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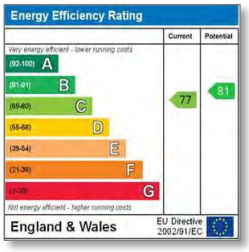

Housing Market Areas in Bedfordshire and surrounding areas

Report of Findings

December 2015

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Contents

1. Introducing the Study 5
Background to the project and wider policy context
Functional Housing Market Areas 5
Geography of Housing Market Areas (NHPAU/CURDS) 6
Planning Advisory Service: Technical advice note on OAN and Housing Targets 6
Duty to Cooperate 8
Feedback from Stakeholders about the Study Methodology 9
Stakeholder Workshop 9
Feedback about the Consultation Draft of the Final Report 10

2. Review of existing analysis 11
Previous analysis of housing markets and economic areas
Sub Regional Housing Markets in the South East (DTZ: 2004) 11
Further evidence from Local and Sub-regional Studies 12
Buckinghamshire SHMA (Fordham Research; 2008) 12
London Commuter Belt (LCB) East SHMA and West SHMA (ORS & Savills; 2008) 13
Bedfordshire and Luton SHMA (ORS; 2010) 14
Aylesbury Vale SHMA Validation Study (GL Hearn; 2013) 15
Cambridge sub-region SHMA (Cambridgeshire County Council; 2013) 16
St Albans City and District SHMA (Housing Vision; 2013) 17
Milton Keynes SHMA (ORS; 2014) 18
Welwyn Hatfield Borough Council SHMA (Turley Economics; 2014) 20
Buckinghamshire HMA and FEMA (ORS & Atkins; 2015) 21
South West Hertfordshire Councils; Defining HMAs (GL Hearn; 2015) 22
Summary of Previous Housing Market Area Analysis 22

3. Analysing Commuting Patterns 23
An overview of the methodology and findings
Understanding Travel to Work Patterns 24
Analysis Outcomes based on 2011 Census Data 27
Further modelling restricting the growth of Central London 28
Reviewing the preliminary outputs 30
Further modelling using finer grain geographies 32
Proposed Commuting Zones 34

4. Housing Market Areas 37
Establishing the evidence base for identifying HMAs
Commuting flows 37
Migration flows 38
House Prices and Rents 42

5. Conclusions 46
Proposed HMAs for Bedfordshire and surrounding areas
Housing Market Areas 46
Functional Housing Market Areas 46
Administrative Boundaries and Housing Market Areas 50
Proposed "Best Fit" Housing Market Areas 51
Stakeholder Feedback about the Conclusions and the Proposed HMAs 52
Final Conclusions 53

Table of Figures 54

Appendix A: List of Stakeholders 55

Appendix B: Study Method Statement 56

Appendix C: Stakeholder Workshop Presentation Slides 62

1. Introducing the Study

Background to the project and wider policy context

1.1 Opinion Research Services (ORS) was commissioned by a partnership of seven councils (Central Bedfordshire Council, Bedford Borough Council, Luton Borough Council, Milton Keynes Council, North Hertfordshire District Council, Stevenage Borough Council and Aylesbury Vale District Council) to identify Housing Market Areas (HMAs) for the partnership and surrounding areas.

1.2 The National Planning Policy Framework (NPPF)[1] sets out government's planning policies for England and how these are expected to be applied. The framework acts as guidance for local planning authorities and decision-takers, both in drawing up plans and making decisions about planning applications.

1.3 The National Planning Policy Framework (NPPF) refers to Local Plans meeting the *"full objectively assessed needs for market and affordable housing in the housing market area"* (paragraph 47, emphasis added).

1.4 Given the NPPF context, the aim of this study was to derive a consensus from local planning authorities and other relevant stakeholders about the most appropriate HMAs for the former county of Bedfordshire together with Aylesbury Vale, Milton Keynes, North Hertfordshire, Stevenage and the surrounding areas. These functional geographies would then provide the partner councils with a basis to undertake further work and develop the evidence base required for the objective assessment of housing need.

Functional Housing Market Areas

1.5 The definition of a functional housing market area is well-established as being *"...the geographical area in which a substantial majority of the employed population both live and work and where those moving house without changing employment choose to stay"* (Maclennan et al, 1998)[2].

1.6 Planning Practice Guidance (PPG)[3] on the Assessment of Housing and Economic Development Needs (March 2014) reflects this existing concept, confirming that the underlying principles for defining housing markets are concerned with the functional areas in which people both live and work:

> ***What is a housing market area?***
>
> *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 the 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.*
>
> **Planning Practice Guidance (March 2014), ID 2a-010**

[1] https://www.gov.uk/government/publications/national-planning-policy-framework--2
[2] Local Housing Systems Analysis: Best Practice Guide. Edinburgh: Scottish Homes
[3] http://planningguidance.planningportal.gov.uk/blog/guidance/housing-and-economic-development-needs-assessments/

1.7 Therefore, PPG requires an understanding of the housing market area and says this can be defined using three different sources of information:

- House prices and rates of change in house prices
- Household migration and search patterns
- Contextual data (e.g. travel to work area boundaries, retail and school catchment areas)

1.8 These sources are well-established, being consistent with those previously identified in the CLG advice note *"Identifying sub–regional housing market areas"* published in 2007[4].

Geography of Housing Market Areas (NHPAU/CURDS)

1.9 CLG also published a report on the *"Geography of Housing Market Areas"* in 2010[5] which was commissioned by the former National Housing and Planning Advice Unit (NHPAU) and undertaken by the Centre for Urban and Regional Development Studies (CURDS) at Newcastle University. This study explored a range of potential methods for calculating housing market areas for England and applied these methods to the whole country to show the range of housing markets which would be generated. The report also proposed three overlapping tiers of geography for housing markets:

- **Tier 1**: framework housing market areas defined by long distance commuting flows and the long-term spatial framework with which housing markets operate;
- **Tier 2**: local housing market areas defined by migration patterns that determine the limits of short term spatial house price arbitrage;
- **Tier 3**: sub-markets defined in terms of neighbourhoods or house type price premiums.

1.10 The report recognised that migration patterns and commuting flows were the most relevant information sources for identifying the upper tier housing market areas, with house prices only becoming relevant at a more local level and when establishing housing sub-markets. The report also outlined that no one single approach (nor one single data source) will provide a definitive solution to identifying local housing markets; but by using a range of available data, judgements on appropriate geography can be made.

Planning Advisory Service: Technical advice note on OAN and Housing Targets

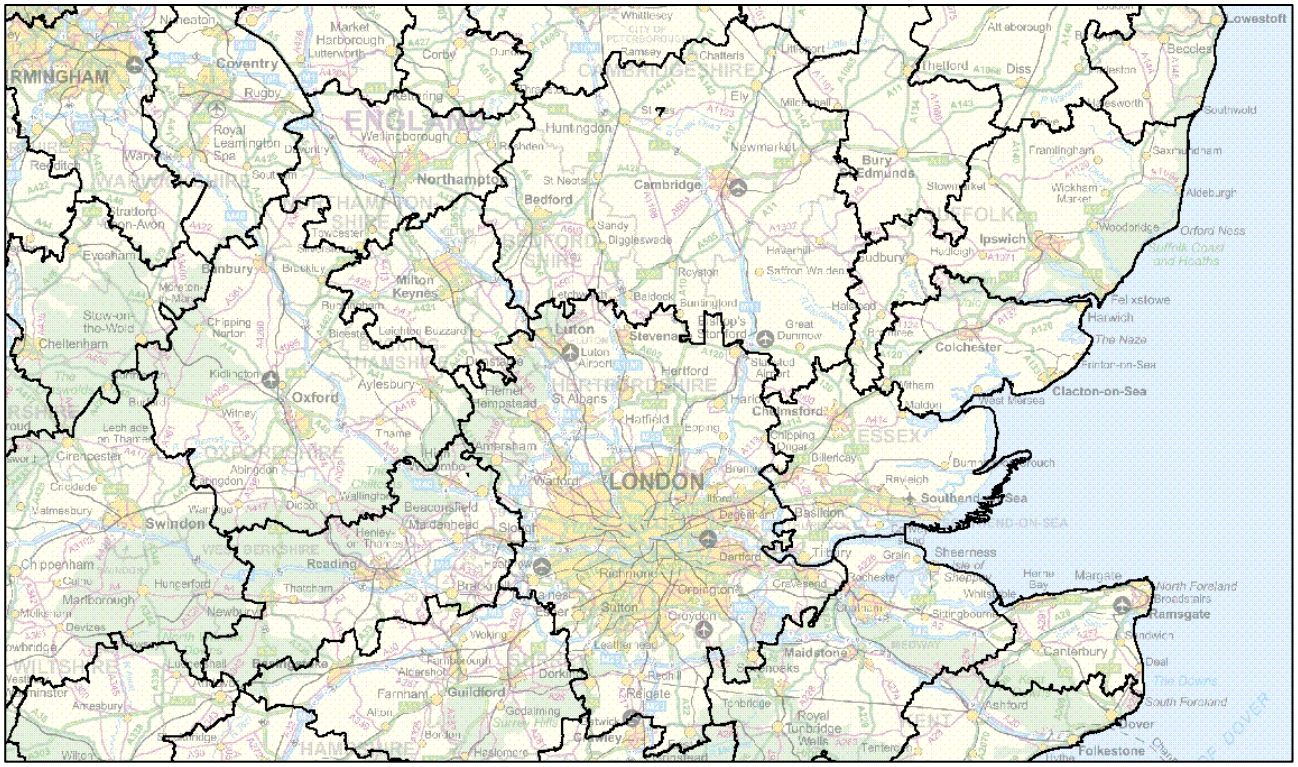
1.11 Advice published in the Planning Advisory Service (PAS) technical advice note about Objectively Assessed Need (OAN) and Housing Targets (originally published in June 2014, with a second edition[6] in July 2015) also suggests that the main indicators will be migration and commuting (second edition, paragraph 5.4).

> *"The PPG provides a long list of possible indicators, comprising house prices, migration and search patterns and contextual data including travel-to-work areas, retail and school catchments. In practice, the main indicators used are migration and commuting."*

1.12 The PAS OAN technical advice note also suggests that analysis reported in the CLG report *"Geography of Housing Market Areas"* (CLG, November 2010) should provide a starting point for drawing HMAs (Figure 1). This suggests that the southern part of the study areas forms part of the London housing market area with Milton Keynes forming an independent housing market area, Bedford and much of Central Bedfordshire being part of the Cambridgeshire housing market area and Aylesbury in the Oxford housing market area.

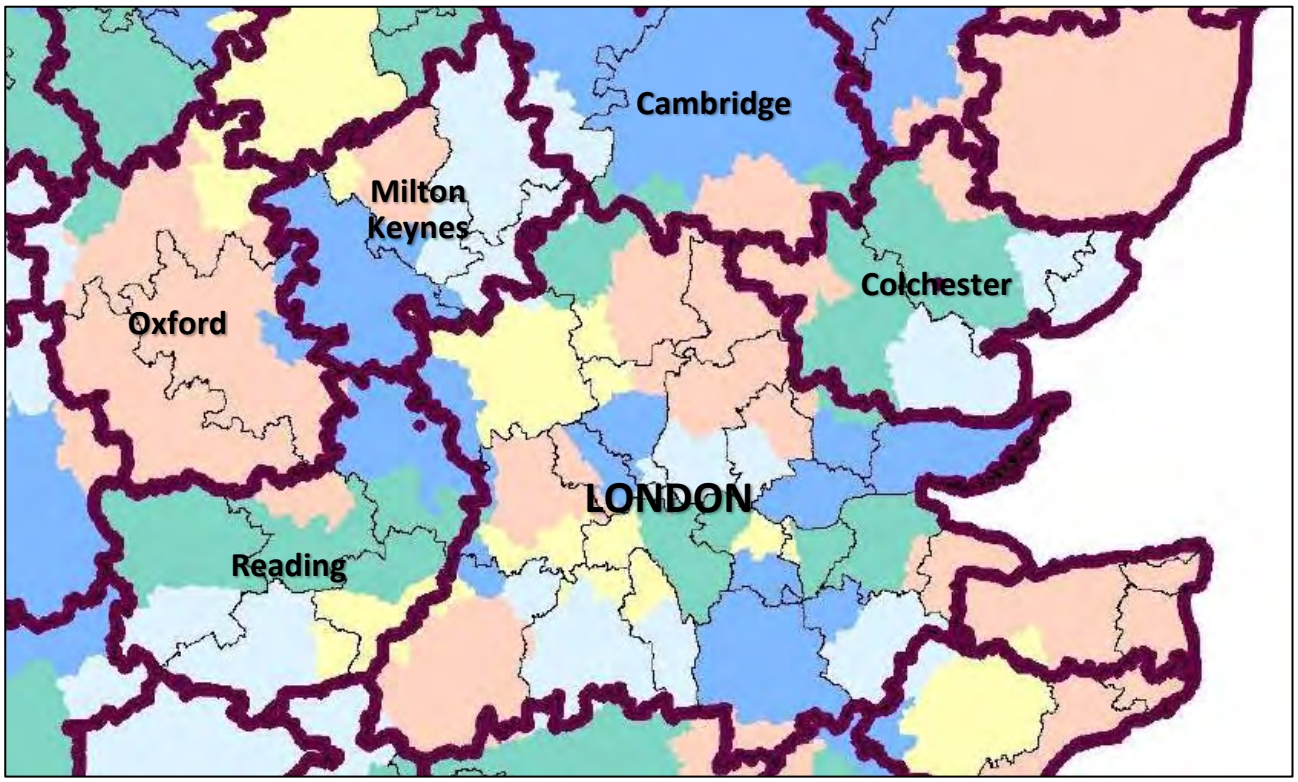
[4] Identifying sub−regional housing market areas (CLG, March 2007); paragraph 1.6
[5] Geography of Housing Market Areas (CLG, November 2010); paragraph 1.6
[6] http://www.pas.gov.uk/documents/332612/6549918/OANupdatedadvicenote/f1bfb748-11fc-4d93-834c-a32c0d2c984d

Figure 1: NHPAU Study - PAS Advice Note 'Starting Point"



1.13 Nevertheless, the PAS OAN technical advice note also notes that *"for some areas, including many close to London, the single-tier silver standard geography looks unconvincing; in that plan-makers should look for guidance to other levels in the NHPAU analysis"* (second edition, paragraph 5.9). Figure 2 illustrates the output for the proposed two-tier geography based on 50% migration containment within 77.5% commuting containment.

Figure 2: NHPAU Study - Lower tier based on migration (50%) within commuting-based upper tier (77.5%)



1.14 This analysis also suggests that Stevenage and North Hertfordshire sit within the London HMA (although the boundary for this area is fundamentally different to the London HMA shown on the "starting point" map), with a second-tier HMA which also includes much of East Hertfordshire and Welwyn Hatfield. Most of the former Bedfordshire county and Aylesbury Vale form part of a much larger Milton Keynes HMA (again fundamentally different to the Milton Keynes HMA on the "starting point" map) which encompasses a total of four second-tier HMAs. Whilst Bedford is no longer included within the Cambridge HMA, parts of Central Bedfordshire remain there.

1.15 On balance, these sub-areas also look *"unconvincing"*; and due to the complexities of the geographies in this area, a more fundamental analysis of the data is needed.

Duty to Cooperate

1.16 The Duty to Co-operate was introduced in the 2011 Localism Act and is a legal obligation.

1.17 The NPPF sets out an expectation that public bodies will co-operate with others on issues with any cross-boundary impact, in particular in relation to strategic priorities such as *"the homes and jobs needed in the area"*.

> *Public bodies have a duty to cooperate on planning issues that cross administrative boundaries, particularly those which relate to the **strategic priorities** set out in paragraph 156. The Government expects joint working on areas of common interest to be diligently undertaken for the mutual benefit of neighbouring authorities.*
>
> *Local planning authorities should work collaboratively with other bodies to ensure that strategic priorities across local boundaries are properly coordinated and clearly reflected in individual Local Plans. Joint working should enable local planning authorities to work together to meet development requirements which cannot wholly be met within their own areas – for instance, because of a lack of physical capacity or because to do so would cause significant harm to the principles and policies of this Framework. As part of this process, they should consider producing joint planning policies on strategic matters and informal strategies such as joint infrastructure and investment plans.*
>
> **National Planning Policy Framework (NPPF), paragraphs 178-179**

1.18 This co-operation will need to be demonstrated as sound when plans are submitted for examination. One key issue is how any unmet development and infrastructure requirements can be provided by co-operating with adjoining authorities (subject to tests of reasonableness and sustainability). The NPPF sets out that co-operation should be "*a continuous process of engagement" from "thinking through to implementation*".

> *Local planning authorities will be expected to demonstrate evidence of having effectively cooperated to plan for issues with cross-boundary impacts when their Local Plans are submitted for examination. This could be by way of plans or policies prepared as part of a joint committee, a memorandum of understanding or a jointly prepared strategy which is presented as evidence of an agreed position. Cooperation should be a continuous process of engagement from initial thinking through to implementation, resulting in a final position where plans are in place to provide the land and infrastructure necessary to support current and projected future levels of development.*
>
> **National Planning Policy Framework (NPPF), paragraph 181**

1.19 This HMA study was jointly commissioned by a partnership of seven local authorities to provide a consistent evidence base and definition for the most up-to-date and appropriate HMAs across the wider area. The emerging HMA outputs have also been discussed with officers and members of neighbouring local authorities under the Duty to Co-operate.

1.20 The study, as part of its methodology, undertook extensive stakeholder engagement to consider both the methodology used and the outputs derived.

- A Method Statement was circulated to stakeholders highlighting the approach proposed and inviting comments: issues raised were discussed with the project steering group;
- A Stakeholder Workshop was convened with the opportunity to provide feedback on any specific concerns or comments; and
- A Consultation Draft of the study report was circulated to all stakeholders and feedback was invited prior to the report being finalised.

1.21 A full list of stakeholders that were invited to engage with the project is included in Appendix A.

1.22 Feedback received from all stakeholders was proactively reviewed and discussed with officers from the commissioning partnership, and the study methodology was revised whenever necessary in order to respond to suggestions and address any concerns raised.

Feedback from Stakeholders about the Study Methodology

1.23 The Method Statement that was circulated to stakeholders is included in Appendix B. Only limited comments were received regarding the proposed methodology for the study, and these were generally supportive. Specific comments encouraged the need for house prices and migration to be properly considered when determining housing market areas.

1.24 Many stakeholders also indicated that they would want to be consulted on the draft report, for whilst they did not necessarily have concerns about the proposed methodology, they reserved their final position until after they had reviewed the outcome of the analysis and the possible implications.

Stakeholder Workshop

1.25 A Stakeholder Workshop was held on Tuesday 16 June 2015, which was attended by officers from each of the following local planning authorities:

- Aylesbury Vale District Council;
- Bedford Borough Council;
- Central Bedfordshire Council;
- East Hertfordshire District Council;
- Luton Borough Council;
- Milton Keynes Council;
- North Hertfordshire District Council;
- Stevenage Borough Council; and
- Welwyn Hatfield Borough Council.

