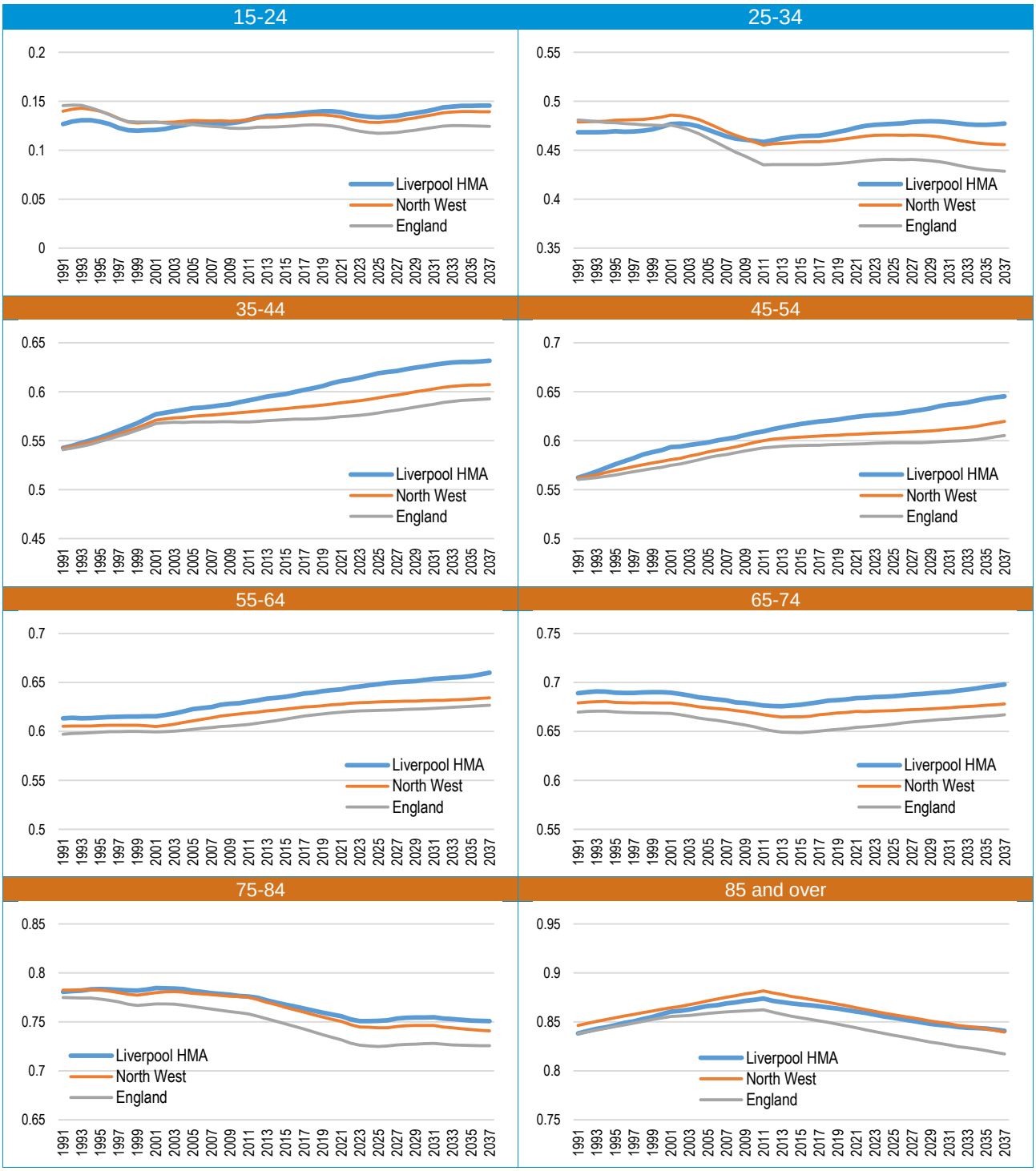
Source: Derived from ONS data

Figure 25: Projected household formation rates by age of head of household – Mid-Mersey



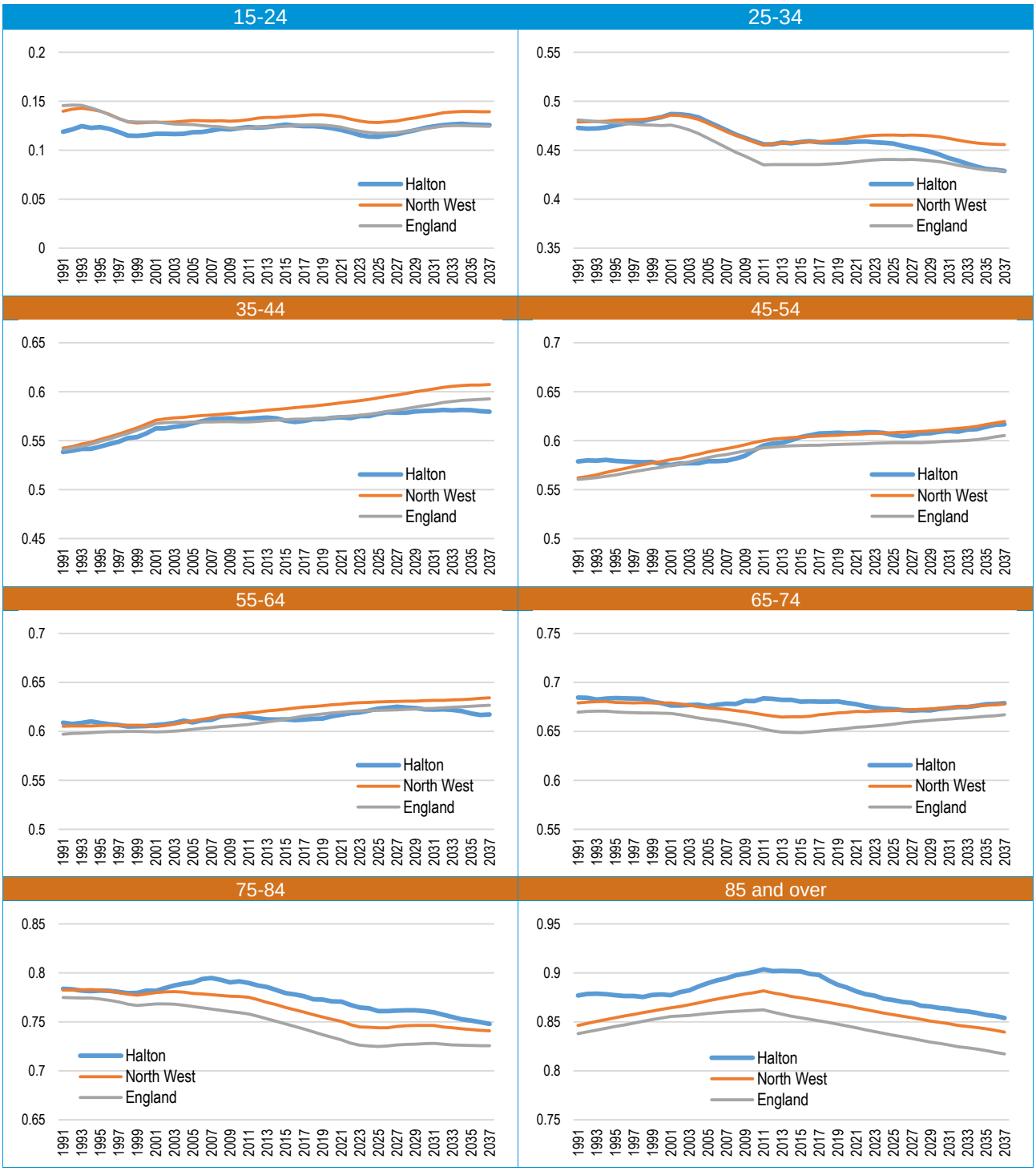
Source: Derived from CLG data

Figure 26: Projected household formation rates by age of head of household – Liverpool HMA



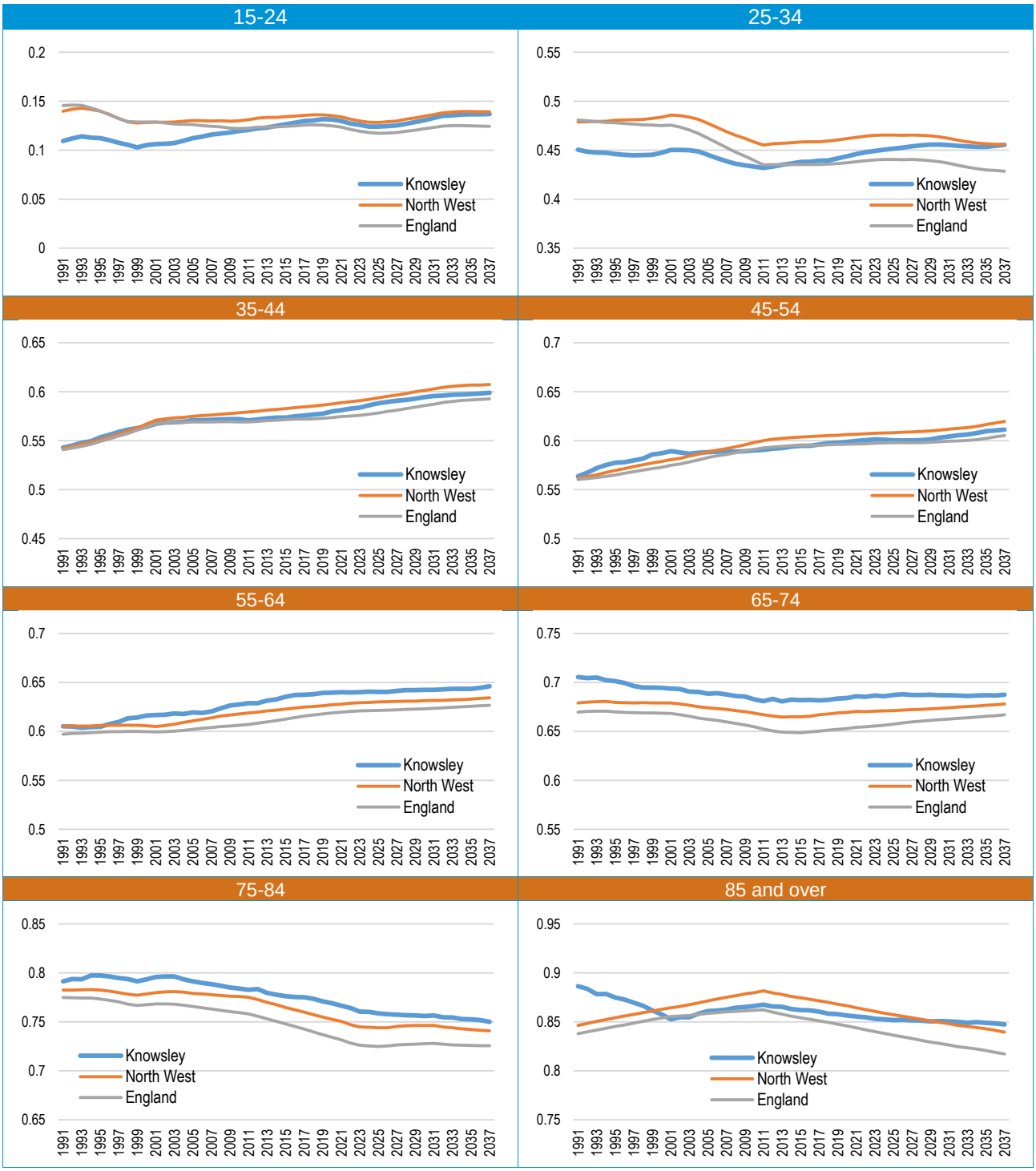
Source: Derived from CLG data

Figure 27: Projected household formation rates by age of head of household – Halton