1.26 Apologies were received from Dacorum Borough Council and the Cambridgeshire & Peterborough JSPU.

1.27 At the workshop, emerging study analysis was presented and explained and Stakeholders had the opportunity to question and clarify both the approach and initial conclusions of the study. Stakeholders also had the opportunity to discuss emerging evidence and provide initial feedback. A copy of the presentation slides is included in Appendix C.

1.28 The first part of the presentation summarised the review of existing HMA analysis in Bedfordshire and the surrounding areas, before focussing on the analysis of commuting flow data that had been completed at that time. This included outputs from the initial modelling analysis and the subsequent analysis which restricted the growth of Central London. There was general support for the methodology, but a number of high-level questions were raised and some suggestions given about how the work should be further developed. All of the issues raised have been properly considered and the additional work undertaken is presented in chapter 3 of this report, together with the outcome of the further analysis that was undertaken.

1.29 Further questions were asked about the way in which the commuting zone data would be used to develop Housing Market Areas, and the need to consider other data sources was also emphasised. It was confirmed that data on house prices and migration would be considered as part of the process.

Feedback about the Consultation Draft of the Final Report

1.30 A Consultation Draft of the final report was circulated to stakeholders on Wednesday 11 November 2015 and all feedback received by noon on Tuesday 8 December was considered. Stakeholder feedback on the consultation draft of the final report is summarised in the conclusions of the report.

2. Review of existing analysis

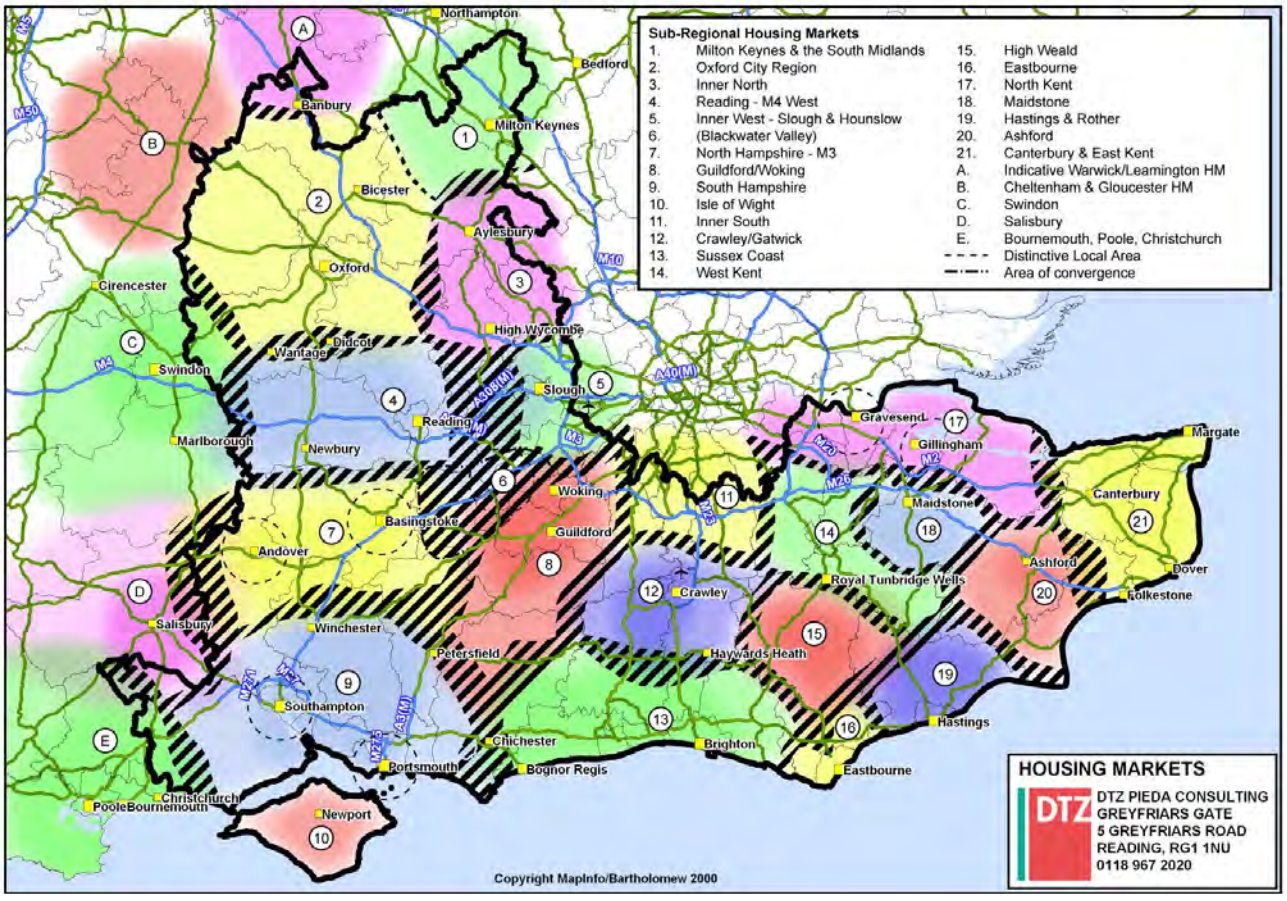
Previous analysis of housing markets and economic areas

2.1 The evidence and understanding of Housing Market Areas has developed considerably in the last 10 years. The following section sets out the conclusions of a wide range of studies undertaken that consider geographies in and around the study area. The studies are presented in chronological order, based on their original publication date.

Sub Regional Housing Markets in the South East (DTZ: 2004)

2.2 DTZ undertook a regional assessment of sub-regional housing markets in 2004 for the South East Regional Housing Board which was part of the then Regional Assembly. The evidence used was travel to work (TTW) and migration data, together with house price data. DTZ also considered the catchment areas for employment and retail centres.

Figure 3: Proposed Sub-Regional Housing Markets (DTZ 2004; for the South East Regional Housing Board)



2.3 Milton Keynes was identified as a sub-regional housing market (Milton Keynes and the South Midlands). Another was Inner North, which was principally centred on the Local Authority areas of Wycombe and Aylesbury Vale. However, there were considerable areas of 'convergence' or areas which overlap between markets.

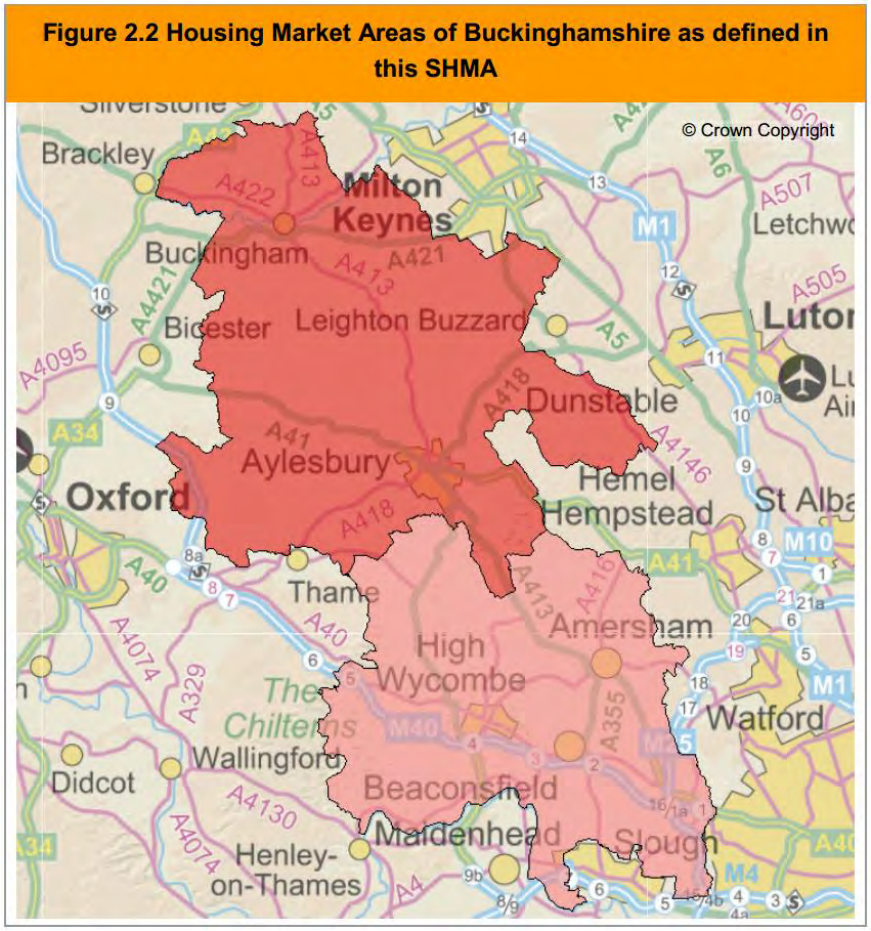
2.4 Whilst this analysis did not cover most of the remainder of the current study area, there was no comparable evidence base for the East of England; however the following section provides a more comprehensive review of the local evidence that has been produced.

Further evidence from Local and Sub-regional Studies

Buckinghamshire SHMA (Fordham Research; 2008)

2.5 The 2008 Buckinghamshire SHMA differed from the DTZ regional study and identified two separate housing markets for the county, with a 'northern' HMA (centred on Aylesbury) and a 'southern' HMA (consisting of Wycombe, Chiltern and South Bucks districts).

Figure 4: Extract from Buckinghamshire SHMA (2008)



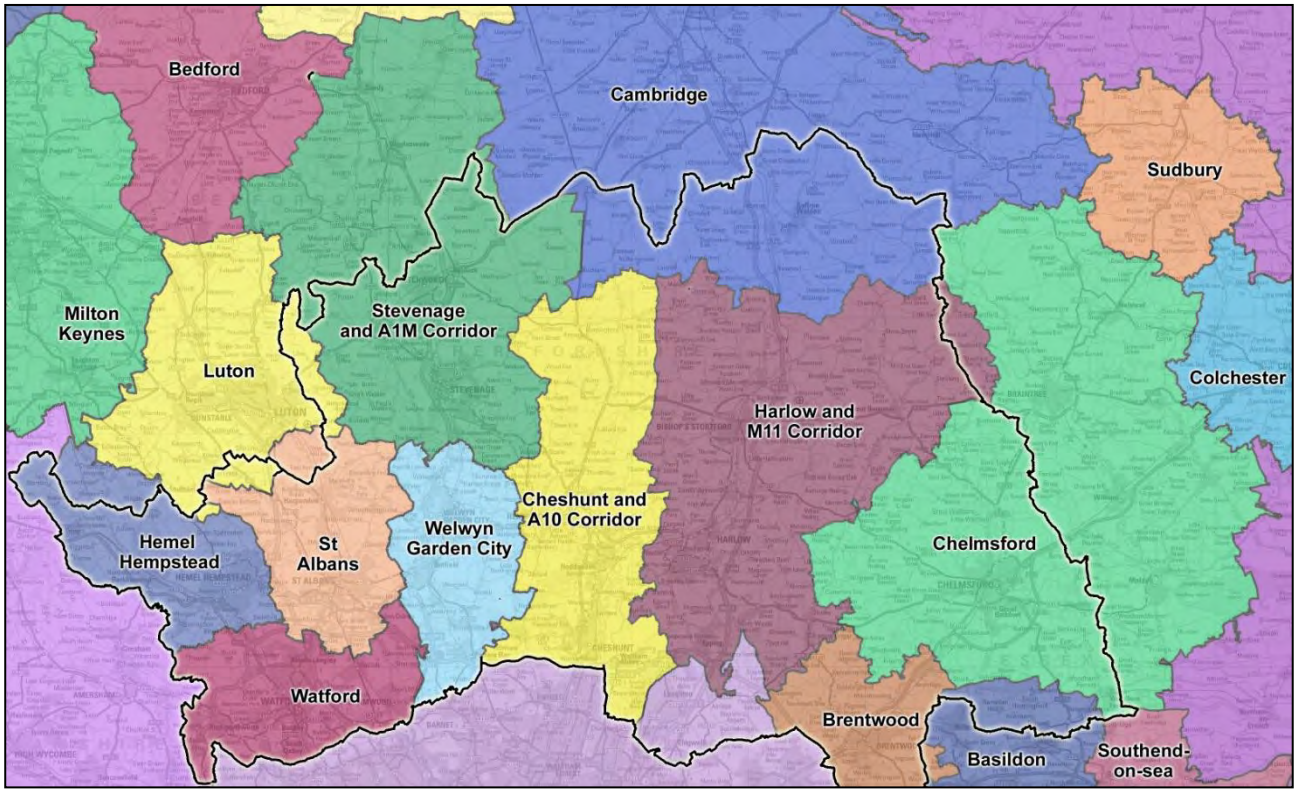
2.6 The SHMA showed how:

> *'61.0% of working people living in Aylesbury Vale also work in the Council area. The main outflows of people for work are to Greater London (6.3%) and Milton Keynes (5.3%). An estimated 7.1% work in one of the other three Buckinghamshire local authorities.'*
>
> *'76.3% of people who working in Aylesbury Vale also live in the district. A further 4.1% live elsewhere in the county. The main other location where people live is Milton Keynes (at 2.7%) although this is notably lower than the proportion who live in the district but work in the Milton Keynes area .'*
>
> *Source: Buckinghamshire SHMA 2008 (Fordham Research)*

London Commuter Belt (LCB) East SHMA and West SHMA (ORS & Savills; 2008)

2.7 The 2008 LCB East and West SHMAs identified functional Housing sub-Markets across the study area of this HMA with the exception of Aylesbury, as shown below. Much of the analysis is based on 2001 Census data.

Figure 5: Extract from LCB (West) SHMA (2008): Functional Housing Sub-Markets



2.8 The SHMA showed how:

> *'68% of employees in the sub-region are also local residents and 67% of the sub-region's residents are also employed in the area and therefore can be argued to have the makings of a housing market area, although it is also possible to identify smaller geographic units.'*
>
> *'Hemel Hempstead and Watford both have more than 65% self-containment when analysing travel to work patterns and so are the only settlements within LCB (West) to meet the level considered to be housing market areas. As relatively few settlements have high levels of self-containment they have been combined to form larger housing sub-markets. Some areas outside of LCB (West) could also impose on the proposed sub-markets*
>
> *'To the north of the study area the housing sub-markets largely follow the local authority administrative boundaries and therefore it would be possible for Dacorum, St Albans and Welwyn Hatfield to undertake individual Housing Market Assessments, although as St Albans has clear links to both other authorities, there is advantage to the three authorities working together.'*
>
> *Source: London Commuter Belt West SHMA 2008 (ORS)*

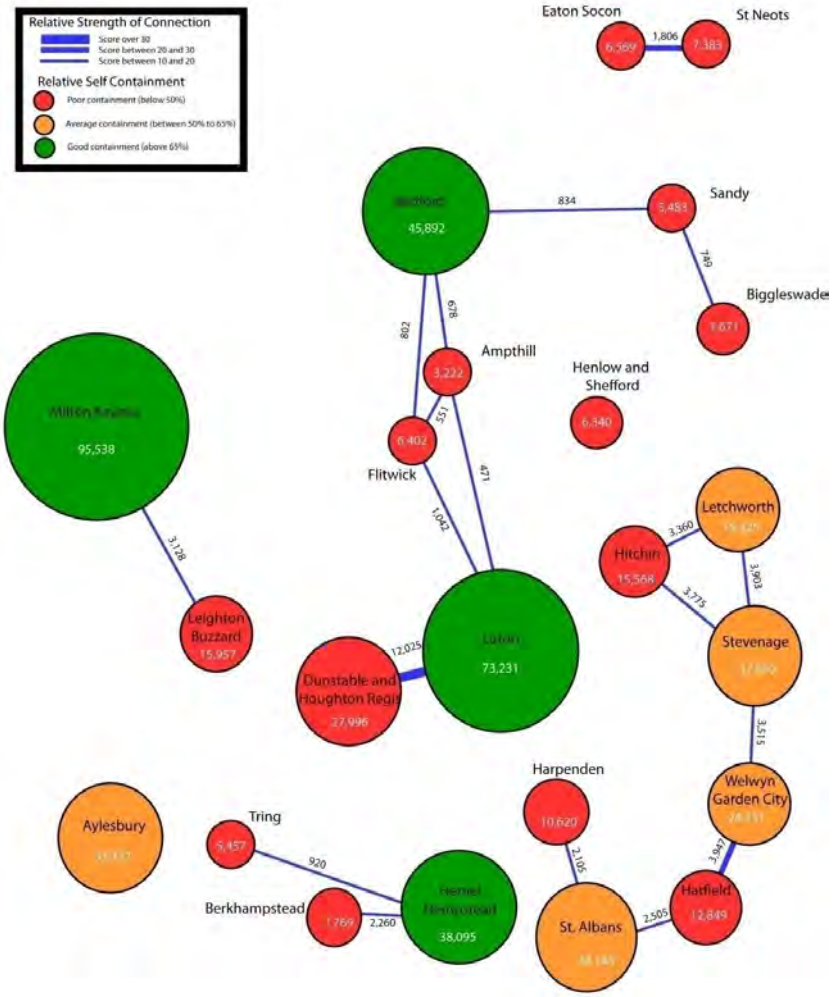
Bedfordshire and Luton SHMA (ORS; 2010)

2.9 The 2010 Luton and Central Bedfordshire SHMA identifies functional HMAs defined by self-containment. The defined HMAs align with the existing authority boundaries, although with some exceptions, such as:

> *'There is a link between Biggleswade and Sandy, and also a link from Sandy to Bedford.'*
>
> *'A number of smaller settlements in Central Bedfordshire, such as Biggleswade, Shefford and Henlow show weak or no connection to the larger surrounding settlements. Therefore, these settlements could potentially link with a number of housing markets.'*

2.10 These are shown in the Figure below.

Figure 6: Extract from Bedfordshire and Luton SHMA (2010)



2.11 The SHMA showed how:

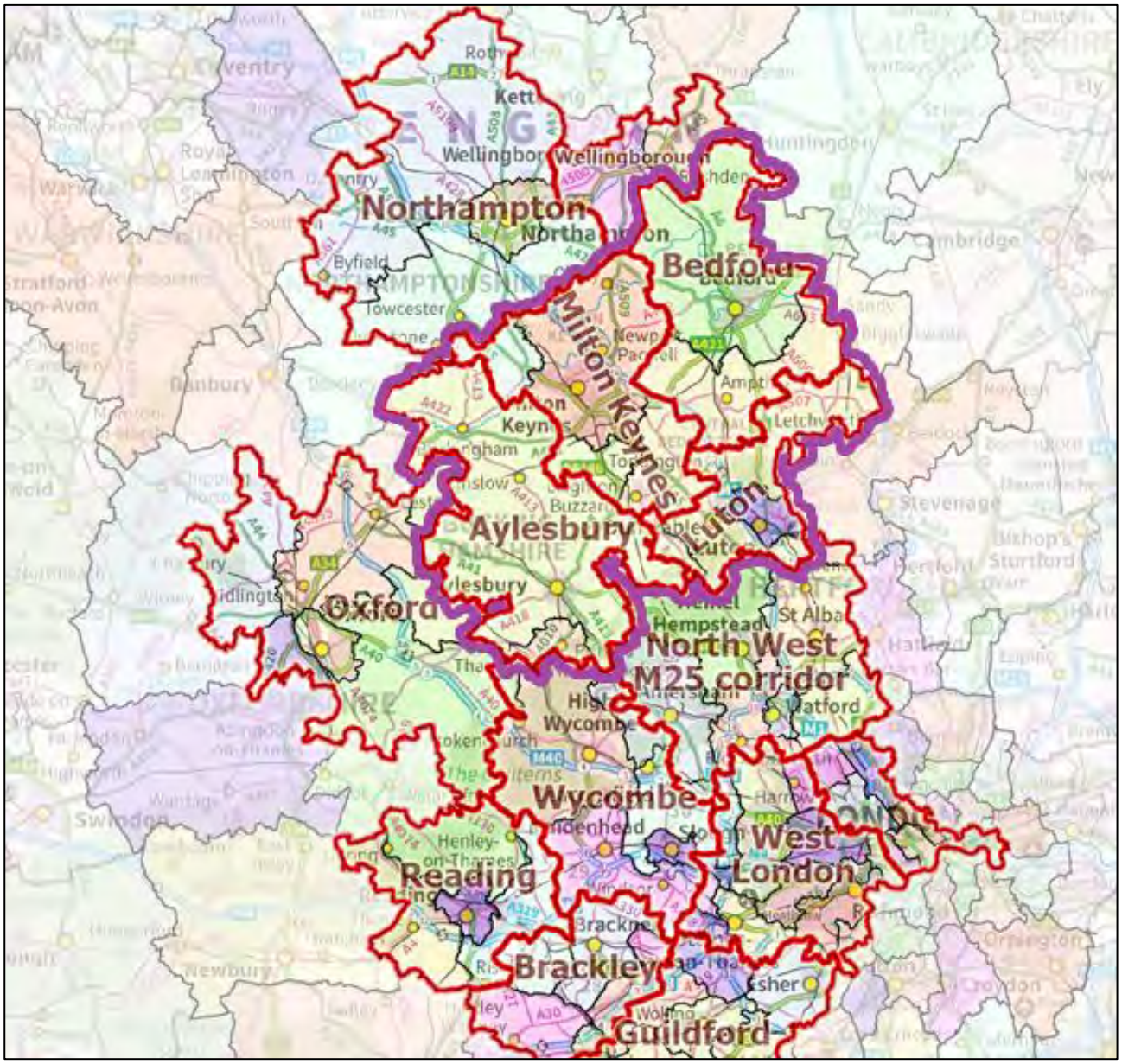
> *'It is evident that over 75% of the people who work in the HMA also live in the area. Furthermore, given that the area has a working population of 96,000 (which is clearly in excess of the 25,000 threshold), the proportion of the area's resident workforce that work in the area is also higher than the 66.7% acceptable minimum. Therefore, the Housing Market Area identified for Luton satisfies the ONS definition for a Travel To Work Area without any need to include Watford or any other urban centres.'*
>
> *Source: Luton and Central Bedfordshire SHMA Refresh 2014 (ORS)*

Aylesbury Vale SHMA Validation Study (GL Hearn; 2013)

2.12 This Validation study considered aspects of HMA evolution for Aylesbury Vale and this included the HMA relationship between Wycombe and Aylesbury Vale. The Validation Study used the 2010 CURDS/NHPAU Study as a basis for the HMA. It noted, with regard to Aylesbury:

> *'2.22 A relationship between High Wycombe and Chiltern Districts to the south with Wendover and Aylesbury (albeit that this relationship appeared less strong than that between the north of the District and Milton Keynes)'.*
>
> *'3.11 To the south of Aylesbury Vale, Wycombe and South Bucks local authorities fall within the Reading Strategic HMA (except the Icknield ward of Wycombe which is in the Luton and Milton Keynes HMA)'.*
>
> *Source: Aylesbury Vale SHMA Validation Study 2013 (GL Hearn)*

Figure 7: Extract from Aylesbury Vale SHMA Validation Study (2013): Map of the Strategic Housing Market Area



Cambridge sub-region SHMA (Cambridgeshire County Council; 2013)

2.13 The 2013 Cambridge sub-region SHMA identifies a function HMA across Cambridgeshire and part of Suffolk. It recognises connections to Bedford, Royston and other bordering urban areas, but retains the local authority boundaries.

Figure 8: Extract from Cambridge sub-Region SHMA (2013)

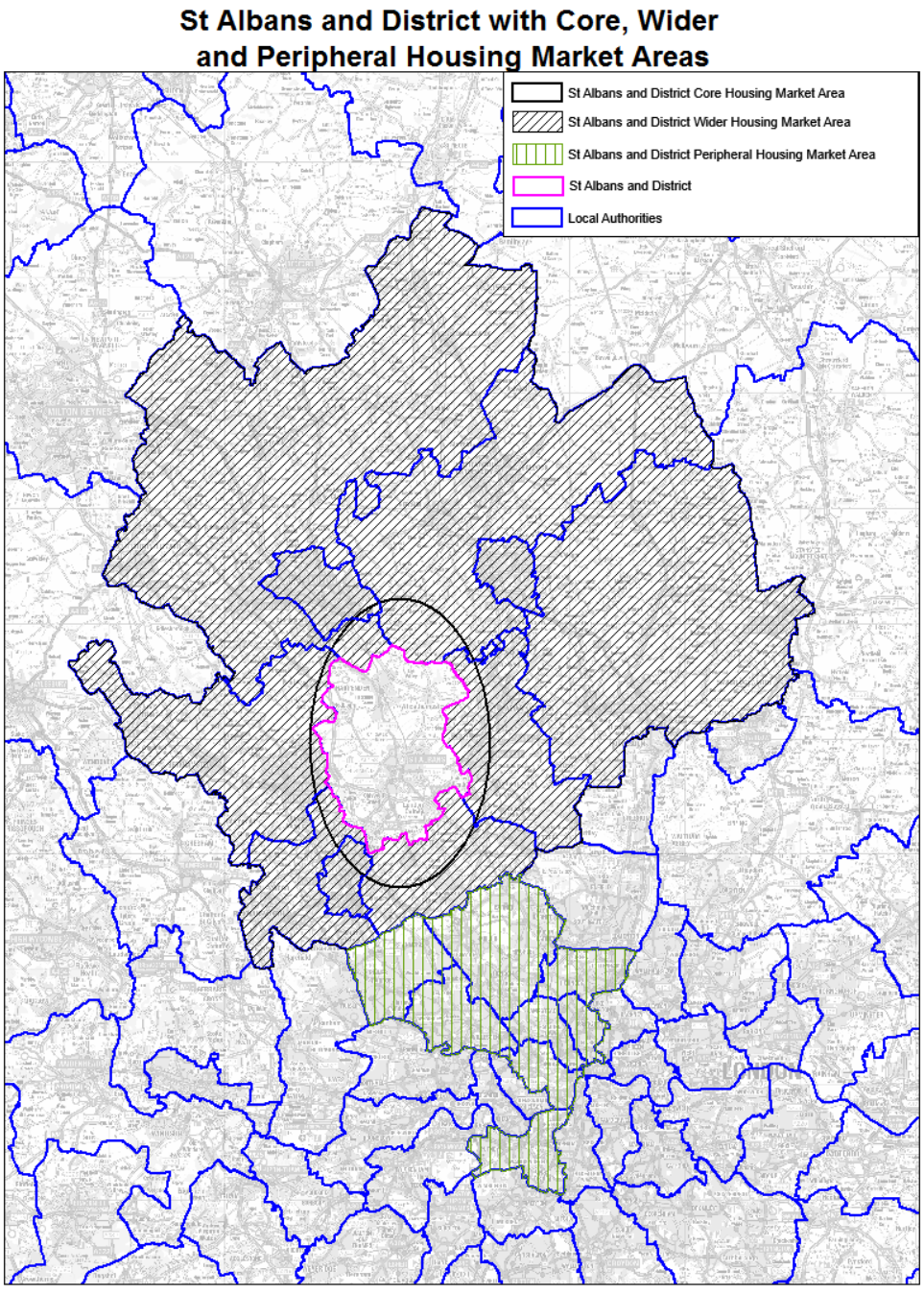
2.14 The SHMA showed how:

> *For surveys of new developments in each of the local authorities involved, between 61% and 88% of respondents live and work in the defined HMA.*
>
> *On migration; 59% of households on new developments moved in from within 20km of the development, with 20km of the new development being entirely or almost entirely within the defined HMA in the majority of cases.*
>
> *Source: Cambridge sub-Region SHMA 2013 (Cambridgeshire County Council Research)*

St Albans City and District SHMA (Housing Vision; 2013)

2.15 The 2013 St Albans SHMA identified three HMA areas. Firstly, *'based on property price patterns and the views of property agents'*, it identified a high value *'Core Housing Market Area'* surrounding St Albans with a limited overlap with each of the surrounding authorities. Secondly it identified a wider HMA area defined by *'home move and travel to work self-containment at 70%'* consisting of: Central Bedfordshire, Dacorum, East Hertfordshire, Hertsmere, Luton, North Hertfordshire, Stevenage, Three Rivers, Watford, and Welwyn Hatfield. Thirdly a peripheral HMA was identified *'based on home move and travel to work self-containment at 70% and the views of property agents'* which showed links to an extended but 'Peripheral Housing Market Area' consisting of a number of London boroughs.

Figure 9: Extract from St Albans SHMA (2013)



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Milton Keynes SHMA (ORS; 2014)

2.16 The HMA for Milton Keynes was analysed in 2014 which developed previous analysis that was originally undertaken by ORS in 2006 and subsequently reviewed in 2008. This clearly established that Milton Keynes formed a separate housing market area.

2.17 The analysis methodology was based on Output Areas that are considered (i) "urban" areas as defined by DEFRA classification or (ii) have large workplace populations; these are grouped together to form nodes. These urban centre nodes are then considered in terms of their relative self-containment at varying levels, as illustrated in Figure 10:

- Green = above 65% of employees living in the area also work in the area;
- Amber = 50 to 65% of employees living in the area also work in the area; and
- Red = below 50% of employees living in the area also work in the area.

2.18 The links that exist between the urban centres are also illustrated by the joining lines, with thicker lines indicating stronger connection.

2.19 Figure 11 illustrates the outcome of further refinements of the above analysis which defined the final Milton Keynes HMA; essentially, the whole borough of Milton Keynes falls within the Milton Keynes housing market together with areas in Aylesbury Vale and Central Bedfordshire.

Figure 10: Extract from Milton Keynes SHMA (2008): Identifying the Links between Urban Centres in the Study Area

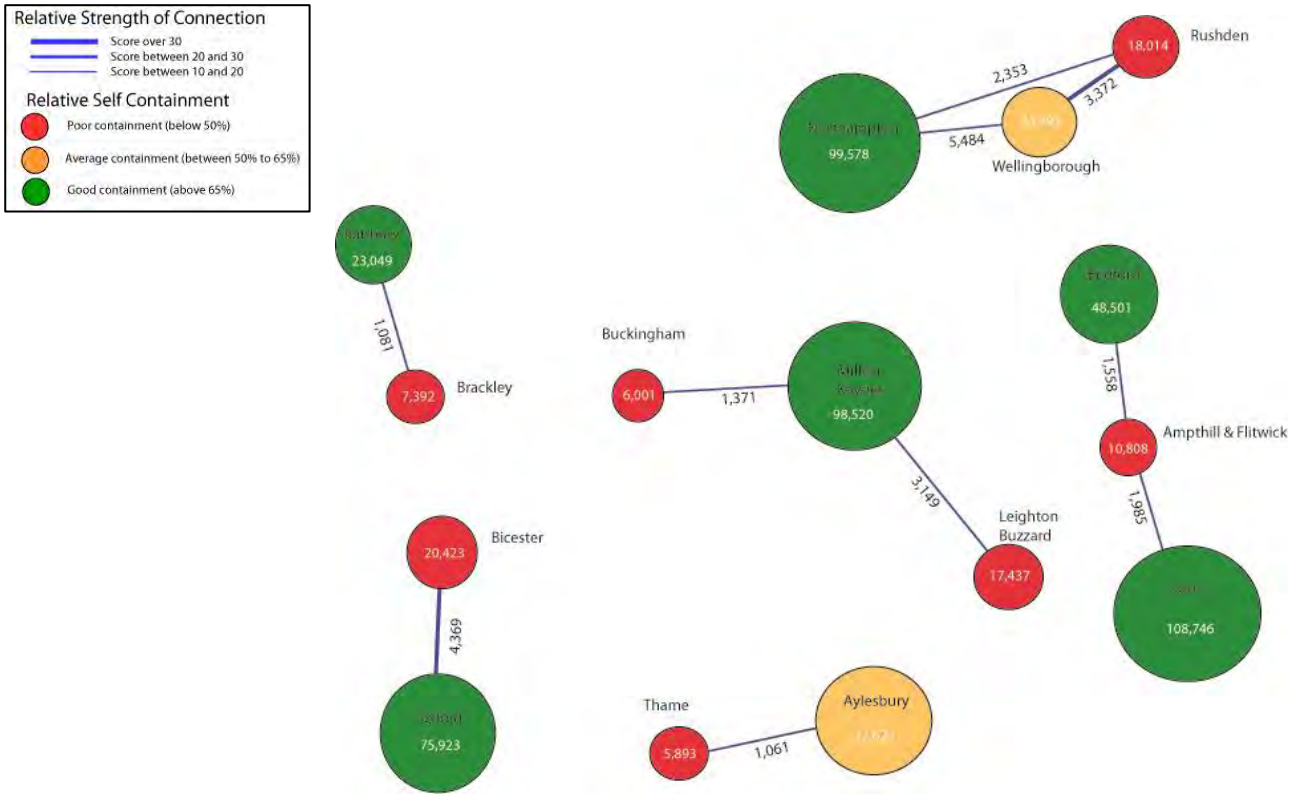
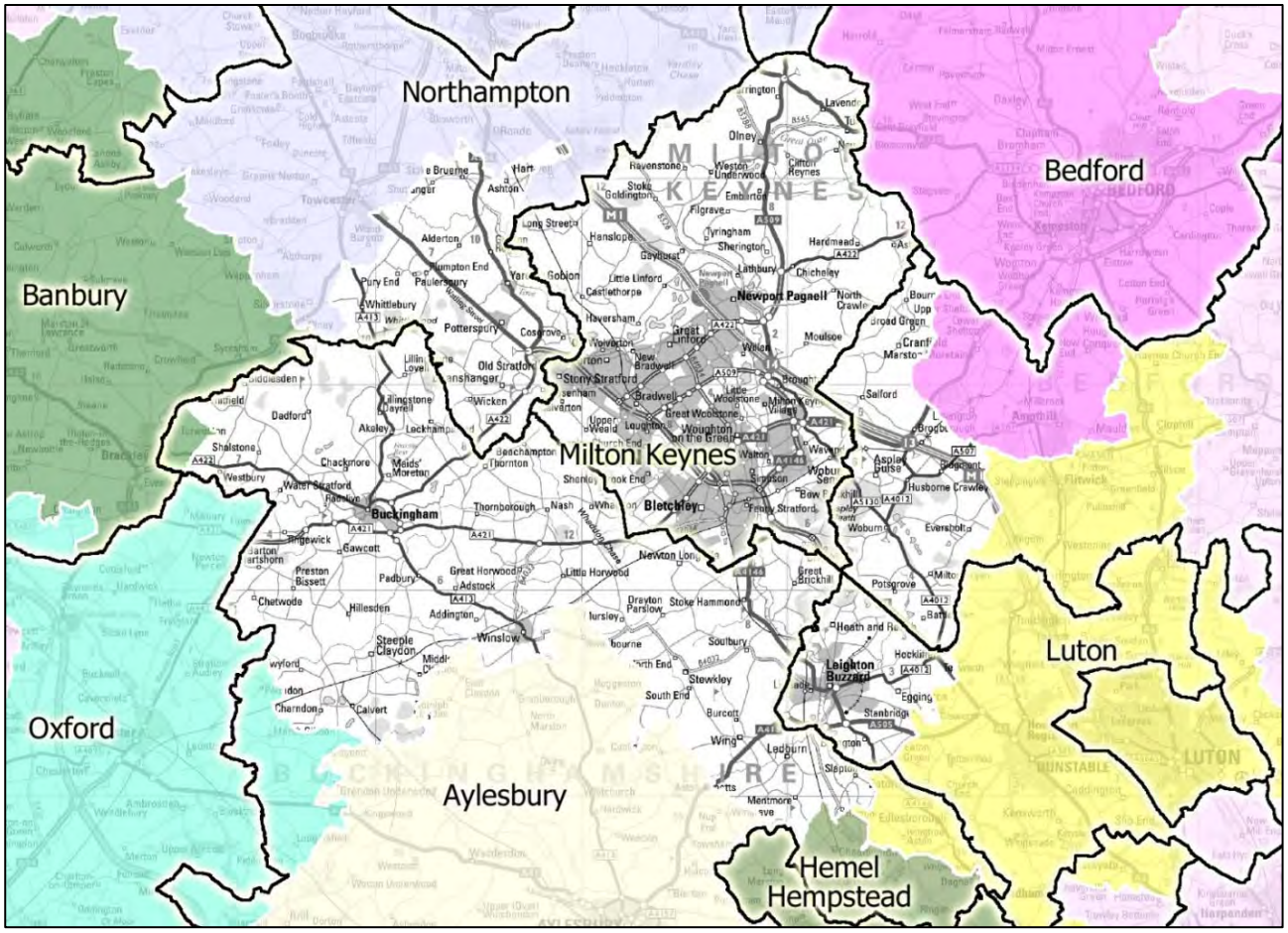


Figure 11: Extract from Milton Keynes SHMA (2008): Identifying the Functional Housing Sub-Markets in the Sub-Region



Welwyn Hatfield Borough Council SHMA (Turley Economics; 2014)

2.20 The 2014 Welwyn Hatfield SHMA identifies the Borough as a separate HMA operating within a wider HMA that includes Barnet, Broxbourne, East Hertfordshire, Enfield, Hertsmere, North Hertfordshire, St Albans and Stevenage. The study concludes that: "The strength of connections between Welwyn Hatfield and these authorities suggests that they should be considered as being part of an operational and functional wider housing market area". A tighter definition is then applied which excludes Enfield and Stevenage, leading to the Welwyn Hatfield HMA and wider HMA shown below. The tighter definition is shown by the red hatched area and is based on a ward level analysis of commuting flow and other data. Much of the analysis is based on 2001 Census data.