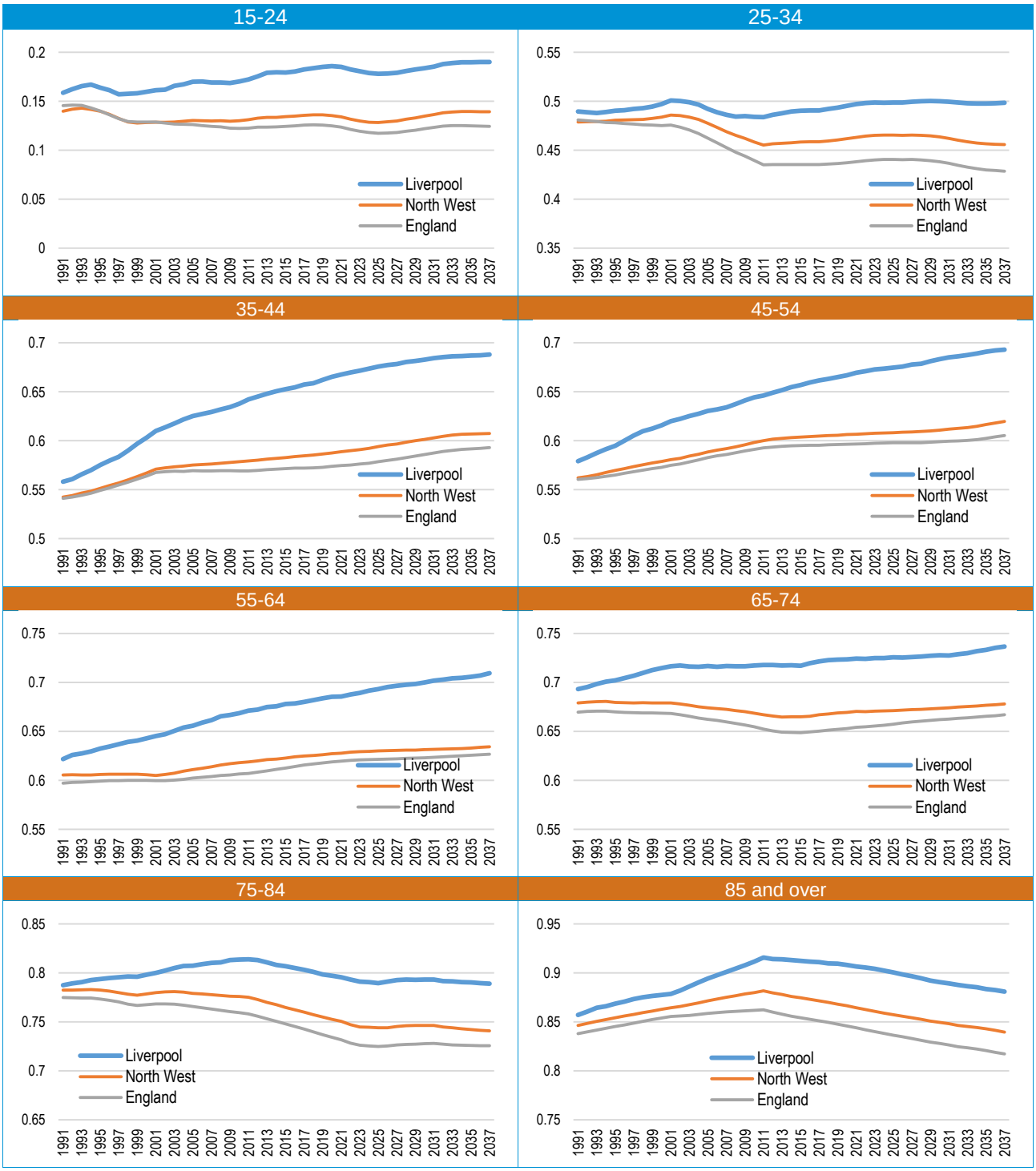
Source: Derived from CLG data

Figure 28: Projected household formation rates by age of head of household – Knowsley



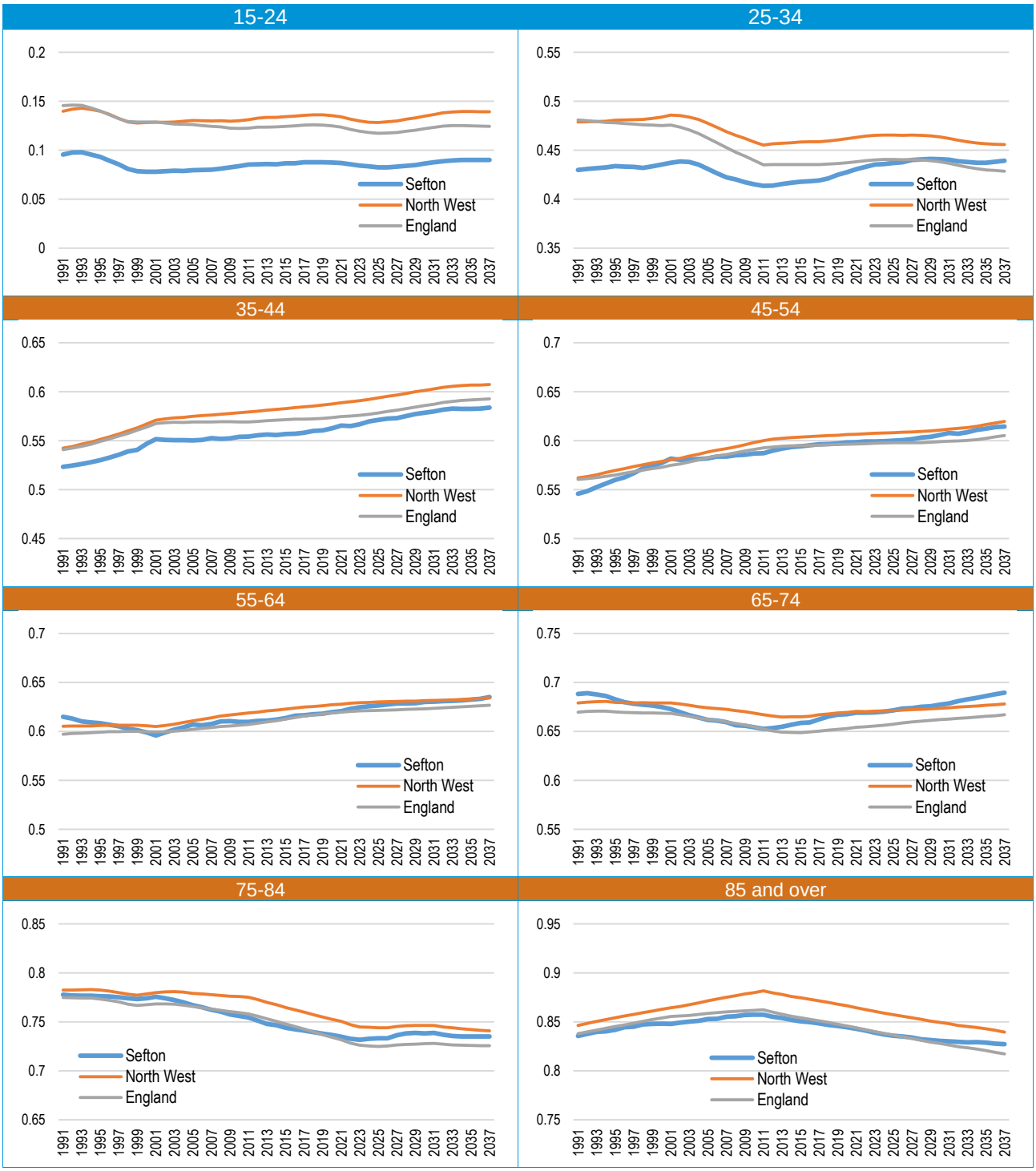
Source: Derived from CLG data

Figure 29: Projected household formation rates by age of head of household – Liverpool



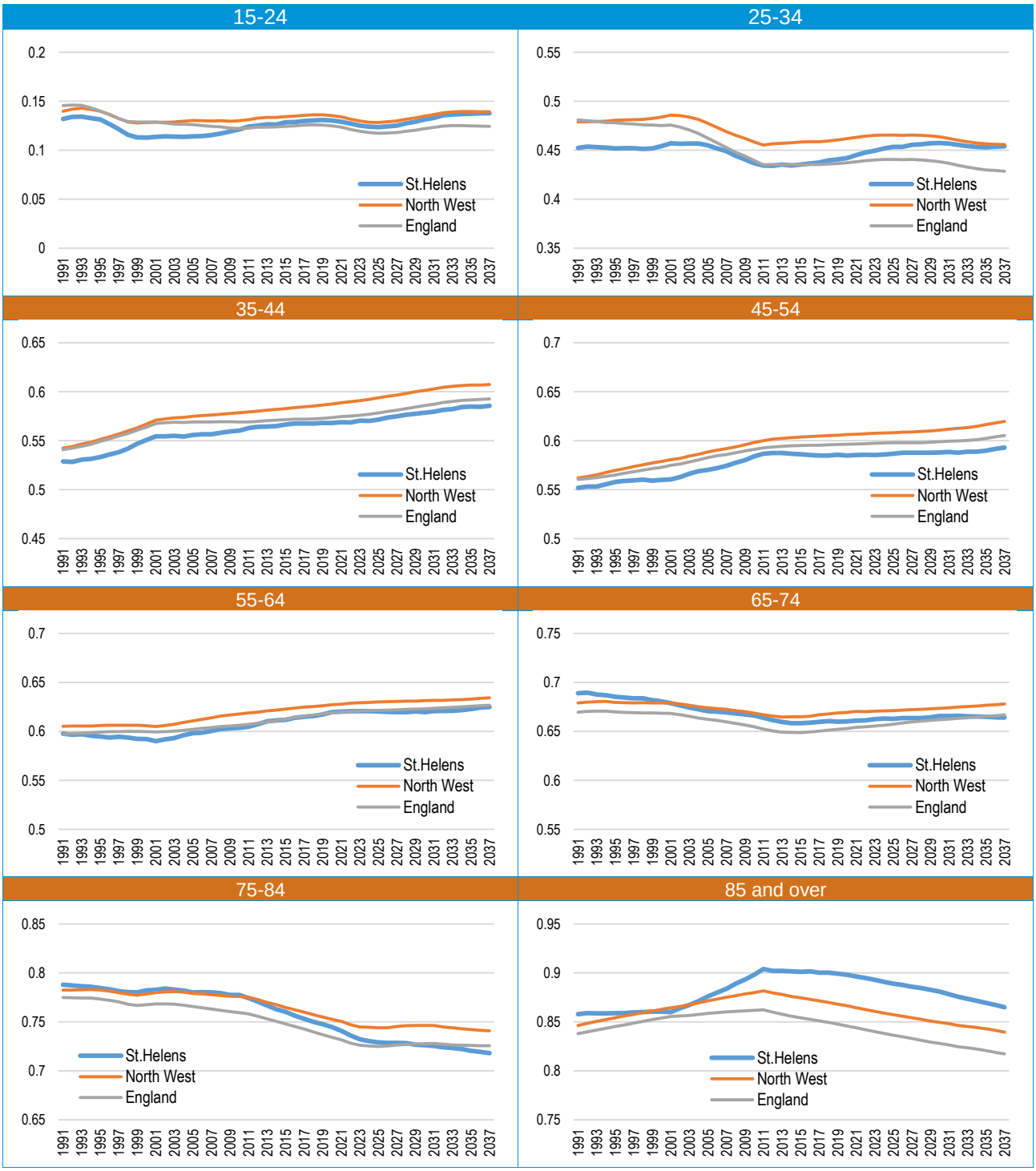
Source: Derived from CLG data

Figure 30: Projected household formation rates by age of head of household – Sefton



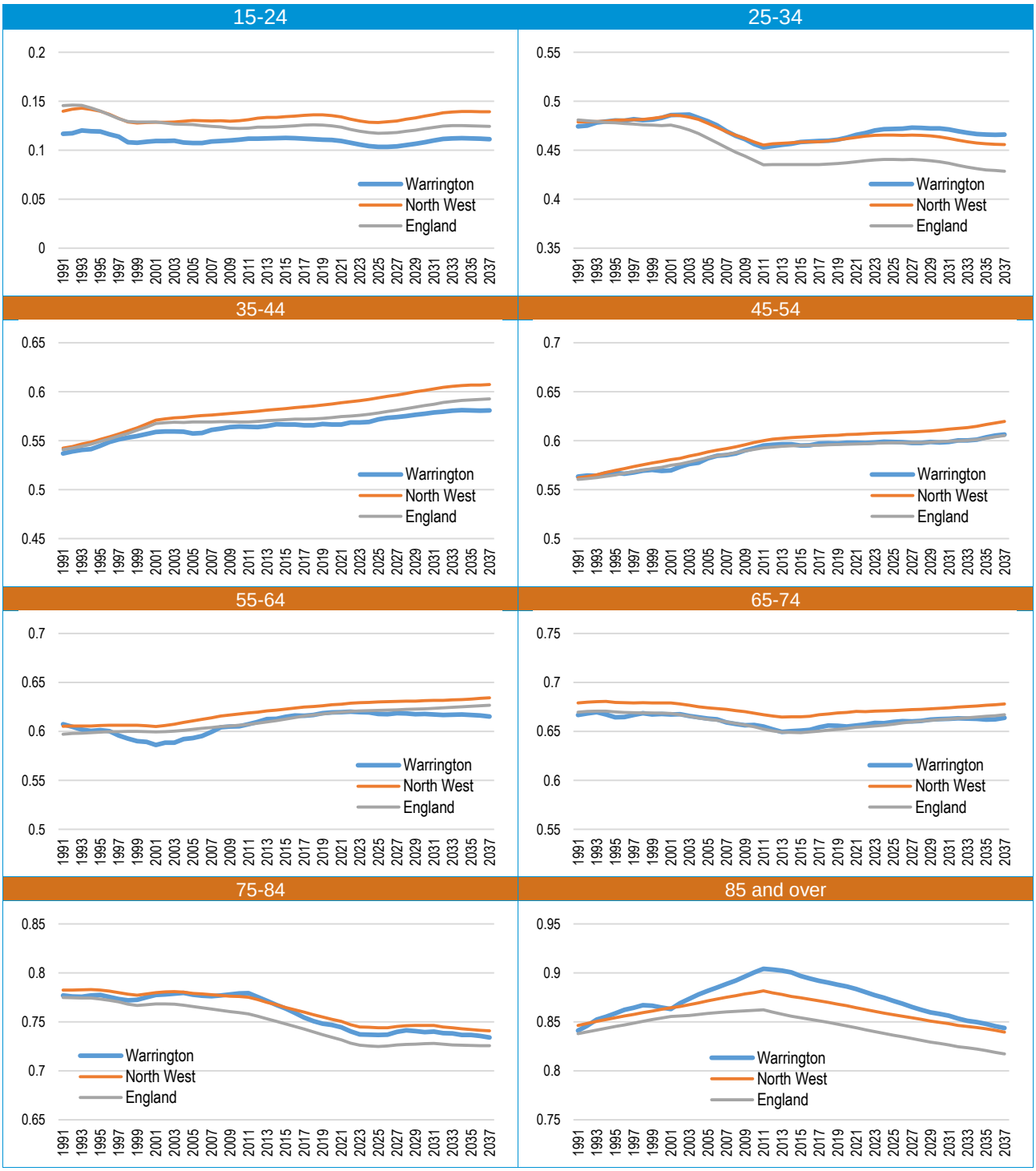
Source: Derived from CLG data

Figure 31: Projected household formation rates by age of head of household – St.Helens