Figure 12: Extract from Welwyn Hatfield SHMA (2014)

2.21 The SHMA showed how:

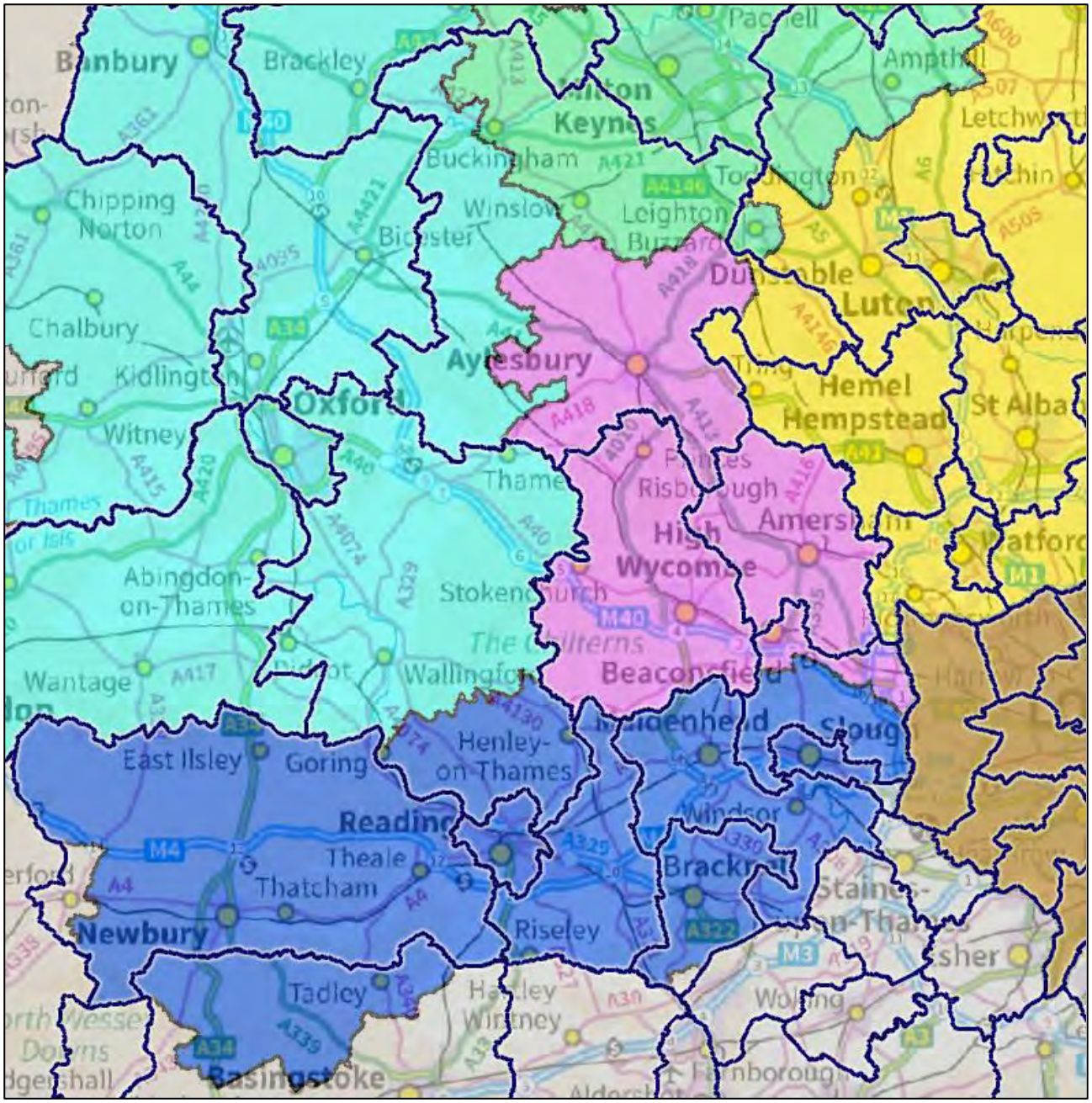
> *There were 37% of workers living in the authority and 47% of residents working in the authority; 'Containment levels are relatively low across the study area, suggesting a high degree of cross-authority commuting. The strong commuting connection between Welwyn Hatfield and Stevenage is supported by research undertaken by the Office for National Statistics to define a set of Travel to Work Areas for the whole of the UK to identify local labour markets.'*
>
> *'68% of residents moving from Welwyn Hatfield remain within the wider housing market area, while 61% of those who move to the borough originated from within the area 61.0%.'*
>
> *Source: Welwyn Hatfield SHMA 2014 (Turley Economics)*

Buckinghamshire HMA and FEMA (ORS & Atkins; 2015)

2.22 The 2015 Buckinghamshire HMA study identifies functional HMAs defined by self-containment. In conclusion, two 'best fit' HMAs are defined; Central Buckinghamshire comprising Aylesbury Vale, Chiltern and Wycombe districts, and Reading and Slough HMA comprising Bracknell, Reading, Slough, West Berkshire, Windsor & Maidenhead, Wokingham, and South Buckinghamshire. However, the study recommends that:

> *'Regardless of the final groupings, the more important issue will be the need for Aylesbury Vale to maintain dialogue with Milton Keynes, Oxford and areas to the north of London.'*

Figure 13: Extract from Buckinghamshire HMA (2015): commuting at 75% containment



2.23 The HMA showed how for the proposed Central Buckinghamshire functional housing market area:

> *'74.8% of the workplace population live in the area;*
>
> *67.9% of residents work in the area;*
>
> *70.5% of residents that had moved in the 12 months prior to Census day stayed in the area; and*
>
> *72.1% of those that used to live in the area 12 months prior to Census day stayed in the area*
>
> *Furthermore, this single area follows the boundary of two BRMAs when combined and these in turn demonstrate a close relationship to the distribution of house prices and long-term changes in prices.'*
>
> *Source: Buckinghamshire HMA 2015 (ORS & Atkins)*

South West Hertfordshire Councils; Defining HMAs (GL Hearn; 2015)

2.24 The draft report on defining HMAs for the South West Hertfordshire councils of Dacorum, Hertsmere, Three Rivers and Watford considered house price geography and change, and migration and commuting patterns using data from the 2011 Census.

2.25 The HMA paper concluded that:

> *'In both migratory and commuting terms there are clearly strong links with St Albans. This is particularly the case with Dacorum and Hertsmere. However St Albans also had clear links with Welwyn Hatfield.'*
>
> *'In examining Welwyn Hatfield however the local authority has other influences outside of St Albans and the commissioning authorities. These primarily relate to Stevenage and North Hertfordshire. This reflects the A1(M) corridor which links these areas and ratifies the previous Travel to Work Area definitions identified by ONS.'*
>
> *'the Housing Market Area should be defined as those commissioning authorities as well as St Albans.'*
>
> *Source: South West Hertfordshire; Defining HMAs 2015 (GL Hearn)*

Summary of Previous Housing Market Area Analysis

2.26 Previous housing market area analysis have analysed Bedfordshire, Buckinghamshire, Hertfordshire and the surrounding areas on the basis of migration, travel to work and house price data at various times and at various spatial levels. A variety of outcomes are noted in this Chapter, indicating the inherent difficulty in achieving a consistent analysis; defining HMAs is complex, and different methodological approaches can be undertaken. There are also different approaches to dealing with the commuting draw of London.

2.27 However, broadly, the studies show how links between authorities within the study area are quite strong compared to links with authorities outside of the study area boundary. They show, for example, considerable self-containment in Hemel Hempstead and Watford to the south and Cambridgeshire to the north east. Relationships to the east are more complex and some studies suggest links to East Hertfordshire.

3. Analysing Commuting Patterns

An overview of the methodology and findings

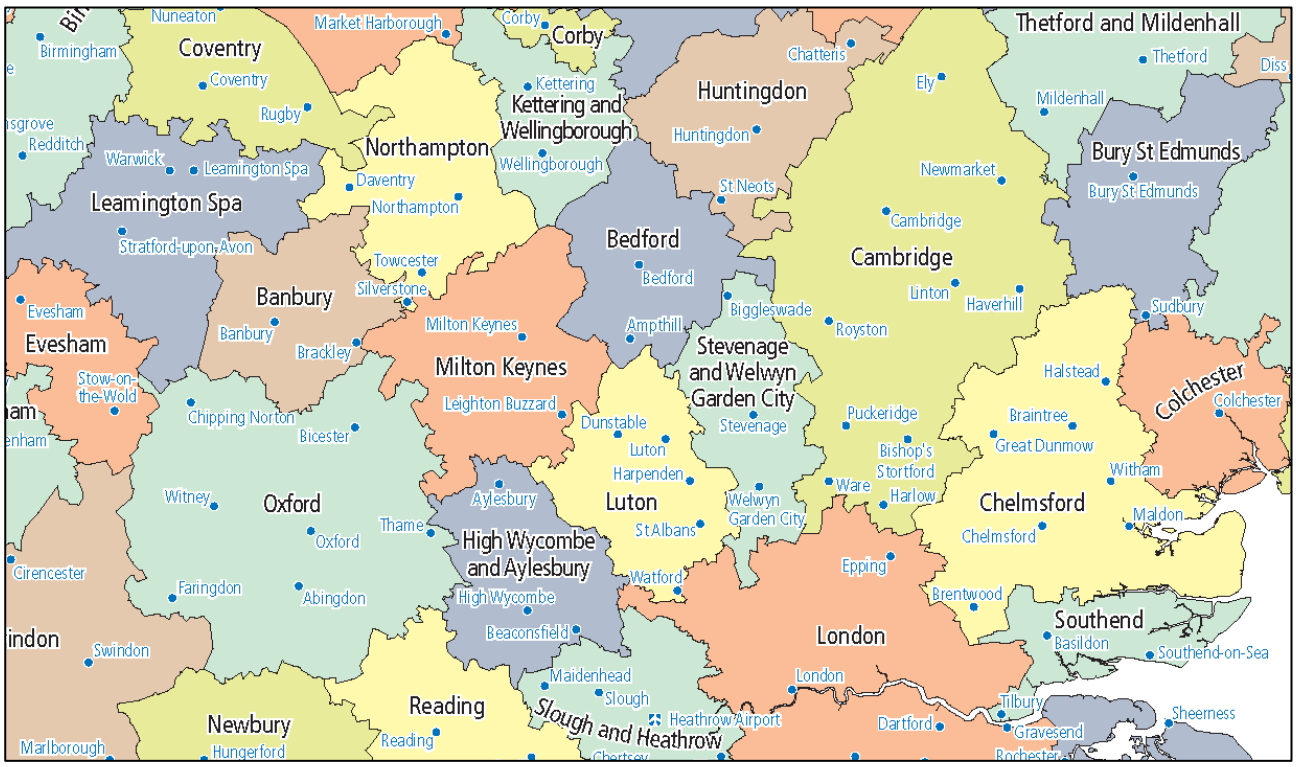
3.1 PPG defines housing market areas on the basis that they will reflect *"the key functional linkages between places where people live and work"* (ID 2a-010). Furthermore, PPG identifies Office for National Statistics Travel to Work Areas (TTWAs) as one of the identified data sources that should be considered when establishing housing market areas.

> *Travel to work areas can provide information about commuting flows and the spatial structure of the labour market, which will influence household price and location. They can also provide information about the areas within which people move without changing other aspects of their lives (e.g. work or service use).*
>
> **Planning Practice Guidance (March 2014), ID 2a-011**

3.2 The Office for National Statistics (ONS) defines official Travel to Work Areas for those involved in labour market analysis and planning. These areas are also based on analysis of Census commuting flow data, and TTWAs based on data from the 2011 Census were published in August 2015. A total of 228 TTWAs were defined for the whole of the UK based on 2011 data, a reduction from the 243 TTWAs that were previously defined based on 2001 Census data.

3.3 Figure 14 shows the defined TTWAs (2015) and these are based on the commuting flow data from the 2011 Census.

Figure 14: ONS 2011 Travel To Work Areas (Source: ONS 2015)



3.4 This shows that:

- **Milton Keynes TTWA** comprises an area which includes all of Milton Keynes together with Buckingham (in Aylesbury Vale) and Leighton Buzzard (in Central Bedfordshire);
- The rest of Aylesbury Vale is largely contained with the **High Wycombe and Aylesbury TTWA**;
- Bedford and part of Central Bedfordshire (including Ampthill) form the **Bedford TTWA**;
- Stevenage and the north of Welwyn Hatfield, together with North Hertfordshire and a part of Central Bedfordshire (including Biggleswade) form **Stevenage and Welwyn Garden City TTWA**; and
- **Luton TTWA** covers Luton and part of Central Bedfordshire, together with Watford, St Albans, Dacorum and part of Three Rivers.

Understanding Travel to Work Patterns

3.5 Commuting flow data from the 2011 Census for small areas enables us to understand the relationships that exist between where people live and work, which is a key element of the housing market area definition. Given that our analysis initially focuses on commuting flows, the areas established will be commuting zones rather than HMAs. Nevertheless, as previously outlined, commuting patterns form an important element of the analysis required to establish both functional HMAs.

3.6 In considering HMAs for Bedfordshire and the surrounding areas, our initial analysis is based on commuting patterns across the geographic area from Corby in the north to Staines in the south, and from Oxford in the west to Ipswich in the east. This approach ensures that functional relationships are properly identified without unduly focussing on the local planning authorities within the study area. Nevertheless, the analysis only identifies the full extent of those HMAs situated entirely within this area; neighbouring areas will only be identified as far as is necessary to establish the most appropriate boundary between them and the HMAs being identified within the study area.

3.7 The key steps in the initial analysis are:

- **Step 1:** Each Middle Layer Super Output Area (MSOA) within the geographic area was identified where all of the constituent Census Output Areas have been classified as being "urban" under the 2011 Rural Urban Classification[7]. The 2011 Rural Urban Classification is used to distinguish between urban areas (based on settlements with more than 10,000 residents) and rural areas.
- **Step 2:** We grouped together any contiguous urban MSOAs and each formed a single seed point, except for the contiguous urban area for London[8] (Figure 15).
- **Step 3:** MSOAs within the geographic area (including those in the London contiguous urban area) were identified where the commuting ratio was less than 1.0; i.e. those MSOAs where the workplace population is larger than the resident population (Figure 16).
- **Step 4:** These MSOAs with concentrations of employment are associated with the existing seed point with which they have the strongest relationship. Where these MSOAs are not contiguous with an urban area (including all MSOAs in Greater London) and have only weak relationships with the existing seed points, employment MSOAs form a new independent seed point (Figure 17).

[7] Department for Environment, Food and Rural Affairs, Rural Urban Classification ; www.gov.uk, 2014; paragraph 3.3
[8] London is excluded from step 2 as this would create a single seed point covering the whole of London at the outset of the analysis process. Whilst London will clearly be an important housing market, this should not be simply based on it being a contiguous urban area.