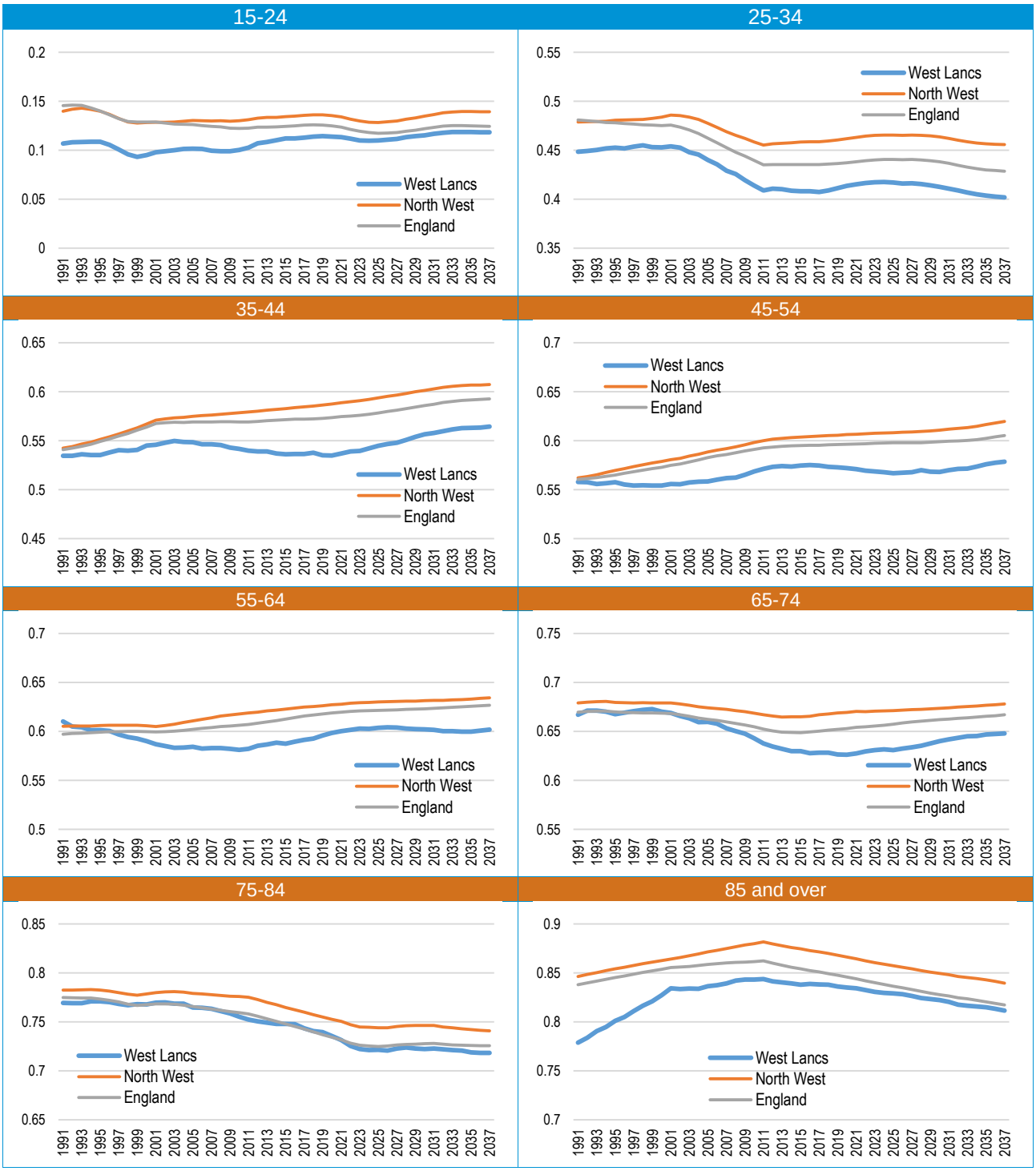
Source: Derived from CLG data

Figure 32: Projected household formation rates by age of head of household – Warrington



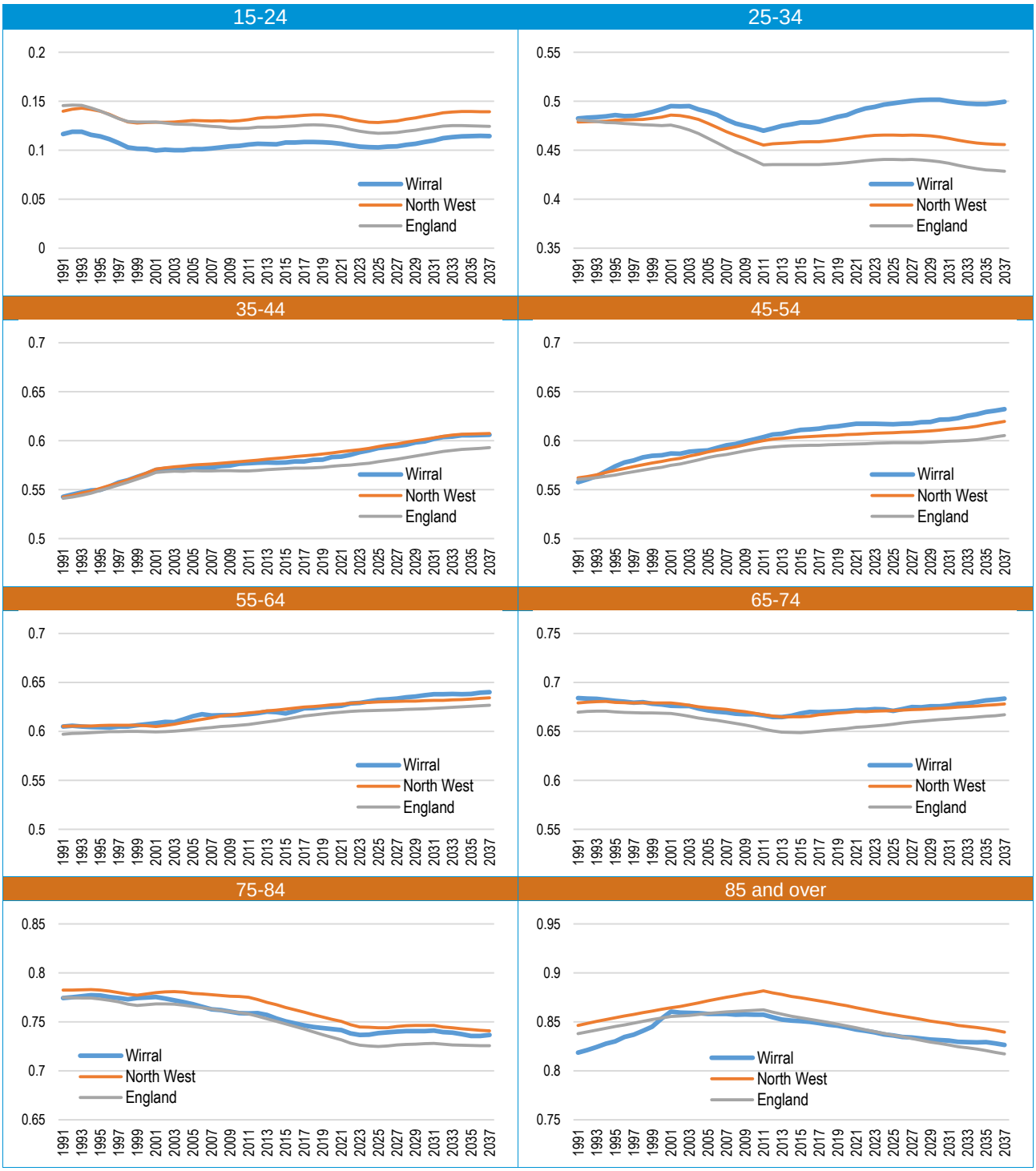
Source: Derived from CLG data

Figure 33: Projected household formation rates by age of head of household – West Lancashire



Source: Derived from CLG data

Figure 34: Projected household formation rates by age of head of household – Wirral



Source: Derived from CLG data

Table 26: Changes to Black and Minority Ethnic Population by age (2001-11) – Mid-Mersey

	BME population 2001	BME population 2011	Change	% of change
15-24	1,492	2,885	1,393	16.3%
25-34	1,846	5,053	3,207	37.5%
35-44	1,770	3,832	2,062	24.1%
45-54	1,332	2,317	985	11.5%
55-64	785	1,329	544	6.4%
65-74	440	752	312	3.6%
75-84	290	300	10	0.1%
85+	57	101	44	0.5%
TOTAL	8,012	16,569	8,557	100.0%

Source: Census (2001 and 2011)

Table 27: Changes to White (British/Irish) Population by age (2001-11) – Mid-Mersey

	White (B/I) population 2001	White (B/I) population 2011	Change	% of change
15-24	55,545	59,297	3,752	25.5%
25-34	65,610	55,690	-9,920	-67.4%
35-44	72,318	68,038	-4,280	-29.1%
45-54	66,891	70,792	3,901	26.5%
55-64	52,552	62,728	10,176	69.1%
65-74	39,006	45,428	6,422	43.6%
75-84	23,764	26,420	2,656	18.0%
85+	7,076	9,094	2,018	13.7%
TOTAL	382,762	397,487	14,725	100.0%

Source: Census (2001 and 2011)

Table 28: Changes to Black and Minority Ethnic Population by age (2001-11) – Liverpool HMA

	BME population 2001	BME population 2011	Change	% of change
15-24	9,862	19,254	9,392	25.0%
25-34	8,878	22,249	13,371	35.5%
35-44	7,397	14,892	7,495	19.9%
45-54	5,284	9,336	4,052	10.8%
55-64	3,231	5,407	2,176	5.8%
65-74	2,479	2,950	471	1.3%
75-84	1,296	1,744	448	1.2%
85+	334	549	215	0.6%
TOTAL	38,761	76,381	37,620	100.0%

Source: Census (2001 and 2011)

Table 29: Changes to White (British/Irish) Population by age (2001-11) – Liverpool HMA

	White (B/I) population 2001	White (B/I) population 2011	Change	% of change

15-24	158,633	171,332	12,699	77.1%
25-34	155,068	142,074	-12,994	-78.8%
35-44	183,179	153,983	-29,196	-177.2%
45-54	163,965	178,941	14,976	90.9%
55-64	133,298	154,610	21,312	129.3%
65-74	117,196	114,877	-2,319	-14.1%
75-84	71,288	79,450	8,162	49.5%
85+	23,922	27,762	3,840	23.3%
TOTAL	1,006,549	1,023,029	16,480	100.0%

Source: Census (2001 and 2011)

Table 30: Changes to Black and Minority Ethnic Population by age (2001-11) – Halton

	BME population 2001	BME population 2011	Change	% of change
15-24	305	474	169	12.2%
25-34	334	827	493	35.5%
35-44	295	607	312	22.5%
45-54	262	424	162	11.7%
55-64	145	308	163	11.7%
65-74	73	165	92	6.6%
75-84	63	55	-8	-0.6%
85+	16	21	5	0.4%
TOTAL	1,493	2,881	1,388	100.0%

Source: Census (2001 and 2011)

Table 31: Changes to White (British/Irish) Population by age (2001-11) – Halton

	White (B/I) population 2001	White (B/I) population 2011	Change	% of change
15-24	14,932	15,632	700	10.5%
25-34	15,874	14,980	-894	-13.4%
35-44	17,342	16,731	-611	-9.2%
45-54	17,147	17,624	477	7.2%
55-64	11,744	16,344	4,600	69.0%
65-74	8,997	10,205	1,208	18.1%
75-84	5,346	6,077	731	11.0%
85+	1,499	1,958	459	6.9%
TOTAL	92,881	99,551	6,670	100.0%

Source: Census (2001 and 2011)

Table 32: Changes to Black and Minority Ethnic Population by age (2001-11) – Knowsley

	BME population 2001	BME population 2011	Change	% of change
15-24	438	635	197	15.9%
25-34	553	796	243	19.6%
35-44	487	824	337	27.2%
45-54	329	598	269	21.7%
55-64	233	354	121	9.8%
65-74	175	204	29	2.3%
75-84	94	111	17	1.4%
85+	11	37	26	2.1%
TOTAL	2,320	3,559	1,239	100.0%

Source: Census (2001 and 2011)

Table 33: Changes to White (British/Irish) Population by age (2001-11) – Knowsley

	White (B/I) population 2001	White (B/I) population 2011	Change	% of change
15-24	18,640	19,334	694	-179.3%
25-34	19,913	16,599	-3,314	856.3%
35-44	23,003	18,379	-4,624	1194.8%
45-54	18,276	21,888	3,612	-933.3%
55-64	14,245	16,839	2,594	-670.3%
65-74	13,512	11,740	-1,772	457.9%
75-84	6,757	8,595	1,838	-474.9%
85+	1,742	2,327	585	-151.2%
TOTAL	116,088	115,701	-387	100.0%

Source: Census (2001 and 2011)

Table 34: Changes to Black and Minority Ethnic Population by age (2001-11) – Liverpool

	BME population 2001	BME population 2011	Change	% of change
15-24	7,136	14,774	7,638	28.1%
25-34	5,597	15,722	10,125	37.3%
35-44	4,202	9,152	4,950	18.2%
45-54	2,620	5,232	2,612	9.6%
55-64	1,619	2,798	1,179	4.3%
65-74	1,344	1,549	205	0.8%
75-84	625	965	340	1.3%
85+	158	283	125	0.5%
TOTAL	23,301	50,475	27,174	100.0%

Source: Census (2001 and 2011)

Table 35: Changes to White (British/Irish) Population by age (2001-11) – Liverpool

	White (B/I) population 2001	White (B/I) population 2011	Change	% of change
15-24	63,602	70,434	6,832	72.9%
25-34	54,772	57,297	2,525	26.9%
35-44	59,819	49,810	-10,009	-106.8%
45-54	50,938	56,078	5,140	54.8%
55-64	39,728	46,984	7,256	77.4%
65-74	36,350	32,478	-3,872	-41.3%
75-84	21,653	22,744	1,091	11.6%
85+	7,035	7,447	412	4.4%
TOTAL	333,897	343,272	9,375	100.0%

Source: Census (2001 and 2011)

Table 36: Changes to Black and Minority Ethnic Population by age (2001-11) – Sefton

	BME population 2001	BME population 2011	Change	% of change
15-24	880	1,546	666	16.9%
25-34	1,004	2,571	1,567	39.8%
35-44	1,056	1,820	764	19.4%
45-54	947	1,335	388	9.9%
55-64	534	908	374	9.5%
65-74	391	473	82	2.1%
75-84	249	311	62	1.6%
85+	69	99	30	0.8%
TOTAL	5,130	9,063	3,933	100.0%

Source: Census (2001 and 2011)

Table 37: Changes to White (British/Irish) Population by age (2001-11) – Sefton

	White (B/I) population 2001	White (B/I) population 2011	Change	% of change
15-24	30,099	31,011	912	-23.7%
25-34	31,793	25,789	-6,004	156.3%
35-44	40,817	32,341	-8,476	220.6%
45-54	37,129	40,115	2,986	-77.7%
55-64	31,850	35,302	3,452	-89.8%
65-74	28,492	28,300	-192	5.0%
75-84	18,003	20,401	2,398	-62.4%
85+	6,345	7,427	1,082	-28.2%
TOTAL	224,528	220,686	-3,842	100.0%

Source: Census (2001 and 2011)

Table 38: Changes to Black and Minority Ethnic Population by age (2001-11) – St.Helens

	BME population 2001	BME population 2011	Change	% of change
15-24	369	696	327	18.9%
25-34	452	1,054	602	34.8%
35-44	453	844	391	22.6%
45-54	373	607	234	13.5%
55-64	250	327	77	4.4%
65-74	146	228	82	4.7%
75-84	97	96	-1	-0.1%
85+	9	29	20	1.2%
TOTAL	2,149	3,881	1,732	100.0%

Source: Census (2001 and 2011)

Table 39: Changes to White (British/Irish) Population by age (2001-11) – St.Helens

	White (B/I) population 2001	White (B/I) population 2011	Change	% of change
15-24	19,977	20,785	808	65.9%
25-34	23,679	19,194	-4,485	-365.8%
35-44	25,127	23,546	-1,581	-129.0%
45-54	24,186	24,294	108	8.8%
55-64	20,145	22,809	2,664	217.3%
65-74	15,402	17,384	1,982	161.7%
75-84	9,228	10,198	970	79.1%
85+	2,705	3,465	760	62.0%
TOTAL	140,449	141,675	1,226	100.0%

Source: Census (2001 and 2011)

Table 40: Changes to Black and Minority Ethnic Population by age (2001-11) – Warrington

	BME population 2001	BME population 2011	Change	% of change

15-24	818	1,715	897	16.5%
25-34	1,060	3,172	2,112	38.8%
35-44	1,022	2,381	1,359	25.0%
45-54	697	1,286	589	10.8%
55-64	390	694	304	5.6%
65-74	221	359	138	2.5%
75-84	130	149	19	0.3%
85+	32	51	19	0.3%
TOTAL	4,370	9,807	5,437	100.0%

Source: Census (2001 and 2011)

Table 41: Changes to White (British/Irish) Population by age (2001-11) – Warrington

	White (B/I) population 2001	White (B/I) population 2011	Change	% of change
15-24	20,636	22,880	2,244	32.9%
25-34	26,057	21,516	-4,541	-66.5%
35-44	29,849	27,761	-2,088	-30.6%
45-54	25,558	28,874	3,316	48.6%
55-64	20,663	23,575	2,912	42.6%
65-74	14,607	17,839	3,232	47.3%
75-84	9,190	10,145	955	14.0%
85+	2,872	3,671	799	11.7%
TOTAL	149,432	156,261	6,829	100.0%

Source: Census (2001 and 2011)

Table 42: Changes to Black and Minority Ethnic Population by age (2001-11) – West Lancashire

	BME population 2001	BME population 2011	Change	% of change
15-24	392	761	369	25.1%
25-34	420	930	510	34.7%
35-44	397	692	295	20.1%
45-54	345	488	143	9.7%
55-64	203	308	105	7.1%
65-74	131	155	24	1.6%
75-84	61	80	19	1.3%
85+	18	23	5	0.3%
TOTAL	1,967	3,437	1,470	100.0%

Source: Census (2001 and 2011)

Table 43: Changes to White (British/Irish) Population by age (2001-11) – West Lancashire

	White (B/I) population 2001	White (B/I) population 2011	Change	% of change
15-24	12,588	14,159	1,571	58.2%
25-34	12,802	9,568	-3,234	-119.9%
35-44	15,501	13,977	-1,524	-56.5%
45-54	15,156	15,788	632	23.4%
55-64	13,158	14,521	1,363	50.5%
65-74	9,436	11,609	2,173	80.6%
75-84	5,415	6,674	1,259	46.7%
85+	1,877	2,334	457	16.9%
TOTAL	85,933	88,630	2,697	100.0%

Source: Census (2001 and 2011)

Table 44: Changes to Black and Minority Ethnic Population by age (2001-11) – Wirral

	BME population 2001	BME population 2011	Change	% of change
15-24	1,016	1,538	522	13.7%
25-34	1,304	2,230	926	24.3%
35-44	1,255	2,404	1,149	30.2%
45-54	1,043	1,683	640	16.8%
55-64	642	1,039	397	10.4%
65-74	438	569	131	3.4%
75-84	267	277	10	0.3%
85+	78	107	29	0.8%
TOTAL	6,043	9,847	3,804	100.0%

Source: Census (2001 and 2011)

Table 45: Changes to White (British/Irish) Population by age (2001-11) – Wirral

	White (B/I) population 2001	White (B/I) population 2011	Change	% of change
15-24	33,704	36,394	2,690	31.1%
25-34	35,788	32,821	-2,967	-34.4%
35-44	44,039	39,476	-4,563	-52.8%
45-54	42,466	45,072	2,606	30.2%
55-64	34,317	40,964	6,647	77.0%
65-74	29,406	30,750	1,344	15.6%
75-84	19,460	21,036	1,576	18.2%
85+	6,923	8,227	1,304	15.1%
TOTAL	246,103	254,740	8,637	100.0%

Source: Census (2001 and 2011)

Table 46: Derivation of vacancy rates by local authority

	Dwellings	Second homes	Vacant	Occupied dwellings	Vacant+ 2nd	Allowance
Halton	55,601	57	798	54,746	855	1.6%
Knowsley	65,874	40	1,284	64,550	1,324	2.1%
Liverpool	219,602	194	6,016	213,392	6,210	2.9%
Sefton	126,311	363	4,036	121,912	4,399	3.6%
St.Helens	81,528	685	1,739	79,104	2,424	3.1%
Warrington	91,354	441	1,612	89,301	2,053	2.3%
West Lancashire	48,482	95	1,067	47,320	1,162	2.5%
Wirral	147,253	667	3,559	143,027	4,226	3.0%

Source: Council Tax data

Table 47: Projected housing need – range of demographic based scenarios and 2014-based headship rates – Mid-Mersey (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
2014-based SNPP	215,993	250,507	34,514	1,381	1,414
2014-based SNPP (+MYE)	215,993	250,484	34,491	1,380	1,413
10-year migration	215,993	251,663	35,671	1,427	1,461
14-year migration	215,993	248,569	32,577	1,303	1,334
10-year migration (+UPC)	215,993	251,888	35,895	1,436	1,468
14-year migration (+UPC)	215,993	249,002	33,009	1,320	1,350

Source: Demographic projections

Table 48: Projected housing need – range of demographic based scenarios and 2014-based headship rates – Liverpool HMA (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
2014-based SNPP	575,605	656,278	80,673	3,227	3,322
2014-based SNPP (+MYE)	575,605	658,130	82,526	3,301	3,398
10-year migration	575,605	647,383	71,779	2,871	2,955
14-year migration	575,605	646,197	70,593	2,824	2,906
10-year migration (+UPC)	575,605	663,183	87,578	3,503	3,606
14-year migration (+UPC)	575,605	666,082	90,477	3,619	3,725

Source: Demographic projections

Table 49: Projected housing need – range of demographic based scenarios and 2014-based headship rates – Halton (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
2014-based SNPP	53,580	59,340	5,759	230	234
2014-based SNPP (+MYE)	53,580	59,356	5,775	231	235
10-year migration	53,580	59,420	5,840	234	237
14-year migration	53,580	59,024	5,443	218	221
10-year migration (+UPC)	53,580	63,073	9,492	380	386
14-year migration (+UPC)	53,580	63,282	9,701	388	394

Source: Demographic projections

Table 50: Projected housing need – range of demographic based scenarios and 2014-based headship rates – Knowsley (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
2014-based SNPP	61,673	68,185	6,511	260	266
2014-based SNPP (+MYE)	61,673	68,533	6,859	274	280
10-year migration	61,673	69,543	7,869	315	321
14-year migration	61,673	69,025	7,351	294	300
10-year migration (+UPC)	61,673	66,852	5,178	207	211
14-year migration (+UPC)	61,673	66,079	4,405	176	180

Source: Demographic projections

Table 51: Projected housing need – range of demographic based scenarios and 2014-based headship rates – Liverpool (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
2014-based SNPP	208,435	249,254	40,819	1,633	1,680
2014-based SNPP (+MYE)	208,435	250,689	42,255	1,690	1,739
10-year migration	208,435	240,927	32,492	1,300	1,338
14-year migration	208,435	243,158	34,723	1,389	1,429
10-year migration (+UPC)	208,435	255,929	47,494	1,900	1,955
14-year migration (+UPC)	208,435	261,490	53,056	2,122	2,184

Source: Demographic projections

Table 52: Projected housing need – range of demographic based scenarios and 2014-based headship rates – Sefton (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
2014-based SNPP	118,599	131,489	12,890	516	534
2014-based SNPP (+MYE)	118,599	131,620	13,021	521	540
10-year migration	118,599	130,871	12,272	491	509
14-year migration	118,599	129,253	10,654	426	442
10-year migration (+UPC)	118,599	129,645	11,046	442	458
14-year migration (+UPC)	118,599	127,642	9,043	362	375

Source: Demographic projections

Table 53: Projected housing need – range of demographic based scenarios and 2014-based headship rates – St.Helens (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
2014-based SNPP	76,360	86,429	10,069	403	415
2014-based SNPP (+MYE)	76,360	86,444	10,084	403	416
10-year migration	76,360	85,809	9,449	378	390
14-year migration	76,360	85,283	8,923	357	368
10-year migration (+UPC)	76,360	83,170	6,810	272	281
14-year migration (+UPC)	76,360	82,303	5,943	238	245

Source: Demographic projections

Table 54: Projected housing need – range of demographic based scenarios and 2014-based headship rates – Warrington (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
2014-based SNPP	86,052	104,738	18,686	747	765
2014-based SNPP (+MYE)	86,052	104,684	18,632	745	762
10-year migration	86,052	106,435	20,382	815	834
14-year migration	86,052	104,263	18,211	728	745
10-year migration (+UPC)	86,052	105,645	19,593	784	802
14-year migration (+UPC)	86,052	103,417	17,365	695	711