Figure 15: Urban Areas based on DEFRA Classification

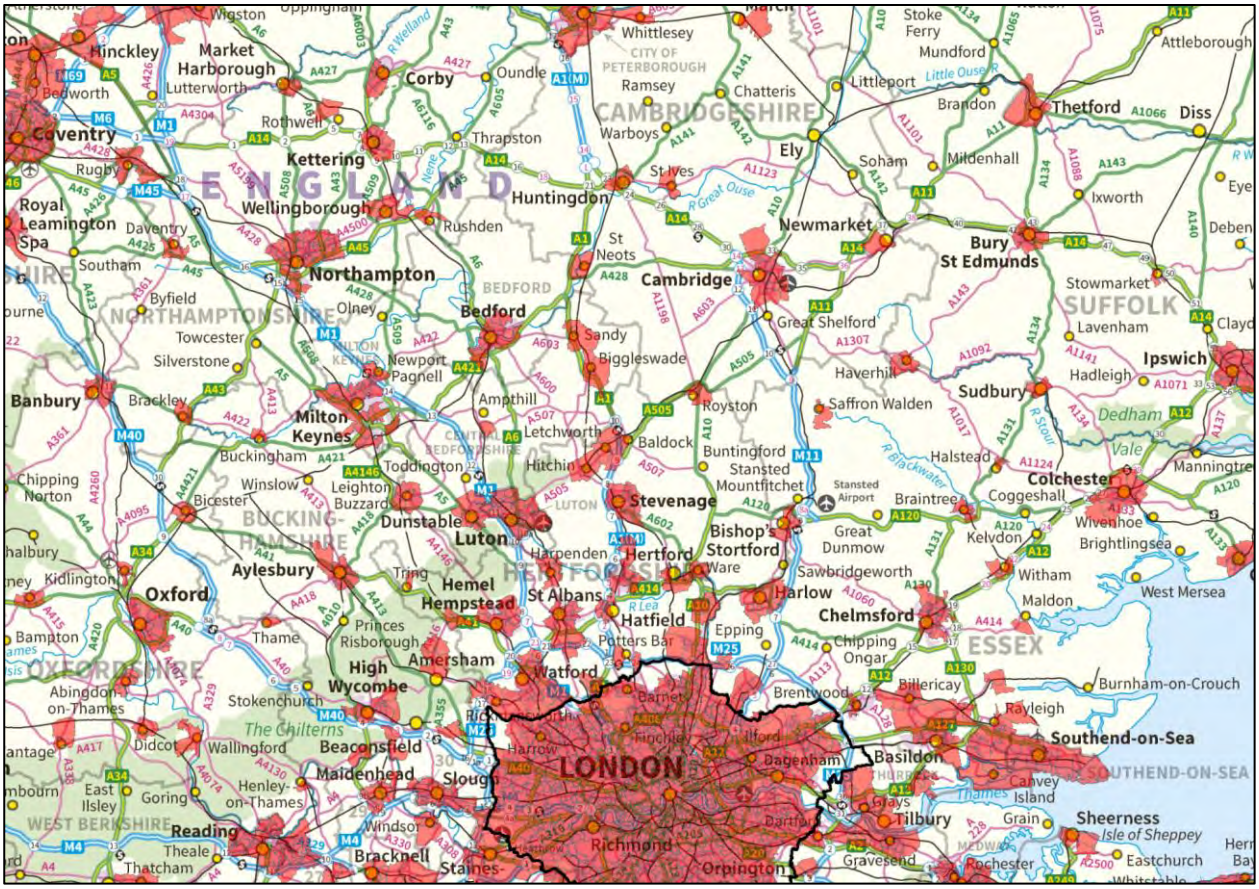


Figure 16: Areas with Commuting Ratio less than 1.0

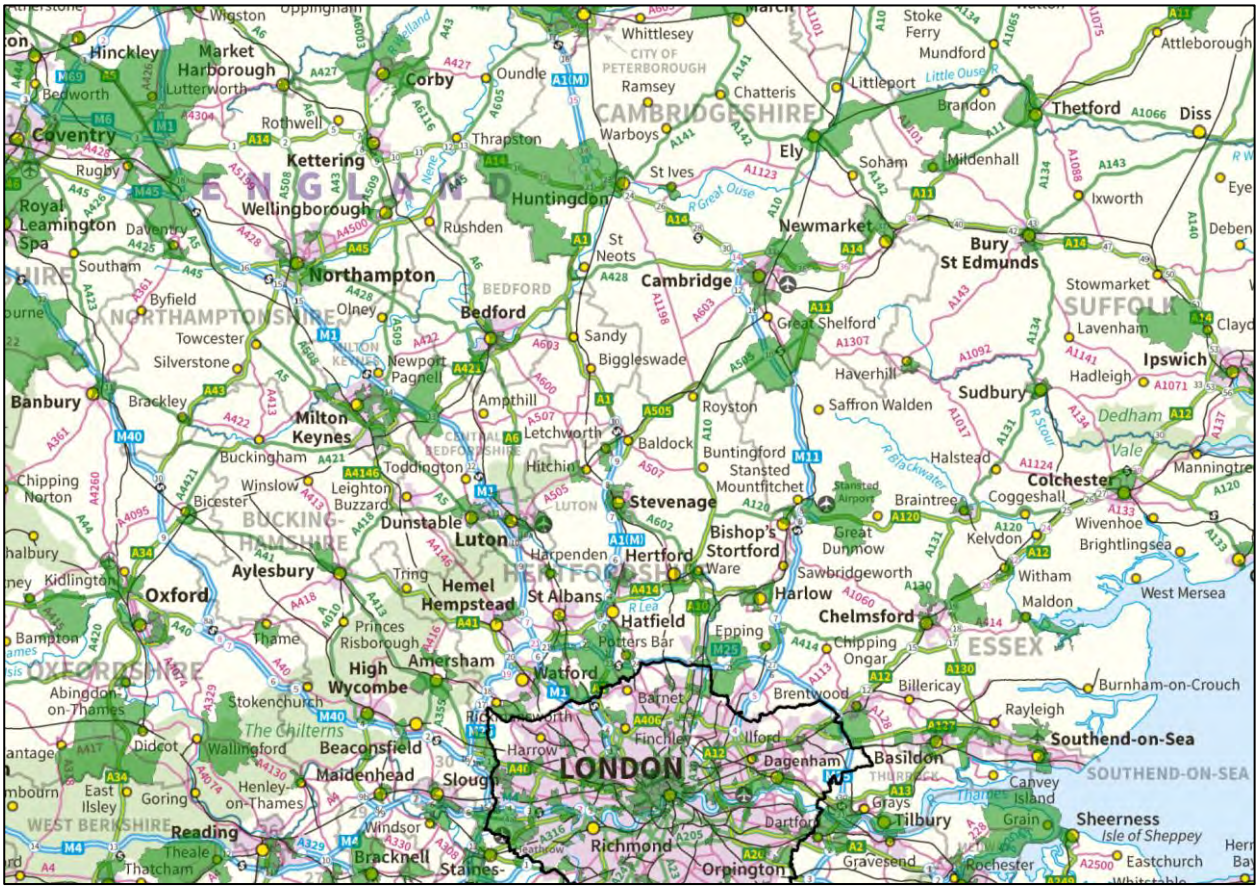


Figure 17: Urban Areas outside London and Employment Areas

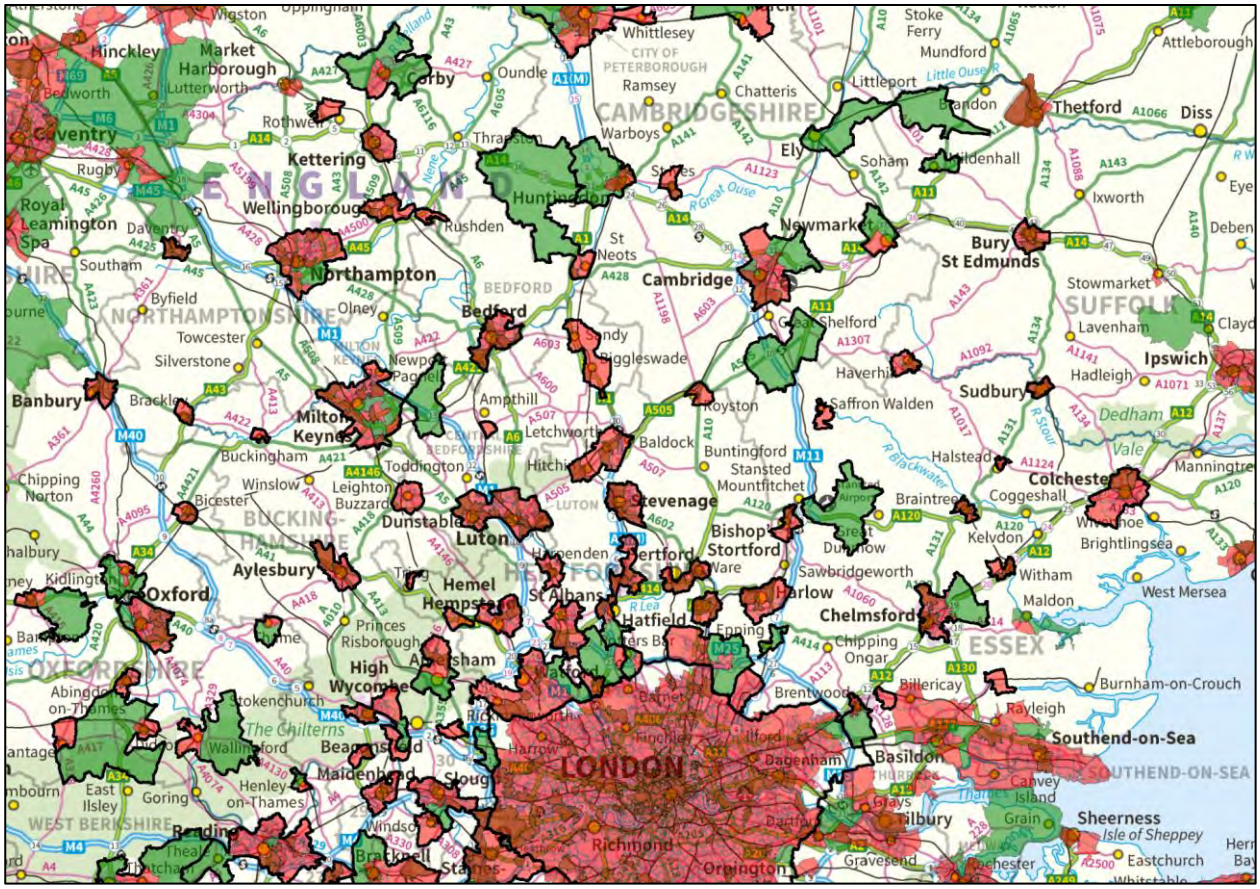
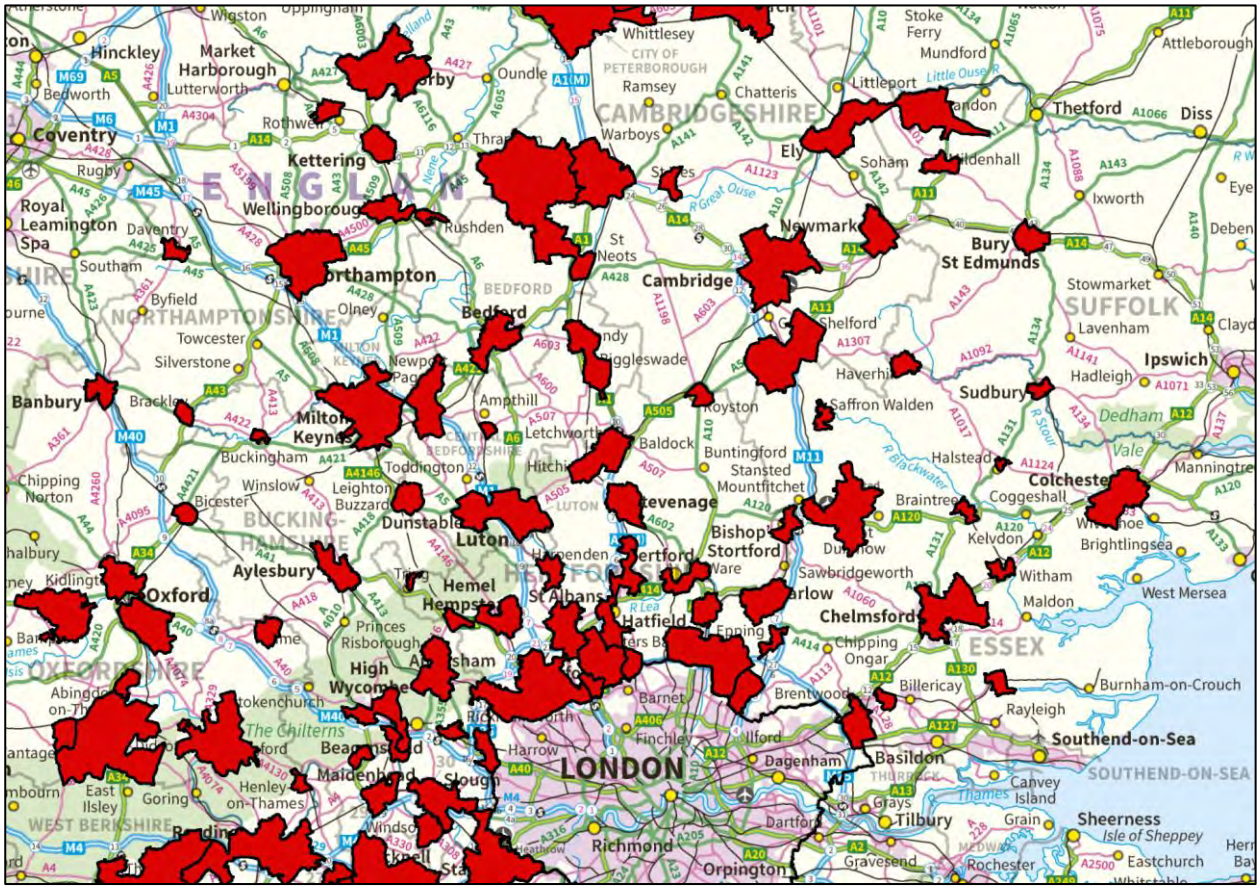


Figure 18: 'Seeds' for Housing Market Areas



3.8 Figure 18 shows the final seeds that were then used for the subsequent stages of the analysis process:

- **Step 5:** For every MSOA in the geographic area, we associate it with the seed point (or seed point cluster) that has the largest number of workers resident in that MSOA.
- **Step 6:** Based on the MSOAs associated with each seed point (or seed point cluster) at Step 5, we calculate the proportion of the resident population that work in the area and the proportion of the workplace population that live in the area to establish a self-containment ratio.
- **Step 7:** If all seed points (or seed point clusters) had an acceptable self-containment ratio, the process stops; otherwise for the seed point with the lowest self-containment ratio, the seed point with which it has the strongest relationship (based on the commuting flows and distance between the two seed points) is identified and the two seed points are clustered together. Where the seed point with the lowest self-containment ratio is already formed of a cluster of seed points, the cluster is separated and the strongest relationship identified for each of the original seed points before new clusters are formed.

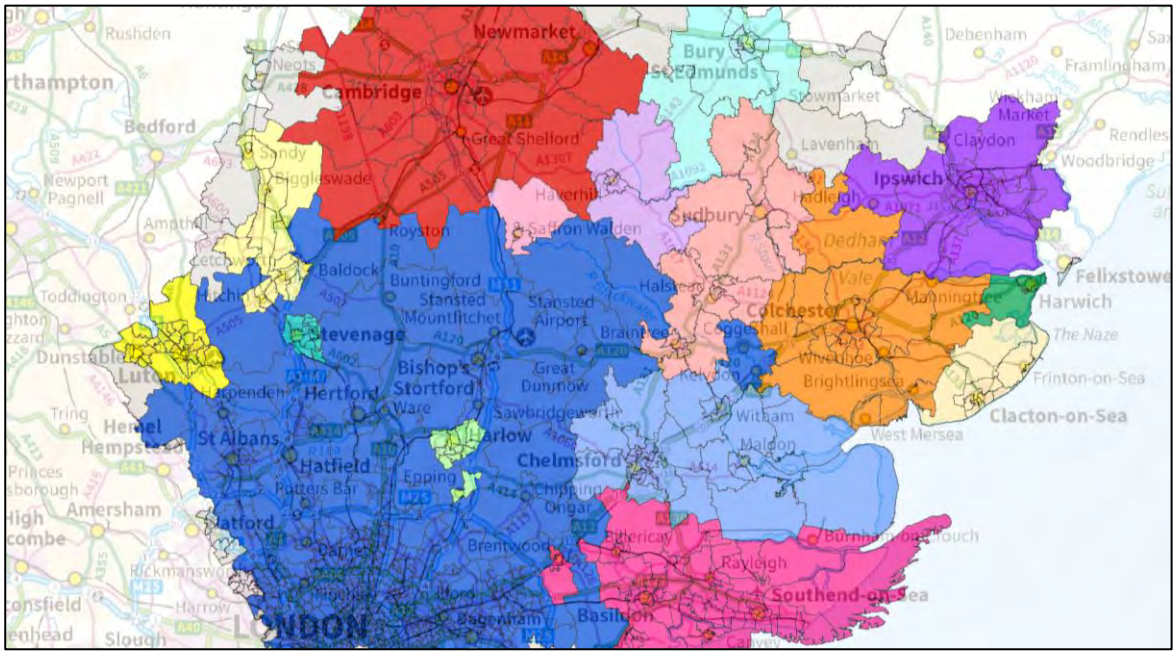
3.9 The process from Step 5 to Step 7 was then repeated to achieve increasing levels of self-containment across all seed points (or seed point clusters).

3.10 The final distribution of areas depends on the level at which the self-containment ratio is considered to be acceptable. The higher that the self-containment ratio is required to be, the larger (and more strategic) the identified areas will become – as smaller areas will tend to have lower levels of self-containment. The ONS use a 75.0% target for Travel To Work areas, but it is worth noting that their threshold is 66.7% (for areas that have a working population in excess of 25,000 workers) and this provides a useful framework.

Analysis Outcomes based on 2011 Census Data

3.11 Figure 19 shows the outcome of this process at the 50% self-containment stage. At the 50% level of self-containment, the London HMA has rapidly grown to include much of the study area (broadly similar to the NHPAU map in Figure 1) – so it is evident that some control of London's growth is necessary if we are to properly understand the housing market interactions across the surrounding areas.

Figure 19: Initial model outputs at 50% containment threshold



Further modelling restricting the growth of Central London

3.12 Whilst the importance of London must be recognised when considering housing markets areas in the South East of the UK, it is also useful to gain an understanding of other housing market areas at a more local level. The PPG recognises that *"it might be the case that housing market areas overlap"*; so whilst acknowledging that London is an important housing market area, it is also possible that London overlaps with other local housing market areas.

3.13 Given this context, the latter part of the analysis (steps 5-7) was repeated; however this time when the seed (or seed cluster point) with the weakest self-containment was joined to the seed to which it had the strongest links, the seed point for Central London (i.e. the area of contiguous MSOAs in the centre of London where the commuting ratio was less than 1.0) was excluded as an option. In other words, Central London could not "grow". In summary:

- At 60% self-containment (Figure 20), various housing market areas are visible as distinct areas – including Bedford, Milton Keynes, Aylesbury, Luton, St Albans, Hemel Hempstead and Stevenage.
- At 70% self-containment (Figure 21), a number of realignments have occurred where some of the smaller seeds have merged with other seeds to which they have the strongest link. Notably, Letchworth has now merged with Stevenage, the Stansted area has merged with Harlow and Potters Bar has joined with St Albans and Hatfield.
- At 72% self-containment (Figure 22), all of the smaller seeds have merged with larger areas, and it is evident that some of these areas have merged too. For example, Aylesbury has merged with High Wycombe; Hemel Hempstead, Watford and St Albans have joined together; and Hatfield and Welwyn Garden City have become part of the Stevenage wider area.

Figure 20: Model outputs with restricted growth of Central London at 60% containment threshold

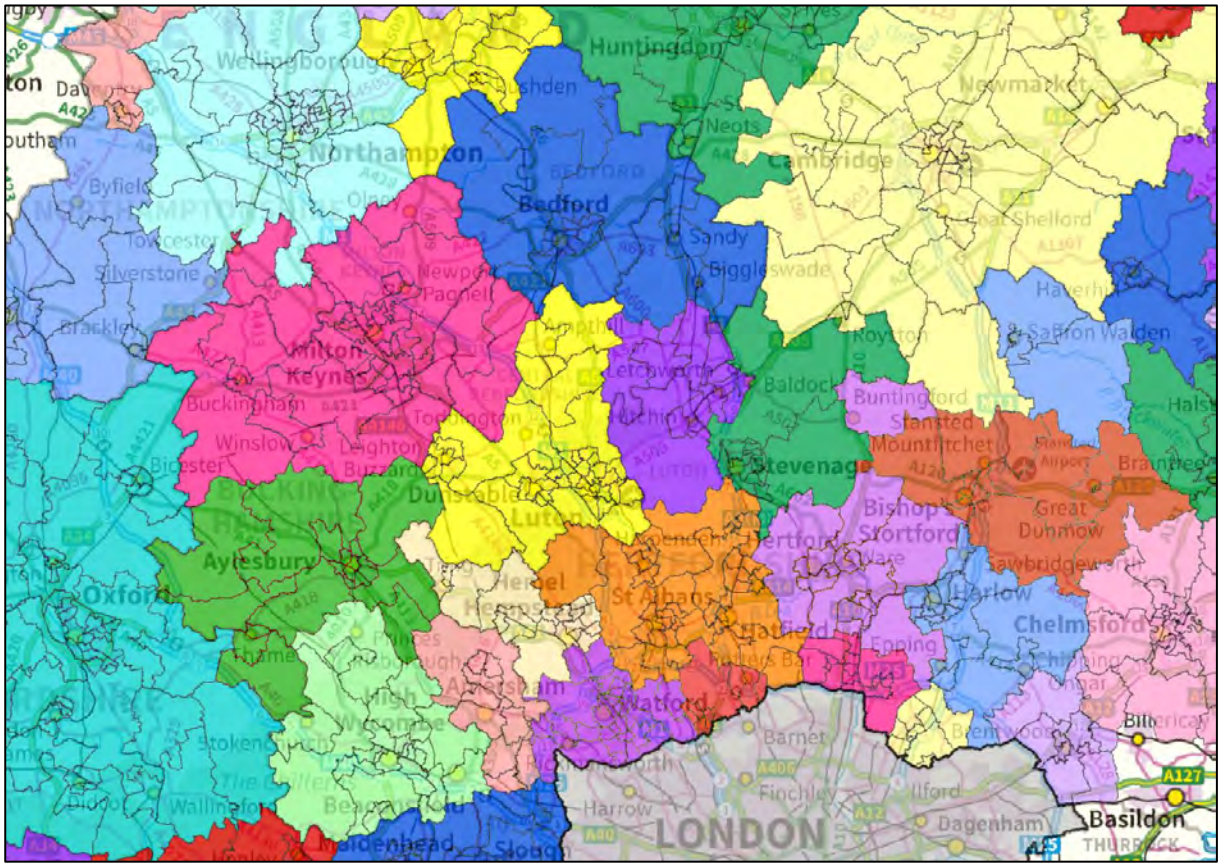


Figure 21: Model outputs with restricted growth of Central London at 70% containment threshold