Source: Demographic projections

Table 55: Projected housing need – range of demographic based scenarios and 2014-based headship rates – West Lancashire (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
2014-based SNPP	45,588	49,704	4,117	165	169
2014-based SNPP (+MYE)	45,588	49,864	4,276	171	175
10-year migration	45,588	50,364	4,776	191	196
14-year migration	45,588	50,957	5,369	215	220
10-year migration (+UPC)	45,588	49,138	3,550	142	145
14-year migration (+UPC)	45,588	49,679	4,092	164	168

Source: Demographic projections

Table 56: Projected housing need – range of demographic based scenarios and 2014-based headship rates – Wirral (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
2014-based SNPP	141,309	157,645	16,336	653	673
2014-based SNPP (+MYE)	141,309	157,424	16,115	645	664
10-year migration	141,309	155,679	14,369	575	592
14-year migration	141,309	153,804	12,495	500	515
10-year migration (+UPC)	141,309	161,619	20,310	812	836
14-year migration (+UPC)	141,309	161,191	19,882	795	819

Source: Demographic projections

Table 57: Projected housing need – range of demographic based scenarios and adjusted headship rates – Mid-Mersey (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
2014-based SNPP	215,993	250,989	34,996	1,400	1,433
2014-based SNPP (+MYE)	215,993	250,967	34,974	1,399	1,432
10-year migration	215,993	252,148	36,155	1,446	1,480
14-year migration	215,993	249,046	33,054	1,322	1,354
10-year migration (+UPC)	215,993	252,428	36,435	1,457	1,490
14-year migration (+UPC)	215,993	249,544	33,552	1,342	1,372

Source: Demographic projections

Table 58: Projected housing need – range of demographic based scenarios and adjusted headship rates – Liverpool HMA (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
2014-based SNPP	575,605	649,651	74,047	2,962	3,049
2014-based SNPP (+MYE)	575,605	651,472	75,868	3,035	3,124
10-year migration	575,605	641,036	65,431	2,617	2,693
14-year migration	575,605	639,825	64,220	2,569	2,643
10-year migration (+UPC)	575,605	656,320	80,715	3,229	3,323
14-year migration (+UPC)	575,605	659,084	83,479	3,339	3,437

Source: Demographic projections

Table 59: Projected housing need – range of demographic based scenarios and adjusted headship rates – Halton (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
2014-based SNPP	53,580	59,822	6,241	250	254
2014-based SNPP (+MYE)	53,580	59,839	6,258	250	254
10-year migration	53,580	59,904	6,324	253	257
14-year migration	53,580	59,501	5,920	237	241
10-year migration (+UPC)	53,580	63,613	10,033	401	408
14-year migration (+UPC)	53,580	63,824	10,244	410	416

Source: Demographic projections

Table 60: Projected housing need – range of demographic based scenarios and adjusted headship rates – Knowsley (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
2014-based SNPP	61,673	68,185	6,511	260	266
2014-based SNPP (+MYE)	61,673	68,533	6,859	274	280
10-year migration	61,673	69,543	7,869	315	321
14-year migration	61,673	69,025	7,351	294	300
10-year migration (+UPC)	61,673	66,852	5,178	207	211
14-year migration (+UPC)	61,673	66,079	4,405	176	180

Source: Demographic projections

Table 61: Projected housing need – range of demographic based scenarios and adjusted headship rates – Liverpool (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
2014-based SNPP	208,435	242,710	34,275	1,371	1,411
2014-based SNPP (+MYE)	208,435	244,107	35,672	1,427	1,468
10-year migration	208,435	234,626	26,191	1,048	1,078
14-year migration	208,435	236,796	28,361	1,134	1,167
10-year migration (+UPC)	208,435	249,195	40,760	1,630	1,678
14-year migration (+UPC)	208,435	254,599	46,164	1,847	1,900

Source: Demographic projections

Table 62: Projected housing need – range of demographic based scenarios and adjusted headship rates – Sefton (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
2014-based SNPP	118,599	131,489	12,890	516	534
2014-based SNPP (+MYE)	118,599	131,620	13,021	521	540
10-year migration	118,599	130,871	12,272	491	509
14-year migration	118,599	129,253	10,654	426	442
10-year migration (+UPC)	118,599	129,645	11,046	442	458
14-year migration (+UPC)	118,599	127,642	9,043	362	375

Source: Demographic projections

Table 63: Projected housing need – range of demographic based scenarios and adjusted headship rates – St.Helens (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
2014-based SNPP	76,360	86,429	10,069	403	415
2014-based SNPP (+MYE)	76,360	86,444	10,084	403	416
10-year migration	76,360	85,809	9,449	378	390
14-year migration	76,360	85,283	8,923	357	368
10-year migration (+UPC)	76,360	83,170	6,810	272	281
14-year migration (+UPC)	76,360	82,303	5,943	238	245

Source: Demographic projections

Table 64: Projected housing need – range of demographic based scenarios and adjusted headship rates – Warrington (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
2014-based SNPP	86,052	104,738	18,686	747	765
2014-based SNPP (+MYE)	86,052	104,684	18,632	745	762
10-year migration	86,052	106,435	20,382	815	834
14-year migration	86,052	104,263	18,211	728	745
10-year migration (+UPC)	86,052	105,645	19,593	784	802
14-year migration (+UPC)	86,052	103,417	17,365	695	711

Source: Demographic projections

Table 65: Projected housing need – range of demographic based scenarios and adjusted headship rates – West Lancashire (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
2014-based SNPP	45,588	50,305	4,717	189	193
2014-based SNPP (+MYE)	45,588	50,472	4,884	195	200
10-year migration	45,588	50,988	5,400	216	221
14-year migration	45,588	51,599	6,011	240	246
10-year migration (+UPC)	45,588	49,730	4,142	166	170
14-year migration (+UPC)	45,588	50,288	4,700	188	193

Source: Demographic projections

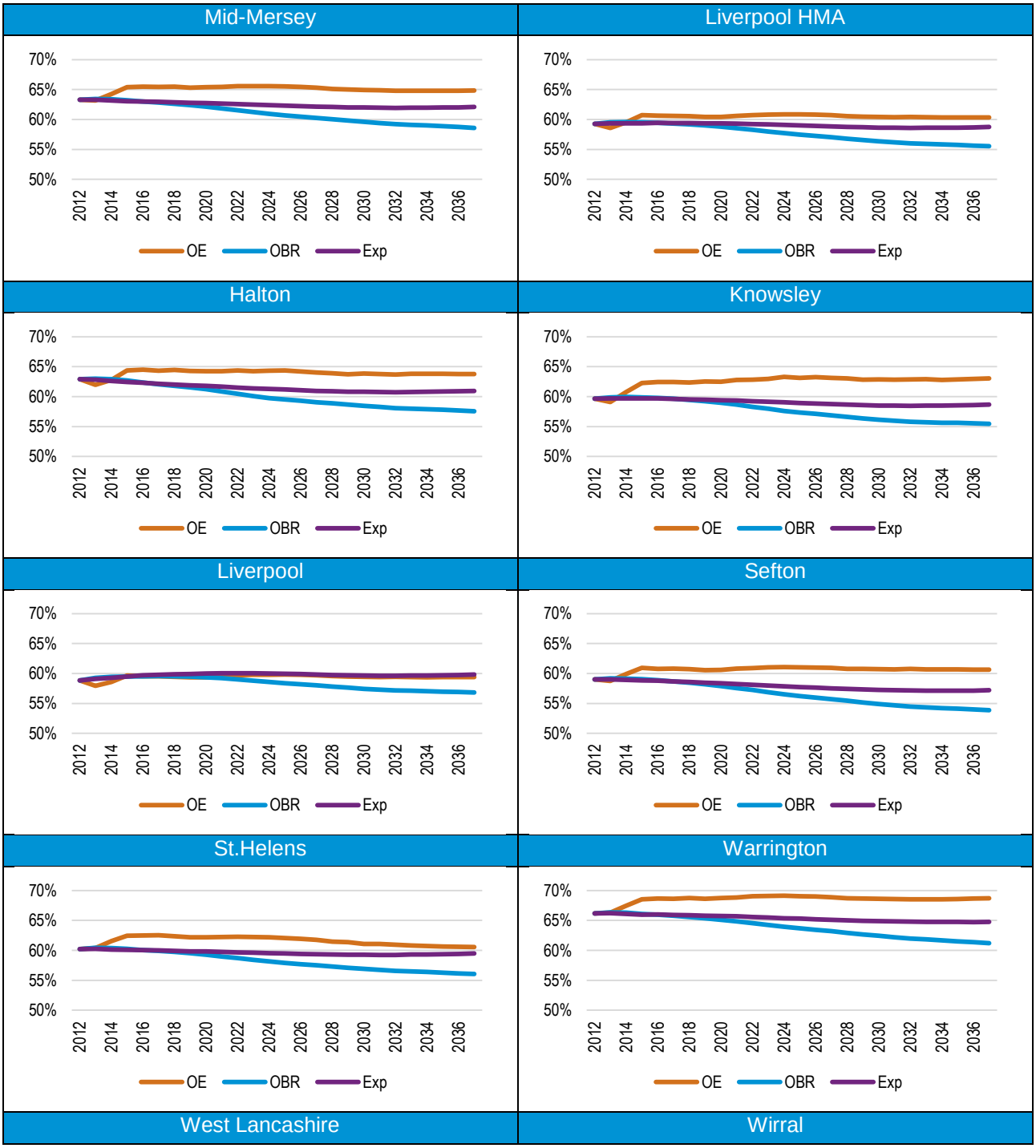
Table 66: Projected housing need – range of demographic based scenarios and adjusted headship rates – Wirral (2012-37)

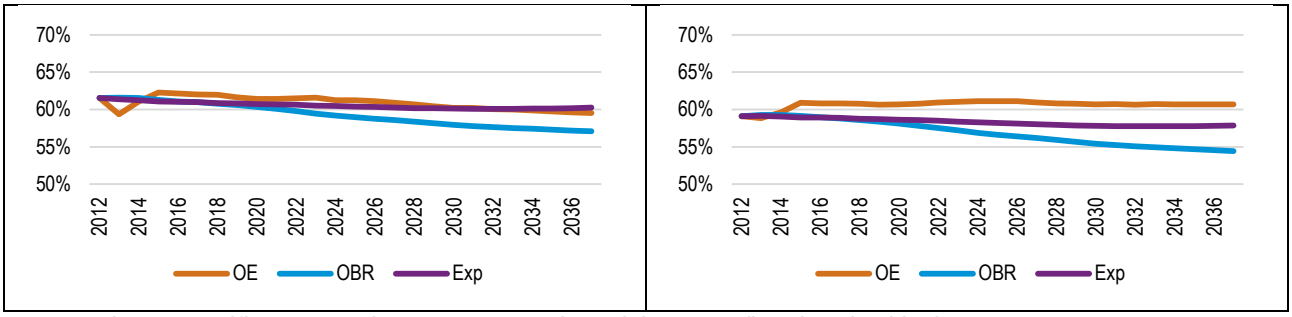
	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
2014-based SNPP	141,309	156,962	15,653	626	645
2014-based SNPP (+MYE)	141,309	156,741	15,431	617	635
10-year migration	141,309	155,008	13,699	548	564
14-year migration	141,309	153,152	11,842	474	488
10-year migration (+UPC)	141,309	160,898	19,589	784	807
14-year migration (+UPC)	141,309	160,476	19,167	767	789

Source: Demographic projections

APPENDIX C: DETAILED ECONOMIC-LED HOUSING MODELLING TABLES

Figure 35: Forecast changes to economic activity rates – baseline forecast





Age and sex specific assumptions on economic activity rates (local authorities)

Table 67: Age and sex specific assumptions on economic activity rates – Halton

	Males		Females	
	2014	2037	2014	2037
16-24	72.3%	68.0%	65.9%	62.7%
25_29	93.4%	93.5%	81.6%	82.8%
30_34	92.1%	92.3%	80.4%	81.6%
35_39	91.5%	91.7%	80.4%	82.7%
40_44	89.6%	89.8%	83.5%	85.8%
45_49	88.5%	88.6%	82.0%	83.3%
50_54	85.3%	87.7%	76.7%	79.0%
55_59	75.3%	83.1%	65.8%	74.8%
60_64	53.3%	76.5%	33.8%	63.6%
65_69	18.2%	46.9%	15.5%	44.1%
70_74	9.2%	18.0%	5.4%	14.2%
75+	3.3%	3.3%	2.0%	2.0%

Table 68: Age and sex specific assumptions on economic activity rates – Knowsley

	Males		Females	
	2014	2037	2014	2037
16-24	68.4%	64.1%	65.8%	62.6%
25_29	90.9%	91.1%	78.3%	79.6%
30_34	91.7%	91.9%	76.8%	78.1%
35_39	88.6%	88.8%	79.0%	81.3%
40_44	86.6%	86.7%	79.3%	81.7%
45_49	84.7%	84.8%	78.6%	79.8%
50_54	78.9%	81.3%	73.2%	75.6%
55_59	72.2%	80.1%	61.8%	70.7%
60_64	49.6%	72.8%	32.6%	62.4%
65_69	15.0%	43.7%	10.7%	39.4%
70_74	6.9%	15.8%	4.5%	13.3%
75+	3.3%	3.3%	1.7%	1.7%

Table 69: Age and sex specific assumptions on economic activity rates – Liverpool

	Males		Females	
	2014	2037	2014	2037
16-24	55.2%	50.9%	55.3%	52.1%
25_29	86.0%	86.1%	78.3%	79.6%
30_34	88.1%	88.2%	77.8%	79.1%
35_39	84.4%	84.6%	76.8%	79.2%
40_44	82.4%	82.5%	78.5%	80.8%
45_49	82.0%	82.2%	77.5%	78.8%
50_54	78.6%	81.0%	72.7%	75.1%
55_59	69.5%	77.4%	61.3%	70.3%
60_64	47.9%	71.1%	33.7%	63.4%
65_69	18.5%	47.2%	14.3%	42.9%
70_74	7.0%	15.8%	5.8%	14.6%
75+	3.8%	3.8%	2.1%	2.1%

Table 70: Age and sex specific assumptions on economic activity rates – Sefton

	Males		Females	
	2014	2037	2014	2037
16-24	69.3%	65.0%	67.7%	64.5%
25_29	92.3%	92.4%	84.0%	85.3%
30_34	91.2%	91.4%	81.8%	83.0%
35_39	90.0%	90.2%	82.2%	84.6%
40_44	90.5%	90.7%	84.2%	86.6%
45_49	90.6%	90.7%	84.3%	85.6%
50_54	86.4%	88.7%	79.8%	82.2%
55_59	77.4%	85.2%	69.4%	78.4%
60_64	55.0%	78.2%	36.3%	66.1%
65_69	22.8%	51.4%	15.4%	44.0%
70_74	10.4%	19.2%	6.3%	15.1%
75+	3.9%	3.9%	2.3%	2.3%

Table 71: Age and sex specific assumptions on economic activity rates – St.Helens

	Males		Females	
	2014	2037	2014	2037
16-24	70.7%	66.4%	64.5%	61.3%
25_29	92.6%	92.8%	80.5%	81.7%
30_34	92.2%	92.3%	82.5%	83.7%
35_39	90.6%	90.8%	82.6%	84.9%
40_44	90.0%	90.2%	84.8%	87.2%
45_49	88.3%	88.5%	83.1%	84.3%
50_54	84.9%	87.3%	78.6%	80.9%
55_59	73.8%	81.7%	66.2%	75.2%
60_64	51.4%	74.6%	33.8%	63.5%

65_69	17.4%	46.0%	12.8%	41.4%
70_74	7.2%	16.0%	5.4%	14.2%
75+	3.0%	3.0%	1.6%	1.6%

Table 72: Age and sex specific assumptions on economic activity rates – Warrington

	Males		Females	
	2014	2037	2014	2037
16-24	70.9%	66.7%	71.7%	68.5%
25_29	92.1%	92.3%	86.0%	87.3%
30_34	93.5%	93.7%	85.5%	86.7%
35_39	93.9%	94.1%	85.4%	87.8%
40_44	93.7%	93.8%	86.7%	89.0%
45_49	93.1%	93.2%	88.3%	89.5%
50_54	91.0%	93.3%	84.2%	86.5%
55_59	81.7%	89.6%	71.8%	80.7%
60_64	59.5%	82.7%	36.9%	66.6%
65_69	22.2%	50.9%	16.3%	45.0%
70_74	8.8%	17.6%	6.7%	15.6%
75+	3.6%	3.6%	2.3%	2.3%

Table 73: Age and sex specific assumptions on economic activity rates – West Lancashire

	Males		Females	
	2014	2037	2014	2037
16-24	67.5%	63.2%	62.5%	59.4%
25_29	92.9%	93.1%	83.1%	84.3%
30_34	94.4%	94.6%	83.0%	84.2%
35_39	93.4%	93.5%	83.3%	85.7%
40_44	93.7%	93.9%	85.5%	87.9%
45_49	92.7%	92.9%	87.1%	88.3%
50_54	89.9%	92.2%	81.0%	83.3%
55_59	81.5%	89.3%	71.1%	80.0%
60_64	62.6%	85.9%	38.6%	68.4%
65_69	26.3%	55.0%	16.9%	45.5%
70_74	12.3%	21.2%	7.5%	16.3%
75+	5.2%	5.2%	3.1%	3.1%

Table 74: Age and sex specific assumptions on economic activity rates – Wirral

	Males		Females	
	2014	2037	2014	2037
16-24	68.5%	64.2%	63.1%	59.9%
25_29	91.8%	92.0%	81.1%	82.4%
30_34	92.0%	92.2%	80.1%	81.4%
35_39	90.4%	90.5%	80.5%	82.8%
40_44	89.9%	90.1%	81.8%	84.1%

45_49	88.5%	88.7%	83.0%	84.3%
50_54	85.1%	87.5%	78.7%	81.1%
55_59	75.6%	83.5%	67.6%	76.5%
60_64	53.5%	76.7%	35.9%	65.7%
65_69	21.6%	50.2%	14.5%	43.1%
70_74	8.9%	17.7%	5.5%	14.3%
75+	3.6%	3.6%	2.0%	2.0%

Summary of method for uplifting economic activity rates from baseline position

To look at a potential uplift to economic activity rates based on the scenario forecast an adjustment to the overall size of the economically active population has been undertaken. This involved looking at the economically active population aged 16-64 for the last 12 quarters from the Annual Population Survey (APS – accessed via NOMIS). Figures for the 16-64 population have been used as these are less influenced by age structure differences than the more normal measure (which is to look at the population aged 16 and over). As can be seen from the table below, all areas apart from Warrington are below the national average and could potentially see some improvement.

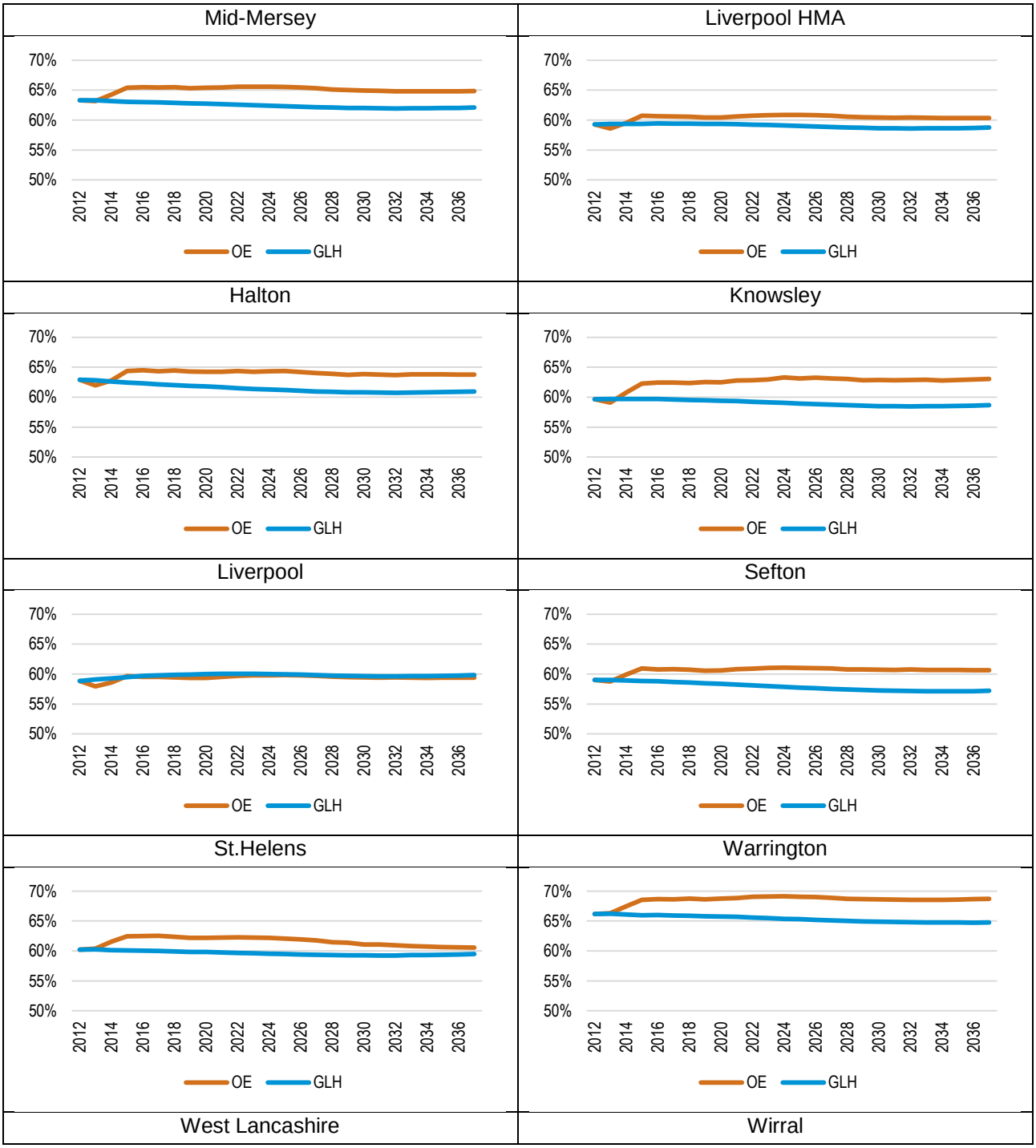
To look at the potential improvement we have taken half of the difference between the local figure and the national average as a guide to how much improvement might happen. In the case of Halton for example, the midpoint between England and Halton is 76.8% and so we have increased the economically active population outputs (in 2037) by 1.01 (76.8/76.0) – note: all figures are based on unrounded data.

This means that areas with a very low activity rate (e.g. Liverpool) see higher increases, but the general pattern between areas remains the same (but the gap closes). The final column is theoretical because the actual rate will also depend on the local age structure, and in all cases will actually be lower than the quoted figure (essentially it is the economic activity rate that we would have now if the improvements were applied to the current age structure).

Table 75: Current economic activity rate and scenario uplift

	Current EA rate (16-64)	Multiplier	Theoretical EA rate (16-64)
Halton	76.0%	1.01	76.8%
Knowsley	72.5%	1.04	75.0%
Liverpool	67.7%	1.07	72.6%
Sefton	77.1%	1.00	77.3%
St.Helens	75.3%	1.01	76.5%
Warrington	82.0%	1.00	82.0%
West Lancashire	74.3%	1.02	76.0%
Wirral	74.2%	1.02	75.9%
England	77.6%	-	77.6%

Figure 36: Forecast changes to economic activity rates – scenario forecast



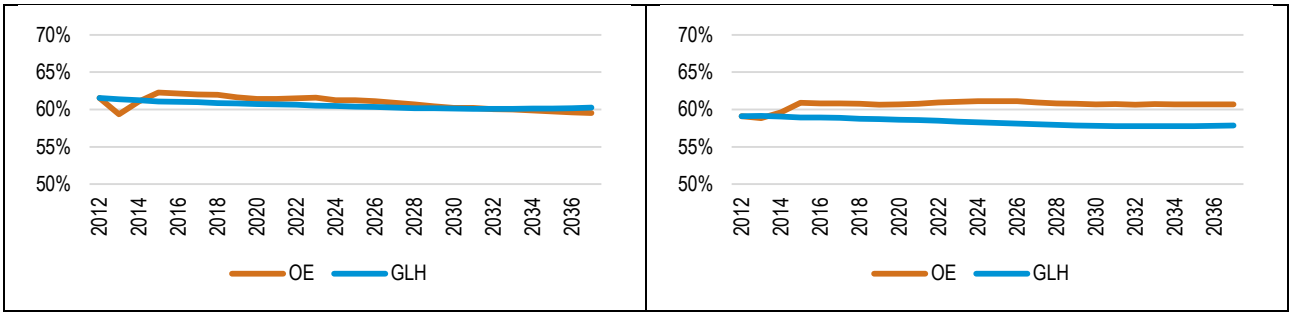


Table 76: Projected housing need – range of economic based scenarios and 2014-based headship rates – Mid-Mersey (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
Baseline	215,993	257,735	41,742	1,670	1,709
Scenario	215,993	273,838	57,845	2,314	2,369

Source: Demographic projections

Table 77: Projected housing need – range of economic based scenarios and alternative headship rates – Mid-Mersey (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
Baseline	215,993	258,249	42,256	1,690	1,730
Scenario	215,993	274,425	58,432	2,337	2,393

Source: Demographic projections

Table 78: Projected housing need – range of economic based scenarios and 2014-based headship rates – Liverpool HMA (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
Baseline	575,605	650,558	74,953	2,998	3,085
Scenario	575,605	665,545	89,941	3,598	3,703

Source: Demographic projections

Table 79: Projected housing need – range of economic based scenarios and alternative headship rates – Liverpool HMA (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
Baseline	575,605	644,175	68,571	2,743	2,822
Scenario	575,605	666,181	90,576	3,623	3,729

Source: Demographic projections

Table 80: Projected housing need – range of economic based scenarios and 2014-based headship rates – Halton (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
Baseline	53,580	61,580	7,999	320	325
Scenario	53,580	66,911	13,330	533	542