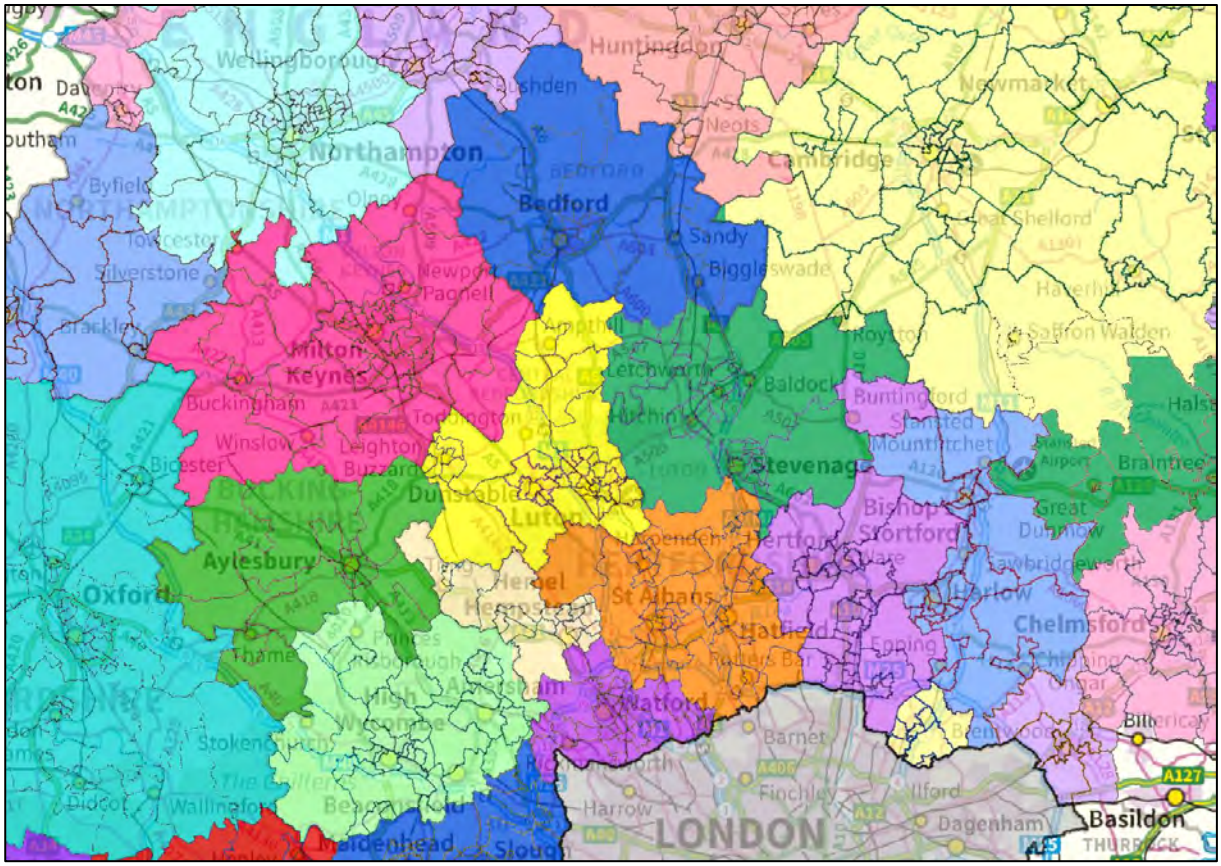
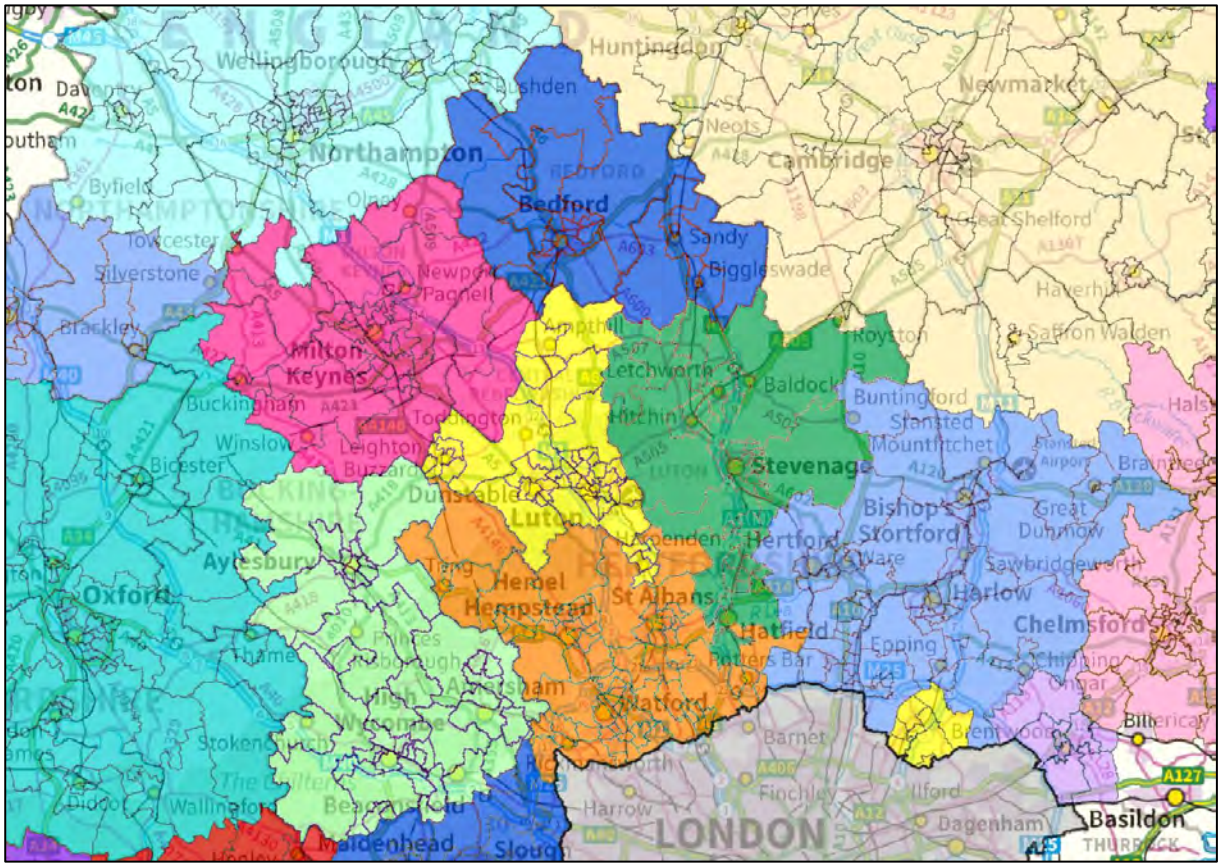


Figure 22: Model outputs with restricted growth of Central London at 72% containment threshold



Reviewing the preliminary outputs

3.14 The preliminary outputs were discussed at a stakeholder workshop with officers from the commissioning local authorities together with representatives from neighbouring areas as part of the Duty to Cooperate process.

3.15 A number of points were raised from the discussion where further analysis would be of benefit. The first related to the order in which seeds were processed and clustered, and whether or not the final clusters represented the strongest linkages between seeds. For example, Sandy and Biggleswade were clustered with Bedford, which represented the strongest link at the time they were processed; however, this was prior to Stevenage and Letchworth being clustered together – and the relationship that exists with Stevenage and Letchworth combined is stronger than the relationship with Bedford. Similar concerns were raised about other smaller settlements, such as Leighton Buzzard, which raised the question as to whether or not the final outputs could be further developed to reflect this.

3.16 Another point raised concerned the relationship between Hatfield, Welwyn Garden City and the Stevenage commuting zone. A review of the original seeds identified that Hatfield and Welwyn Garden City formed a continuous urban area (based on the statistical geographies used) and therefore had been defined as a single seed. The purpose of creating seed points was to enable separate places to be identified, and part of the reason for varying the approach in relation to London was to avoid predetermining the outputs. In a similar way, it was agreed at the workshop that it was not appropriate to presume that Hatfield and Welwyn Garden City should inevitably fall into the same area given the different functional relationships of the two places. On this basis, it was agreed to split the seed point into two distinct areas based on their individual MSOA boundaries.

3.17 The process for reviewing the cluster groupings was undertaken systematically to ensure a fair approach across the entire area. In each of the identified seed clusters, any individual seeds that represented less than 20% of the size of the largest seed in the seed cluster were considered to be “weak” and were therefore “unseeded”; that is, those areas were no longer considered to be a seed and treated in the same way as all other areas that had not originally been part of a seed.

3.18 Figure 23 shows the outcome of this process, identifying the original seeds which are “unseeded” in yellow. The areas in red form the seed clusters for the revised analysis.

3.19 Figure 24 the impact of the “unseeding” process on the identified areas.

3.20 The most notable changes include Sandy and Biggleswade moving from the Bedford to the Stevenage area, Leighton Buzzard moving from the Luton to the Milton Keynes area, and the area north of Tring moving from the Watford to the Aylesbury area.

3.21 Furthermore, following the separation of Hatfield and Welwyn Garden City into separate seeds, it is evident that whilst the strongest relationship for Welwyn Garden City continues to be with the Stevenage area, the strongest relationship for Hatfield is with the Watford area.

3.22 The outputs from this further process were discussed collectively with officers from the commissioning authorities, who accepted that this output provided an appropriate basis for developing the final commuting zones which, together with information on migration and house prices, would inform the functional housing market area definition.

Figure 23: Original seeds that have become 'unseeded'

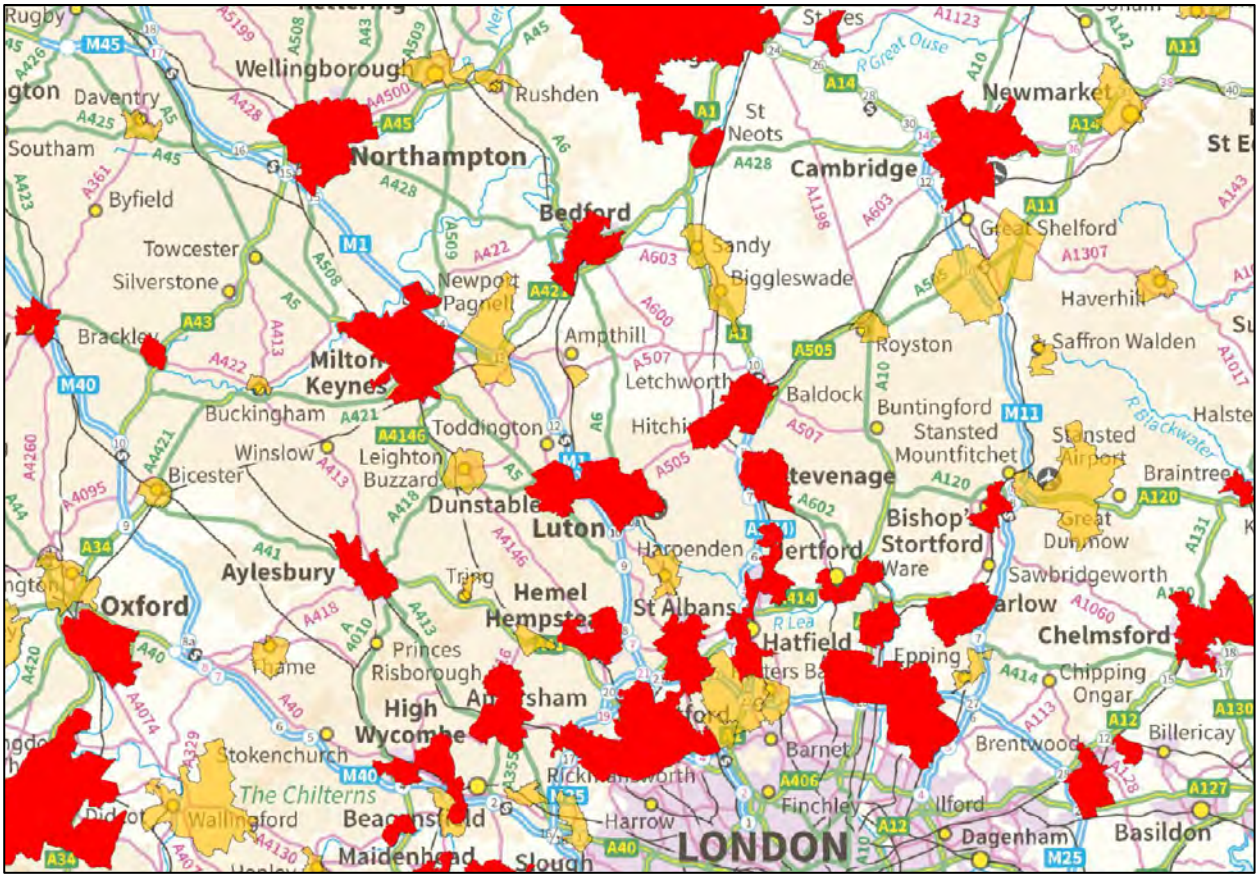
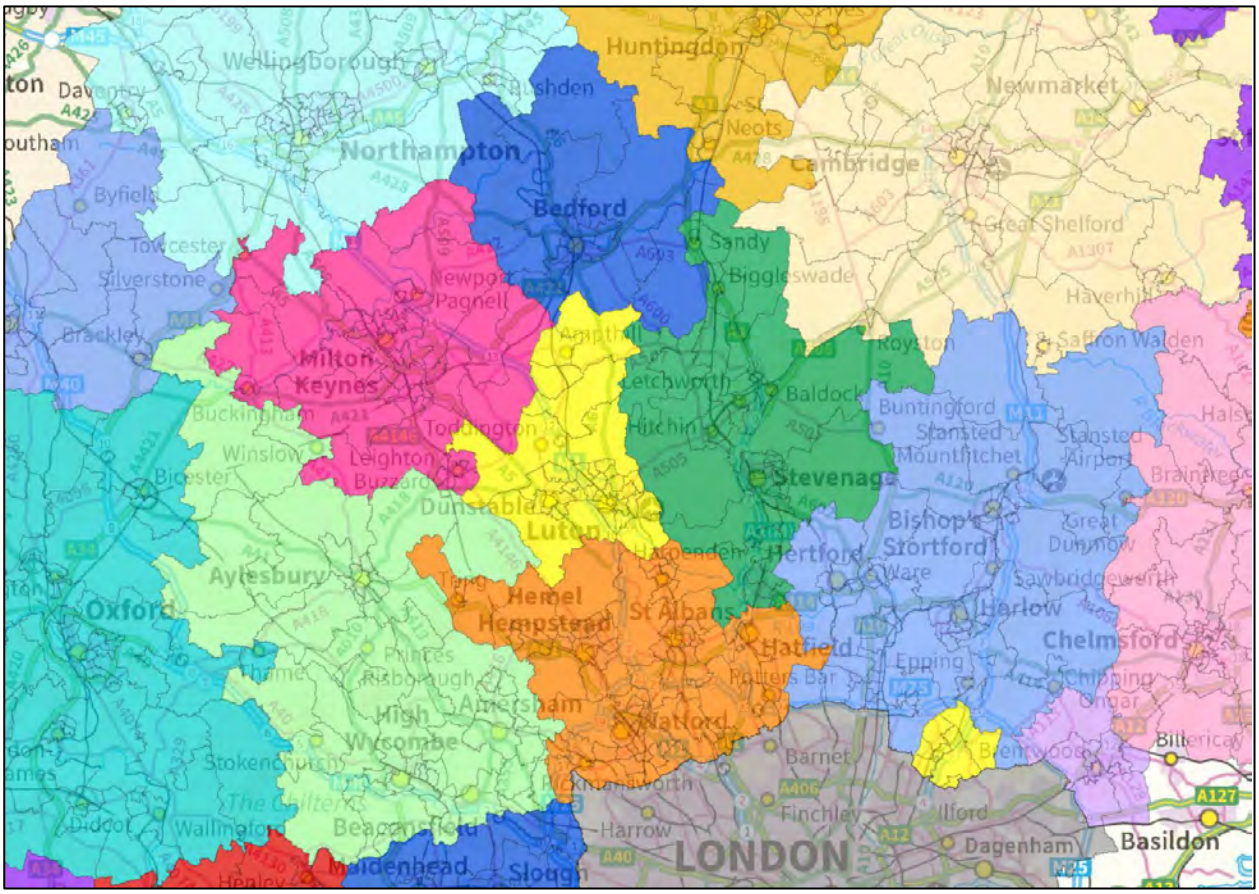


Figure 24: The impact of "unseeding" smaller settlements; model outputs at 72% containment of seed clusters



Further modelling using finer grain geographies

3.23 The analysis to define the commuting zone clusters was developed using the MSOA statistical geography. Whilst these areas are smaller than local authority areas, they each cover a relatively large population: a minimum of 2,000 households and an average of 3,000 households in each MSOA. Therefore, some MSOAs cover relatively large geographic areas, in particular those outside urban centres. This means that the boundaries that have been identified for the commuting zones are likely to be relatively imprecise, especially in areas that are currently less populated.

3.24 To refine the identified boundaries, the modelling was re-run using Census Output Areas (COA): the smallest statistical geographies available, covering a minimum of 40 households with a target of 125 households in each COA. In considering this finer grained geography, the modelling is revised using COA based on the final seed clusters (excluding those smaller settlements that had been "unseeded").

3.25 The following maps show the strongest relationship for each COA. Figure 25 shows the areas where an absolute majority of workers (that is over 50%) travel to or from the COA to the identified area. At 50% absolute self-containment, the "core" of each travel to work area can be identified.

3.26 Figure 26 shows the outcome of the same analysis based on a simple majority of workers (that is the largest number) excluding the flows to Greater London, whereas the hatched areas on Figure 27 identify those COAs where the greatest flows are to Greater London. There are clearly some parts of the study area where the largest flows are to Greater London, but the influence of London appears far less significant than in parts of the Cambridge, Chelmsford, Harlow and South West Hertfordshire commuting zones.

Figure 25: COAs with absolute majorities (over 50%) of workers travelling to and from the area

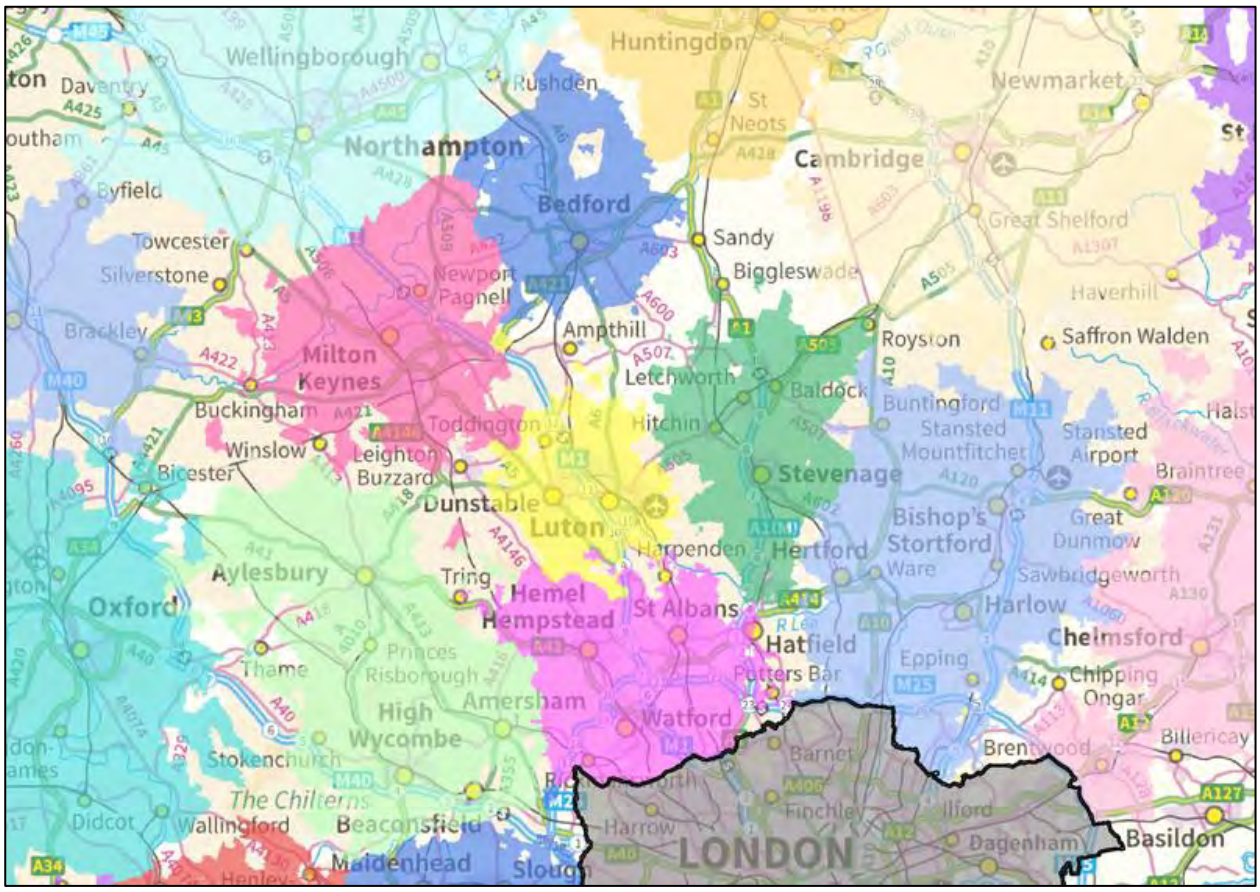


Figure 26: COAs based on simple majorities of workers travelling to or from the area

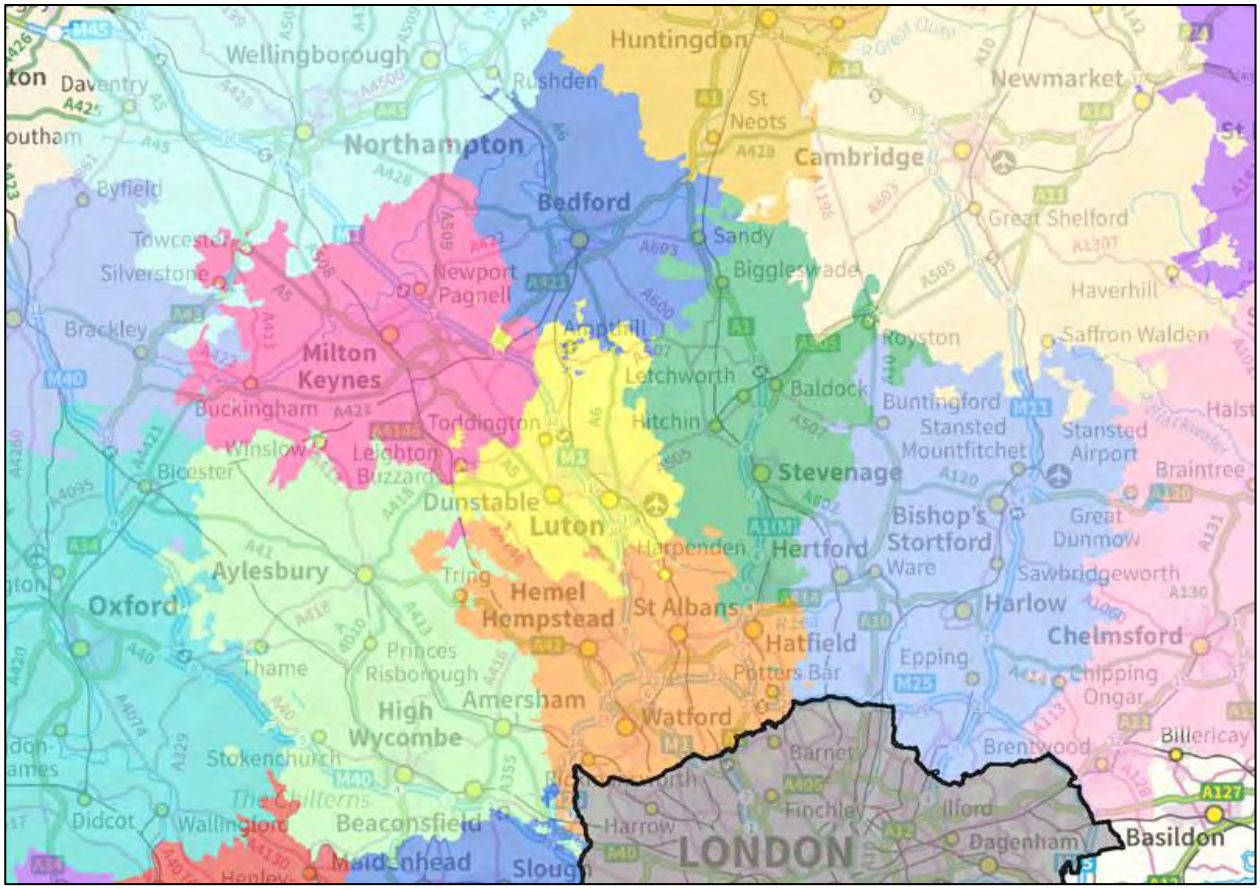
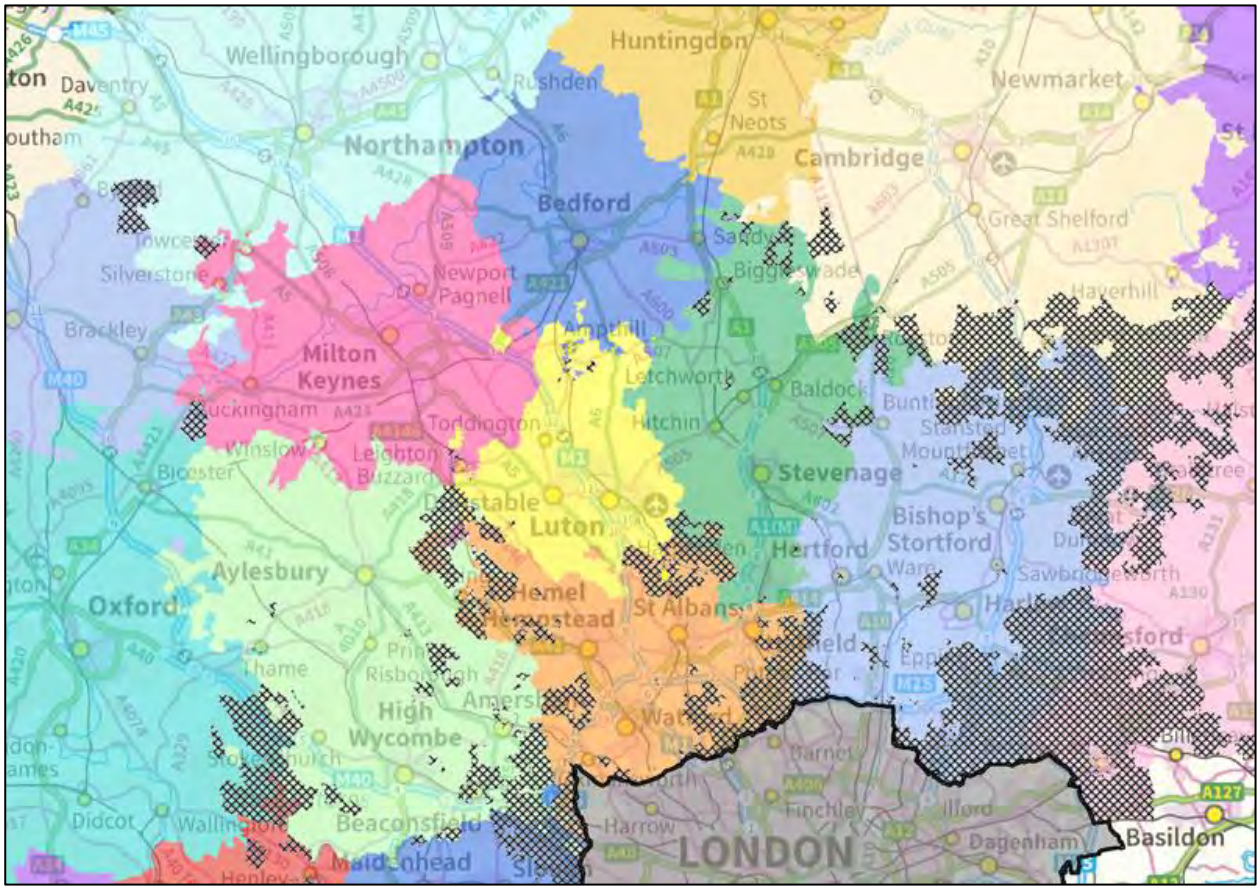


Figure 27: COAs based on simple majorities of workers travelling to or from the area, including Greater London



3.27 Greater London is also evidently important when considering HMAs in this wider area. The modelling analysis has clearly shown that the commuting "pull" from Central London is often stronger than from more local employment centres, and it would be possible to define a Greater London travel to work area that included many areas outside the region boundary.

3.28 Whilst the functional relationships with London are important, the Mayor of London and the Greater London Authority are responsible for the London Plan and this is based on the administrative boundary for the region. Therefore, on balance, it is pragmatic and appropriate to define Greater London using the administrative boundary and then separately consider the commuting flows outside the region.

3.29 On this basis, our proposed commuting zones are based on the final iteration of the modelling analysis that excluded Greater London.

Proposed Commuting Zones

3.30 The conclusions following this analysis of fine grained geographies are:

- Ampthill, Biggleswade, Leighton Buzzard and Sandy each have workers travelling in different directions;
- Considered individually, none of these settlements have more than 50% working in any of the identified areas; and
- When considering the strongest relationships, different areas of the settlements show different patterns.

3.31 Given this context, it is necessary to consider the most appropriate approach for these overlapping areas. Whilst PPG recognises that *"it might be the case that housing market areas overlap"* (ID 2a-010), when establishing the evidence it will be important to avoid double counting the needs of any area. Therefore, it is appropriate for each settlement to be primarily associated with a single housing market.

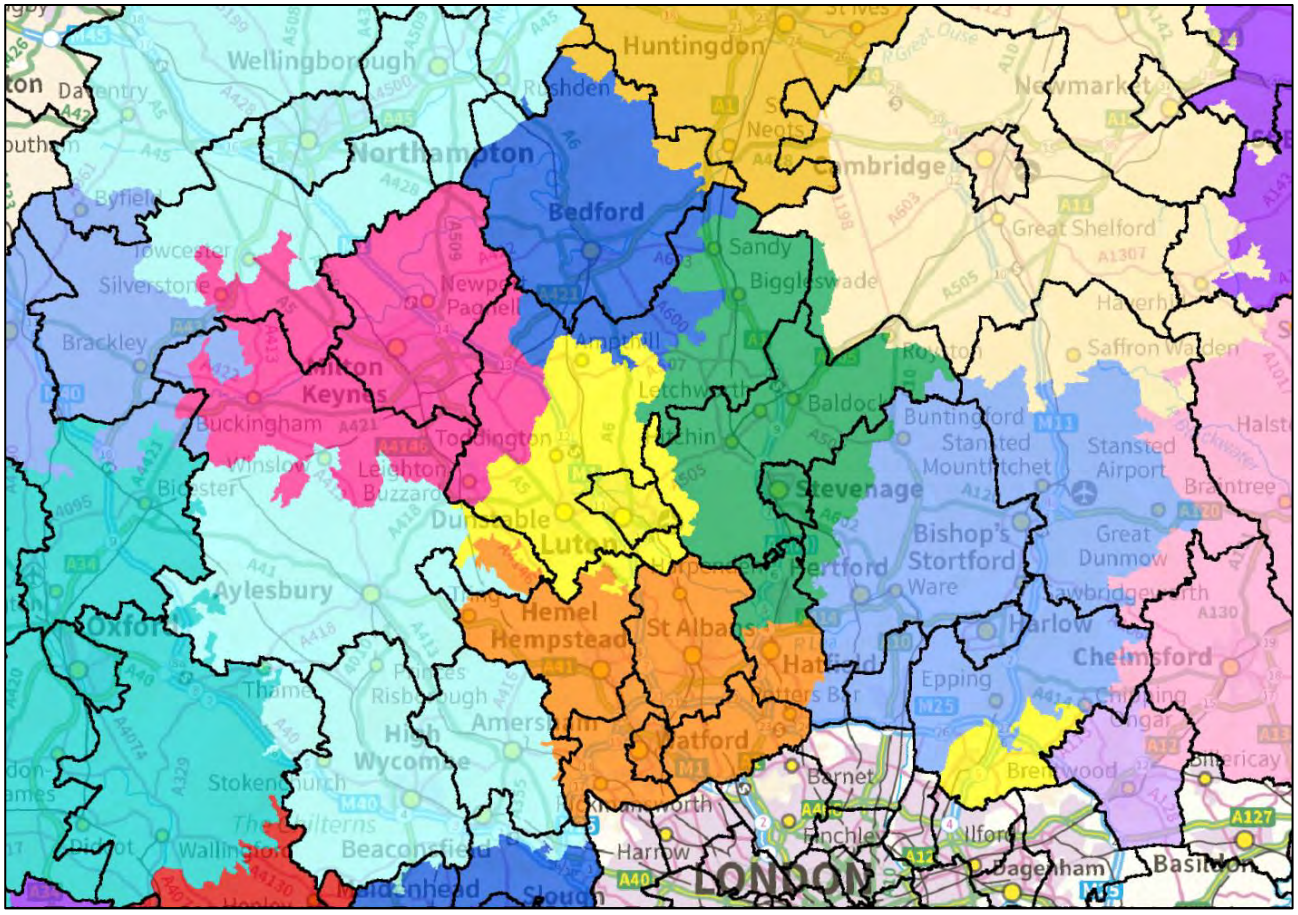
3.32 The final stage of the process therefore requires manual review in order to establish areas with contiguous boundaries and ensure that individual settlements are not split between different areas. This provides outputs that are clearly evidence based, but also allows practical policy planning.

3.33 Figure 28 shows the commuting zones proposed for Bedfordshire and surrounding areas, with the local authority administrative boundaries:

- Milton Keynes
- Aylesbury & High Wycombe
- Bedford
- Luton
- Stevenage

3.34 It is evident that Sandy, Biggleswade and Welwyn Garden City are all included within the Stevenage commuting zone; Leighton Buzzard forms part of the Milton Keynes commuting zone; and both Harpenden and Hatfield form part of the South West Hertfordshire commuting zone.

Figure 28: Final commuting zones with contiguous areas based on COAs, showing LA administrative boundaries



3.35 Figure 29 sets out the key statistics for these final commuting zones, presented in descending order of containment score.

3.36 The figure also shows the overall commuting flows (including flows to and from Greater London) and highlights those that reach the ONS target of 75% and the ONS threshold of 66.7% in green (dark green and light green respectively), with the remaining flows (that fail to reach the ONS threshold of 66.7%) highlighted in red.

Figure 29: Statistics for Commuting Zones at 72% Containment (excluding Greater London) (Source: 2011 Census; Note: Dark green cells exceed the ONS TTWA target of 75%; light green cells meet or exceed the ONS TTWA threshold of 66.7% whilst red cells do not achieve the ONS TTWA minimum threshold)

Commuting Zone	Living and Working in area	Workplace Population		Resident Population				Containment Score	
				All workers		Exc. Central London			
		Total workers	% living in area	Total workers	% working in area	Total workers	% working in area	Overall	Exc. Central London
Milton Keynes	135,926	183,436	74.1%	177,308	76.7%	168,463	80.7%	75.4%	77.3%
Central Bucks	150,935	196,708	76.7%	220,640	68.4%	193,595	78.0%	72.3%	77.3%
Bedford	57,715	79,326	72.8%	82,449	70.0%	78,774	73.3%	71.4%	73.0%
Luton	100,509	135,054	74.4%	150,722	66.7%	139,624	72.0%	70.3%	73.2%
Stevenage	111,859	153,444	72.9%	172,677	64.8%	154,069	72.6%	68.6%	72.8%

3.37 The underlying data for the contiguous areas shows that:

- All areas exceed the 66.7% threshold of workplace population living in the same area.
- All areas except one exceed the 66.7% threshold of resident population working in the same area; and when London is excluded, all areas exceed this threshold.

3.38 The Stevenage area shows the lowest self-containment, with an overall containment score of 72.8% (when Greater London is excluded). While the proportion of people in employment that live in the area who also work in the area is 64.8%, slightly below the ONS threshold, this proportion is 72.6% when London workers are excluded and the proportion of jobs in the area fulfilled by workers that live in the area is 72.9%, which both comfortably exceed the threshold.

3.39 Figure 30 details the distribution of the resident population between the proposed commuting zones for the seven partner authorities. Cells have been highlighted in dark green where two thirds or more of the population for a local authority area are resident in a commuting zone. Cells have been highlighted in light green where at least a third of the population for a local authority are resident in a commuting zone.