Source: Demographic projections

Table 81: Projected housing need – range of economic based scenarios and alternative headship rates – Halton (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
Baseline	53,580	62,093	8,513	341	346
Scenario	53,580	67,498	13,918	557	565

Source: Demographic projections

Table 82: Projected housing need – range of economic based scenarios and 2014-based headship rates – Knowsley (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
Baseline	61,673	70,148	8,474	339	346
Scenario	61,673	70,801	9,128	365	373

Source: Demographic projections

Table 83: Projected housing need – range of economic based scenarios and 2014-based headship rates – Liverpool (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
Baseline	208,435	242,589	34,154	1,366	1,406
Scenario	208,435	251,949	43,514	1,741	1,791

Source: Demographic projections

Table 84: Projected housing need – range of economic based scenarios and 2014-based headship rates – Sefton (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
Baseline	118,599	129,818	11,219	449	465
Scenario	118,599	132,755	14,155	566	587

Source: Demographic projections

Table 85: Projected housing need – range of economic based scenarios and 2014-based headship rates – St.Helens (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
Baseline	76,360	86,919	10,559	422	435
Scenario	76,360	97,098	20,738	830	855

Source: Demographic projections

Table 86: Projected housing need – range of economic based scenarios and 2014-based headship rates – Warrington (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
Baseline	86,052	109,236	23,184	927	949
Scenario	86,052	109,829	23,777	951	973

Source: Demographic projections

Table 87: Projected housing need – range of economic based scenarios and 2014-based headship rates – West Lancashire (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
Baseline	45,588	51,127	5,539	222	227
Scenario	45,588	50,830	5,243	210	215

Source: Demographic projections

Table 88: Projected housing need – range of economic based scenarios and alternative headship rates – West Lancashire (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
Baseline	45,588	51,771	6,183	247	253
Scenario	45,588	51,466	5,878	235	241

Source: Demographic projections

Table 89: Projected housing need – range of economic based scenarios and 2014-based headship rates – Wirral (2012-37)

	Households 2012	Households 2037	Change in households	Per annum	Dwellings (per annum)
Baseline	141,309	156,876	15,567	623	641
Scenario	141,309	159,210	17,901	716	737

Source: Demographic projections

Table 90: 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

APPENDIX D: LAND REQUIREMENT FOR COMMODITIES STORAGE

7.1 The Section provides a review of the latest Mersey Port Master Plan (June 2011). The Mersey Ports Master Plan covers the Port of Liverpool and the Manchester ship canal. The main purpose of the plan is to:

- Clarify the port's own strategic planning for the medium to long term
- Assist regional and local planning and transport network providers in preparing and revising their own development strategies
- Inform port users, employees and local communities as to how they can expect to see the port develop over the coming years

7.2 Two of the key aspects of the plan that will address the above points are the sections on the port's forecasts to 2020 and 2030, as well as the Land Strategy & 'Areas of Change' chapter. The latter will act as a means of addressing the land use implications required by forecasted growth/declines of the various sectors that make up the Mersey Port's business.

7.3 The forecast sections of the Master Plan are set out by commodity, giving a description of the importance of that particular commodity to the port as well as the national context, followed by the forecasts and reasons for expected growth/decline. A 2008 base year has been used in the forecasts chapter, taken from the official UK maritime statistics. The forecasts are presented in the context of the Government's own port forecasts prepared by *MDS Transmodal*. It is also worth noting that the Mersey Ports forecasts have been devised from a "bottom up" commercial approach and where there are differences to the national forecasts, a rational is provided.

7.4 The chapter outlines an overall context of cargo for the Mersey Ports, detailing that in 2008 the port group handled 39.64 million tonnes of cargo, which represented 7.8% of all ports traffic via UK major ports. The government forecasts are outlined up to 2030 (at 5 year intervals) for bulk, unitised and non-unitised, with unitised expected to produce the largest national growth of 3.1% CAGR[11] (2005-2030), with Total GB for all cargo types 1.1% CAGR.

Containers

7.5 Container traffic at the port of Liverpool is in the region of 700,000 TEU (20ft equivalent units) a year and is the highest annual total for ports in the North of Britain. The main markets for containers at Liverpool are USA, Canada and shorter services to the Mediterranean and Iberian Peninsula. The future of container traffic at Liverpool is dependent on the port's ability to handle larger vessels and inland transport solutions to reach the hinterland of the port.

[11] Compound Annual Growth Rate

7.6 In 2008 Liverpool had a fairly even split between container traffic by Short-Sea, Feedering and Deep-Sea (34%, 30% and 36%).The largest vessels at the Port of Liverpool typically have a capacity of between 3,500 and 4,500 TEU. Increased container throughput would have a positive growth effect on port centric logistics and also require additional portside handling and storage capacity. The report makes the case for direct services to Liverpool in order to reduce transport costs and provide a more direct route to Northern markets.

7.7 The container forecasts are predicated upon the delivery of the Seaforth River Terminal and additional supporting land infrastructure. This is represented in 2.0 million TEU by 2020 and up to 3.0 million TEU by 2030, representing a CAGR of 7.04%. This is double the Government's forecast over the same period. The plan highlights an increase in reefer traffic, in part due to an increase in services from the Mediterranean and Iberian Peninsula. Liverpool is in a good position to facilitate this growth due to the recent construction of a fresh produce terminal at Royal Seaforth Dock, costing £5 million and totalling 90,000 sq ft in size.

Ro-Ro

7.8 Liverpool is the major port for trade between Britain and Ireland, handling more than 30% of all freight crossing the Irish Sea. Liverpool has a total of seven Ro-Ro freight and passenger services daily to Belfast and Dublin, by Stena Line, Seatruck and P&O, as well as a daily service to the Isle of Man. The Stena Line services operate from the in-river Twelve Quays terminal at Birkenhead. Unaccompanied traffic represents 67% of all Ro-Ro from the Mersey ports, with Accompanied accounting for 33%, the heavier reliance on unaccompanied required larger parking areas.

7.9 The forecasted throughputs to 2020 and 2030 are 757,000 Units and 1,047,700 Units respectively. This represents a CAGR of 3.3% and whilst being in excess of the Government's CAGR of 2.8% (for the UK) it is consistent with the regionalised forecast applicable to the North West. The plan notes that the increasing trend towards "unaccompanied" movements as a result of increasing fuel prices will encourage the greater use of longer Irish Sea ferry crossings and shorter road shunts.

7.10 The need for berths of at least 7.5m is suggested, with the Twelve Quays facility at Birkenhead approaching capacity at peak times. The port also has consent for another in-river berth close to Langton Lock for Ro-Ro operations, although it cites the need to secure necessary trailer parking facilities.

Trade Cars

7.11 The main flows of trade cars through Liverpool consist of:

- Export of cars and commercial vehicles manufactured in the UK, both to short sea and deep sea countries;

- Import of cars and commercial vehicles manufactured overseas, both from short sea and deep sea trade partners.

7.12 For imports, extensive parking areas are required. Import cars tend to have a dwell time of 2 weeks, whereas export cars are parked more closely and have a dwell time of no more than 1 week. Mersey ports handle around 1% of all British port trade car traffic despite being home to car plants at Halewood (Jaguar/Land Rover) and Ellesmere Port (Vauxhall/Opel).

7.13 The plan suggests that trade cars represents a significant growth opportunity for the Mersey Ports and forecasts a growth of 8.11% CAGR, compared with the 0.6% for the Government forecasts. The forecasted growth is dependent on improved marine capability for car carriers and the associated storage land being available.

Grain

7.14 The Mersey Ports are one of the largest port complexes for handling grain within the UK. The Royal Seaforth Grain Terminal is the country's largest import facility with a total silo capacity of 168,000 tonnes. The terminal handles soya beans from Brazil, wheat from Canada and maize from Argentina. Grain can be transported by road or put on barges for customers, using the Manchester Ship Canal.

7.15 For the purposes of forecasting, it is envisaged that grain throughput will remain constant during the 20 years of the master plan.

Animal Feedstuffs (AFS) & Biomass

7.16 The master plan states that the Mersey Ports has a competitive advantage with regard to these commodities, due to being in close proximity to agricultural areas and from the ability to handle large ships. The import of animal feed is mainly discharged at Seaforth S2 and S10. There is also a 250,000sq ft warehouse available and a satellite store also in operation adjacent to Canada Dock. Distribution of AFS and Biomass from Liverpool is performed almost entirely by road.

7.17 The port forecasts for AFS and Biomass to 2020 and 2030 suggest a growth rate of 3.6% CAGR, compared to the Government's forecasts of -0.1% CAGR. It is worth noting that the ports plan puts most of the anticipated outperformance on the emergence of the biomass sector rather than increase in demand from the agricultural sector.

Coal

7.18 In 2008 the Mersey Ports handled 2.38 million tonnes of coal from their dedicated facilities at Gladstone Dock and Manisty Wharf, upon the Manchester Ship Canal. The majority of coal is

bound for the Fiddlers Ferry Power Station. The plan suggests that Coal is a declining import market, due to the move away from fossil fuels in the UK energy policy.

7.19 Forecasts of coal at the Mersey Ports are flat, although the plan notes that fluctuations on coal imports are highly likely up to 2020 and 2030. No further land is required for coal handling during the period of the master plan and the existing operational terminals have the capacity to respond to substantial increases in throughput.

Other Dry Bulks

7.20 The Mersey Ports handle a diverse range of other dry bulks including cement, aggregates, scrap metal, and chemicals/powders. Port-related processes associated with dry bulks also occur at the port, notably scrap metal operations.

7.21 The ports plan forecasts an increase of 1.45% CAGR over the ensuing 20 year period, due to the importance of the Port of Liverpool in terms of handling scrap metal as well as the handling and sustainable distribution of other waste material.

Steel, Metals & General Cargo

7.22 The Mersey Ports share of steel and metals is 5.2%, compared with 8.2% for UK port tonnages and 15% for all unit load traffic. This low throughput amounts to 703,000 tonnes in 2008 and is explained by a number of factors, including the high proportion of steel sourced from the near continent, a market which is dominated by east coast ports. There is also the absence of a steel manufacturing plant in the North West.

7.23 Despite these factors, the Ports plan forecasts a growth rate of 2.41% CAGR, compared to 0.6% CAGR for the Government's forecasts. This is due to the emergence of the Indian sub-continent/Far East as a source of steel for the UK economy, which offers opportunities for the Mersey Ports for regional consumption.

Forest Products

7.24 Mersey Ports handle 3% of the UK's forestry products. This low share is attributed to the historical decline of North America as a supplier to the UK and the emergence of Scandinavia and the Baltic States, with these imports mainly reaching the UK via East coast ports.

7.25 The master plan does, however suggest that there is a re-emergence of North America as a source of forest products, as well as increased Far East production, presenting future opportunities to the Mersey Ports. This is reflected in the forecasts of 600,000 tonnes in 2020 and 750,000 tonnes in 2030, representing a growth rate of 4.93% CAGR, compared with Government forecasts of 0.6% CAGR.

Petrochemicals

7.26 The Mersey Ports have a strategically important position in petrochemicals, through the Tranmere Oil Terminal connected by pipeline with the refinery at Stanlow and the Eastham refinery via the Manchester Ship Canal. For Mersey Ports, crude oil imports amounted to 11.3 million tonnes in 2008. In the same year the Mersey Ports also handled 4.5 million tonnes of oil products and exported in excess of 600,000 tonnes of product, mainly coastwise to other ports in Great Britain and to Ireland.

7.27 The plan notes that the demand for crude oil is directly related to the demand for oil products and the refining capacity available in the UK. The Government forecasts for crude oil a decline of -0.6% CAGR, representing a -13% change by 2030. The plan also notes that medium term demand for volumes handled at Mersey ports is unlikely to change significantly, although in the longer term, the UK will have a greater reliance on the import of petroleum products and crude oil in larger vessels from more remote global locations.

7.28 The port's own forecasts place throughputs to 2020 and 2030 as being flat, although recognise that there may be fluctuations during this period. It also suggests that the existence of deepwater berthage at Tranmere Oil Terminal and facilities at QEII dock in Eastham will be able to provide the necessary infrastructure for future imports.

Other Bulk Liquids

7.29 In 2008, the Mersey Ports handled a total of 2.26 million tonnes of "other liquid bulks", representing 21% of the UK port traffic. Much of this was destined for facilities along the Manchester Ship Canal. The Port of Liverpool handles a diverse range of products including chemicals, molasses and edible oils. Steady growth is expected in this commodity area, with greater frequency of vessel calls expected over time.

7.30 The throughput of edible oils, used in food manufacturing is expected to grow as well as an increase in palm oils from mainly South East Asia. This is supported by the completion of a new refinery for palm oil adjacent to Huskisson Dock.

7.31 The master plan forecasts a growth of 1.45% CAGR for "other bulk liquids", compared to the Government's forecasts of 0.4% CAGR. This represents an increase to 2.7 million tonnes in 2020 and 3.1 million tonnes in 2030.

Cruises

7.32 The plan distinguishes between the two types of cruise activity at the Port of Liverpool – "turnaround" and "port of call". The former are accommodated at the Langton Dock Terminal and

the latter accommodated at the City of Liverpool Cruise Terminal. The type of cruise activity also dictates the level of supporting infrastructure required, including baggage handling, customs and security, parking, etc.

7.33 The trend in larger vessels for enhanced passenger capacity is a problem for Langton Dock, which is constrained by the lock system and it will become increasing difficult for it to accommodate "turnaround" vessels. The City of Liverpool Cruise Terminal currently only handles "port of call" vessels.

7.34 In 2008 there were 30 cruises operated from Langton Dock and 13 visiting calls to the Pier Head. The plan notes that the strong population hinterland close to the Port of Liverpool means there is opportunity to expand turnaround cruise activity, although it would be dependent on the delivery of the necessary supporting infrastructure. There are no forecasts provided for cruise passengers.

Forecast Summary

7.35 Table 69 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 91: 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)

Land Strategy & 'Areas of Change'

7.36 This chapter in the ports plan is concerned with detailing the land use implications for the forecasts of each commodity. The methodology used for producing forecasts for the Mersey Ports potential land requirements is based on the forecasts 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.

7.37 Therefore, there are three aspects to the future land requirements to be considered:

- the amount of land needed to serve the Port's traffic growth;
- the amount of land required to serve the needs of portcentric distribution;
- the amount of land required to serve complementary sectors (energy, waste, off-shore wind sector, processing activities)

Containers

7.38 The plan suggests that in the future containers will be moved on increasingly larger vessels. The increasing size of vessels and increasing volumes of containers that is likely to be unloaded per call will place additional pressure on portside land required for handling and storage of containers. Part of the forecasted growth in container traffic at the Port of Liverpool will be catered for by the existing container terminal and the proposed in-river extension which will provide 130 acres with a capacity to handle 1.5 Million TEU.

7.39 This means that 130 acres of further land for container handling and storage will be needed to meet forecasted growth. The Mersey Ports master plan suggests a need 40 for acres of this before 2020 and the remaining 90 acres up to 2030.

Ro-Ro

7.40 This traffic type is reliant upon unaccompanied trailers at the Port of Liverpool and as a result will require portside land for buffer storage. The plan notes that land at Liverpool and Birkenhead Docks that is assigned for Ro-Ro operations and trailer storage is fully utilised and accounts for 85 acres. The forecasts predict a doubling of throughput by 2030 for Ro-Ro, requiring 40 additional acres by 2020 and a further 45 acres by 2030.

Trade Cars

7.41 Future land requirements are dependent on the evolving business strategy due to the differences in land requirements between deep sea and short sea markets and import or export vehicles. Based on the forecasts and the assumption of an "export" scenario, 30 acres of land would be required to 2020 and beyond.

Grain

7.42 The plan notes that grain volumes during the forecast period will remain static, although suggests that there will be an increasing demand for separation of cargoes to fulfil audit trail requirements, and additional requirement for modern storage facilities incorporating food grade flooring. This amounts to 6 acres over the forecast period, enabling a development of up to 100,000 sq ft of floor space. The plan suggests that working closely with existing operators to maximise the utilisation of their land assets would assist in meeting this target.

AFS & Biomass

7.43 To cater for the forecasted Biomass growth of 1 million tonnes per annum by 2020 and further 500,000 tonnes by 2030, it would be necessary to consider the extension of the existing AFS Store adjacent to Royal Seaforth Dock. The plan suggests doubling of this facility (to 500,000 sq ft) would require a further 8 acres upon adjoining land.

Coal

7.44 Coal throughput is forecast to be flat during the plan period and there is sufficient capacity within existing terminals to cater for any increase in activity. Albeit Government policy has since changed to phasing out coal-fired generation by the mid 2020s. This would suggest land requirements for coal falling to zero.

Other Dry Bulks

7.45 Additional land will be required due to the 1.56% CAGR growth forecast, which will result in centralisation on the spread of sites handling scrap metal, allied to the development of the in-river container terminal. Additionally, 10 acres of land is required through the master plan period.

Steel, Metals and General Cargo

7.46 In order to meet anticipated growth in this commodity group, the plan suggests increasing the capacity for handling at existing terminals at Seaforth and Gladstone, which could be equipped with overhead gantry craneage, thereby increasing the storage density over the same land area.

7.47 This would result in the overspill steel terminal at N3 Canada Dock becoming available for other port related activities. The plan estimates that a further 10 acres would be required to meet forecast throughput increases and outlines current developments at Port Wirral and Port Warrington which would provide the necessary storage capacity.

Forest Products

7.48 The port has little land currently available for portside handling of forest products and the plan states a requirement of 10 acres to meet future forecasted demand. The plan suggests an additional 10 acres will be required for storage and weatherproof buildings.

Petrochemicals

7.49 Forecasts for petrochemicals are static during the plan period and existing facilities are deemed capable of meeting any fluctuations in demand.

Other Bulk Liquids

7.50 This commodity group is forecast to increase to 2.7 million tonnes (by 2020) and 3.1 million tonnes (by 2030). This will result in more space for tank storage for new business and replacement of old units and new units need more space due to safety requirements. The increase in container and greater Ro-Ro activity will generate greater demands for bunker fuel.

7.51 The plan notes that there are currently 50 acres devoted to bulk liquids, with a further 6 acres required for both periods up to 2020 and 2030. The area around Regent Road in Liverpool is earmarked for expansion and adjoining land at the QEII Dock in Eastham.

Cruises

7.52 The plan notes the under development in this sector and suggests that a passenger terminal handling 2,500 passengers would typically require a minimum of 5 acres of land.

Port Centric Logistics

7.53 The plan recognises the importance of port centric logistics, notably for Ro-Ro and Lo-lo customers. Handling of containers within the secure port environment enables logistics providers to “shunt” from container stack to warehouse premises at a reduced cost as vehicles can utilise rebated (red) diesel. Additional benefits include port security.

7.54 The Mersey Ports currently provide 4 million sq ft of warehousing, with the majority located at the Port of Liverpool. Most of the existing warehousing is currently occupied and there remains a strong demand for port related accommodation. The development of a 100,000 sq ft warehouse typically requires a land footprint of 7 acres allowing for servicing areas and off-street car parking provision.

7.55 It is anticipated that there will be an increase in migration of distribution activity to portside locations which provide multi-modal transport solutions and logistics benefits. The plan therefore forecasts a 4 million sq ft increase of port related warehousing over the ensuing 20 year period. In terms of land requirements, this would be 280 acres.

Off-shore Wind Farms

7.56 Existing wind farms are already in place off the coast of the Liverpool and more are due to be constructed. It is also government policy that renewable energy will make an increased contribution to the UK's energy targets. There are differences in the land requirements associated with large scale manufacturing facilities for off-shore wind turbines and those for a port just acting as an operations and maintenance base, with the latter type requiring less space.

7.57 The Mersey Ports plan has suggested a requirement for 75 acres to de devoted to the off-shore wind sector to 2020 and beyond although this would be dependent upon the nature of evolving project requirements. The Cammell Laird site and adjoining land (34 acres) is considered appropriate for this sector, taking into account the established range of marine and engineering experience.

Biomass Energy

7.58 Aligning with the government's renewable energy plans, Biomass is considered a viable development at the Port of Liverpool (25 acres) or along the Manchester Ship Canal (10 acres). The plan notes that in October 2010 renewable energy developer RES announced plans to develop a biomass power plant within the Port of Liverpool at Alexandra Dock, with an additional plant, the Barton Renewable Energy plant on the Manchester Ship Canal currently going through the planning process.

Tidal Power

7.59 Peel Energy commissioned a feasibility study in September 2009 looking at options for a tidal powered scheme in the Mersey estuary. The study identified a barrage on an alignment between New Ferry and Dingle as the preferred scheme. It would contain navigation locks to allow passage of commercial, recreational and service vessels. The scheme would require support from the government to enable it to be delivered and at the time of publishing the Mersey Ports plan, a decision had yet to be taken on the future of the scheme.

Table 92: Mersey Ports Summary Land Requirements 2020 & 2030 (acres)

Port Traffic	2020	2030
Containers	40	90
Ro-Ro	40	45
Trade Cars	30	0
Grain	3	3
AFS & Biomass	8	0
Coal	0	0
Other Dry Bulks	5	5
Steel, Metals & General Cargo	5	5
Forest Products	10	10
Petrochemicals	0	0
Other Bulk Liquids	6	6
Port Centric Warehousing	140	140
Complementary Sectors:		
Off-Shore Wind Farms	75	0
Biomass Energy	45	0
Processing & Valued Added	70	70
Total (Ac)	**477**	**374**

Source: Peel Ports (2011)

Processing & Value Added

7.60 These particular sites and activities are best served in conjunction with access to water and berthing. Many of the existing processing uses are linked to cargoes, such as Eastham Refinery (petrochemicals), Cargill (edible oils) and Ineos (salt). Such sites and activities are difficult to forecast in terms of land requirements as they appear as “windfall” opportunities. For the purposes of forecasting, Mersey Ports have assigned a requirement of 7 acres per annum, the equivalent of 140 acres during the timespan of the Master Plan.

7.61 The total land requirement for the lifespan of the Ports plan by commodity group is shown in table 70. As well as the land requirements for commodities, the plan also assesses the sites that are part of the Mersey Ports Group and their capacity for development.

Royal Seaforth

7.62 This area is seen as the major development area to support future container traffic growth, with the in-river terminal being given planning consent in 2007. The approval of this project was subject to an Environmental Impact Assessment and there are a number of legal agreements in place relating to the mitigation of impacts arising from the development.

Hornby/Alexandra Dock

7.63 This comprises an area of 24 acres and the development area within it is allocated for the purposes of a biomass power plant project being backed by RES.

Langton River Berth

7.64 For the anticipated increase in throughput associated with Irish Sea Ro-Ro traffic, a further terminal is planned, situated within the river adjacent to the Langton Lock entrance. A Harbour Revision Order for the works was granted on 31st December 2002 requiring "substantial commencement" of the works by the expiry of consent (31st December 2012).

7.65 The plan suggests that "substantial" works are unlikely to be in place within the next 2 years and therefore an extension of time to enable the works to be completed to a later timescale. The project would also require further consents for the storage of "unaccompanied" trailers as close to the terminal as possible ideally within the Port boundary.

In-River capability

7.66 During the next 20 years and driven by changes in the size of vessels it is likely that constraints with existing lock sizes may necessitate the delivery of further in-river infrastructure taking advantage of berthage within deep water. Possible solutions include West Seaforth, West Huskisson, and at Cammell Lairds.

Birkenhead Docks

7.67 The principle port activities at Birkenhead are focussed upon the terminals at Tranmere and Twelve Quays. For the port strategy there are two sites identified as providing circa 50 acres. There is a small parcel of land (4 acres) adjoining the Twelve Quays terminal which could be assimilated into existing Ro-Ro operations.

QEII Dock, Eastham

7.68 Next to the operational Port estate there is an adjoining expansion area of circa 17 acres. Other mentioned sites include Manisty Wharf/Bridgewater Paper Mill, Port Wirral, Wigg Wharf, Port Warrington, Port Ince, Irlam Container Terminal and Port Salford. The potential for development on the individual sites is listed in table 71.

7.69 The table shows that an additional 105 acres of unidentified land will need to be acquired in order for the plan to meet the forecasts to 2020 and 2030. Dock Infilling is mentioned as a possible solution for meeting land requirements. 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.

Table 93: Land availability position relevant to the delivery of the Mersey Ports growth strategy

Code	Site Description	Area (Acres)	Comments
L1	Seaforth River Terminal	42	HRO approval May 2007
L2	Seaforth Area B	78	Regulatory consents required
L3	Hornby/Alexandra Dock	24	RES Biomass Power Station
L4	LIFT Zone Phase 2	19	Planning approval April 2011
L5	Regent Road/Derby Road	92	Land assembly strategy
L6	N3 Canada	10	Permitted Development usage
L7	Huskisson Dock Complex	20	Permitted Development usage
B1	Twelve Quays	4	Planning approval required
B2	Beaufort Road	27	Decant site for East Float
B3	Former Mobil Site	23	Decant site for East Float
B4	Cammell Laird	34	Regulatory consents required
M1	Land at QEII Dock	17	Permitted Development usage
M2	Port Wirral	146	Planning approval required
M3	Former Bridgewater Paper Mill	46	Planning approval required
M4	Port Ince	10	Planning approval August 2009
M5	Wigg Wharf	2	Permitted Development usage
M6	Port Warrington Phase 1	11	Planning approval March 2010
M7	Port Warrington Phase 2	24	Planning approval required
M8	Irlam Container Terminal	6	Permitted Development usage
M9	Port Salford	111	Planning approval July 2009
	Total Land Identified	**746**	
	Unidentified land	**105**	
	Overall Land Requirement	**851**	

Source: Peel Ports (2011)

7.70 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.

Conclusion on the Land Requirements for Commodities Storage

7.71 The commodities forecasts presented within the Mersey Ports plan 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.

7.72 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, meaning that there are still 105 acres of unidentified land. This is equivalent to around 42.5 hectares.

7.73 Of the sites listed in Table 71, 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. This would suggest that the 12% shortfall could be even larger.