Figure 30: Resident Population in 2011 by Local Authority Area and Proposed Commuting Zone (Source: 2011 Census. Note: Population rounded to nearest 100. Figures may not sum due to rounding)

Local Authority Area	Proposed Commuting Zone											
	Milton Keynes		Central Bucks		Bedford		Luton		Stevenage		Elsewhere	
	N	%	N	%	N	%	N	%	N	%	N	%
Aylesbury Vale	29,300	16.8%	137,400	78.9%	-	-	2,700	1.5%	-	-	4,700	2.7%
Bedford	-	-	-	-	154,700	98.2%	-	-	-	-	2,800	1.8%
Central Beds	49,700	19.5%	-	-	14,100	5.5%	114,900	45.2%	75,700	29.8%	-	-
Luton	-	-	-	-	-	-	203,200	100.0%	-	-	-	-
Milton Keynes	248,800	100.0%	-	-	-	-	-	-	-	-	-	-
North Herts	-	-	-	-	-	-	1,700	1.3%	109,200	85.9%	16,300	12.8%
Stevenage	-	-	-	-	-	-	-	-	84,000	100.0%	-	-
Elsewhere	14,400	-	297,100	-	200	-	700	-	66,900	-	-	-
TOTAL	**342,300**	-	**434,600**	-	**169,000**	-	**323,100**	-	**335,700**	-	-	-

3.40 The population of each of the authorities is mainly contained within a single commuting zone, notably Luton, Milton Keynes and Stevenage with 100% in their respective commuting zones and Bedford with over 98%. A large majority of the populations of Aylesbury Vale (78.9%) and North Hertfordshire (85.9%) are also in a single commuting zone. The Central Bedfordshire population is spread mainly over three commuting zones, with the largest proportion being in the Luton zone (45.2%), with smaller proportions in the Stevenage and Milton Keynes zones.

3.41 While this study has clearly defined the boundaries for these commuting zones inside the study area, the boundaries outside of this area should be treated with caution given the geographic area that was included within the modelling analysis. This would not affect the boundaries or distribution within the area which is the focus of the study.

4. Housing Market Areas

Establishing the evidence base for identifying HMAs

4.1 As previously noted, PPG states that three different sources should be considered when identifying housing market areas, namely:

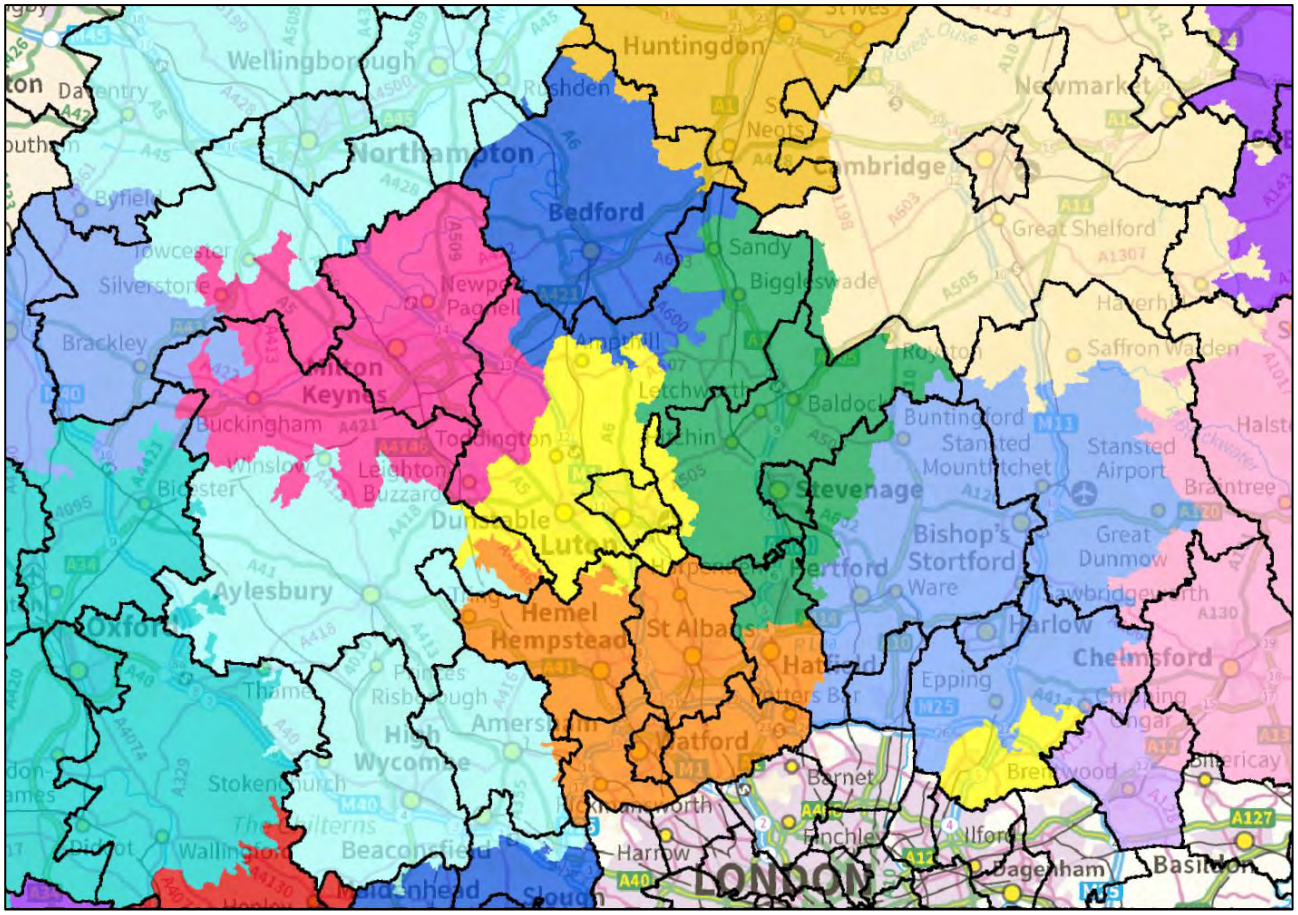
- House prices and rates of change in house prices;
- Household migration and search patterns and;
- Contextual data including Travel to Work areas, retail and school catchment areas.

4.2 However, CLG research and the PAS OAN advice note have both suggested that commuting flows and migration patterns are the most relevant information sources when seeking to establish upper-tier housing market areas; house prices are more relevant when considering local areas or identifying housing sub-markets. Given this context, our analysis has initially focused on commuting and migration.

Commuting flows

4.3 Chapter 3 set out a detailed analysis of commuting flows and identified proposed commuting zones for Bedfordshire and the surrounding areas. Figure 31 shows the areas that the analysis identified.

Figure 31: Final Commuting Zones showing Local Authority administrative boundaries



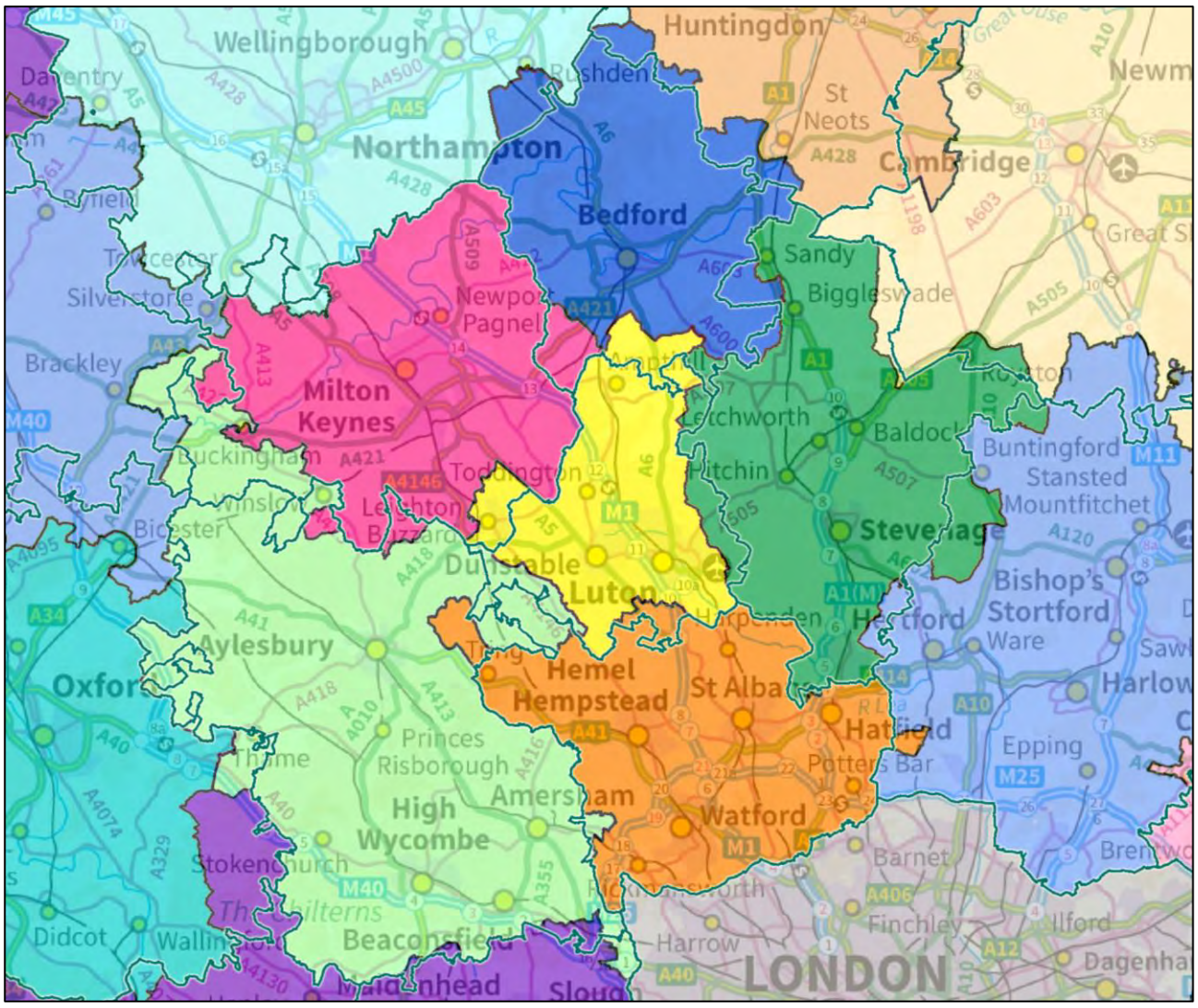
Migration flows

4.4 Whilst commuting flow data helps identify *"the key functional linkages between places where people live and work"*, PPG also suggests that migration patterns should be considered when defining functional housing market areas:

> *Migration flows and housing search patterns reflect preferences and the trade-offs made when choosing housing with different characteristics. Analysis of migration flow patterns can help to identify these relationships and the extent to which people move house within an area. The findings can identify the areas within which a relatively high proportion of household moves (typically 70 per cent) are contained. This excludes long distance moves (eg those due to a change of lifestyle or retirement), reflecting the fact that most people move relatively short distances due to connections to families, friends, jobs, and schools.*
>
> **Planning Practice Guidance (March 2014), ID 2a-011**

4.5 Analysis of Census migration flow data shows that the strongest relationships in terms of migration mirror the strongest commuting relationships. Figure 32 shows the strongest relationships in terms of migration flows between each MSOA and the identified seed clusters.

Figure 32: MSOAs with the strongest migration links to the final seed clusters, showing commuting zone boundaries



4.6 It is evident that the migration patterns largely reflect the travel to work patterns previously illustrated by the commuting zone analysis, although there are some notable differences. In summary:

- **Bedford:** the Luton and Milton Keynes migration zones extend into the south of the Bedford commuting zone, whereas the Bedford migration zone extends further north than the area's commuting zone;
- **Central Buckinghamshire:** whilst the commuting and migration zones are largely the same to the south, the migration zone extends into the Luton, Milton Keynes and South West Hertfordshire commuting zones;
- **Luton:** the Central Buckinghamshire and South West Hertfordshire migration zones extend into the south of the Luton commuting zone; however the Luton migration zone extends north and west into the Bedford and Milton Keynes commuting zones, and notably includes Leighton Buzzard;
- **Milton Keynes:** the commuting and migration zones generally follow the same boundary, but whilst areas to the west of Buckingham are in the Milton Keynes commuting zone they fall within the Central Buckinghamshire migration zone, and similarly whilst Leighton Buzzard is in Milton Keynes's commuting zone it is in the Luton migration zone; and
- **Stevenage:** once again the commuting and migration zones are very similar; however the migration zone includes Royston which falls in the Cambridge commuting zone.

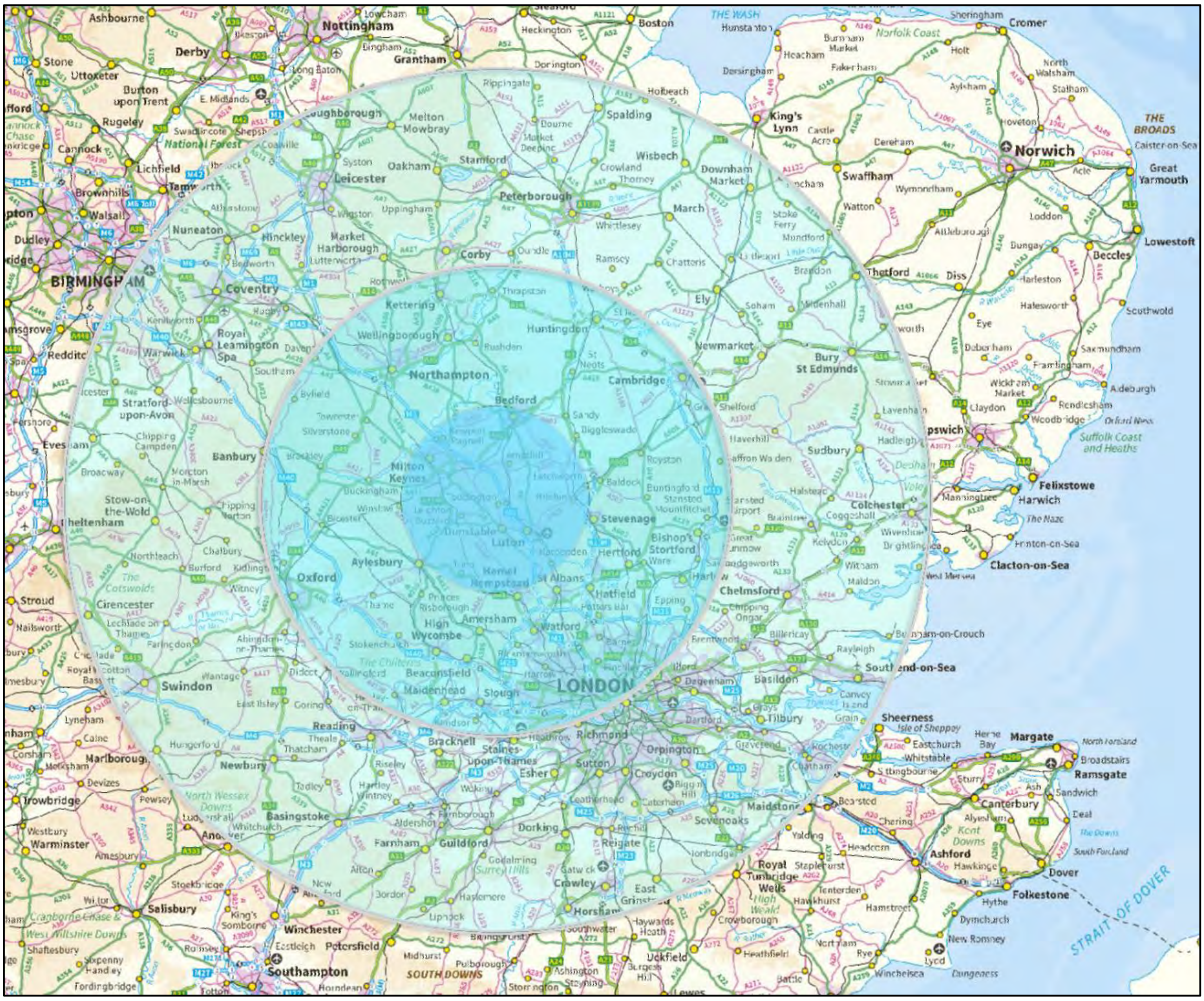
4.7 PPG identifies that a *"relatively high proportion of household moves"* will be contained within a housing market area, and suggests that this will be *"typically 70%"* or more; however this *"excludes long-distance moves"* (ID 2a-011).

4.8 As the PAS OAN technical advice note confirms, *"what counts as a long-distance move is a matter of judgment"* (second edition, paragraph 5.16). Data from the English Housing Survey 2013-14 household report[9] (figure 6.4) shows that over 7 in every 8 moves in the UK involved distances of less than 50 miles, with almost 5 in every 6 involving distances of less than 20 miles. It would therefore seem appropriate for long-distance moves to include all moves of at least 50 miles, and for moves of 20 miles or more to also be considered.

4.9 Figure 33 provides an indication of the catchment areas based on distances of both 50 miles and 20 miles beyond the broad study area; however the actual catchment will differ for each local authority area, as the analysis is based on the distance between the specific origin and destination of each move. It is evident that the 20 mile zone covers numerous settlements in the surrounding area such as Cambridge, Hatfield, Hemel Hempstead, High Wycombe, Huntingdon, Maidenhead, Northampton, Oxford, Slough and Watford, as well as much of North and West London. The 50 mile zone covers all of Greater London together with most of wider South East England.

[9] https://www.gov.uk/government/statistics/english-housing-survey-2013-to-2014-household-report

Figure 33: Indicative catchment area for moves to and from the study area, excluding long-distance moves (Note: Inner circle based on moves of up to 20 miles; outer circle based on moves of up to 50 miles)



4.10 The concept of excluding *"long-distance moves"* relates back to the early definition of a functional housing market area that was set out at the start of this chapter. That definition focused on *"those moving house without changing employment"*, and long-distance moves will generally involve a change of job or other change of lifestyle (such as retirement). On balance, it seems unlikely that many people would move more than 20 miles in this part of the country without a change of job; so it would seem reasonable to consider moves of over 20 miles as being *"long-distance"* in the context of this specific area.

4.11 Figure 34 sets out these key statistics for each of the identified migration zones based on the two migration containment ratios set out in the PAS OAN technical advice note (second edition, paragraph 5.15):

> *"Supply side (origin); moves within the area divided by all moves whose origin is in the area, excluding long-distance moves*
>
> *Demand side (destination): moves within the area divided by all moves whose destination is in the area, excluding long-distance moves."*

Figure 34: Statistics for Migration Zones (Source: 2001 Census)

		Migration Zone				
		Bedford	Central Bucks	Luton	Milton Keynes	Stevenage
Supply Side (origin)						
Moved within area		10,737	24,146	20,123	17,694	17,968
Moved from elsewhere	Moves of up to 20 miles	2,157	5,000	3,661	3,336	3,879
	Moves of 20 to 50 miles	1,302	5,252	3,116	2,616	3,161
	Moves of 50 miles or more	2,733	9,746	4,850	4,694	5,248
Total supply side moves		**16,929**	**44,144**	**31,750**	**28,340**	**30,256**
Moves within area as…	% of all moves	63.4%	54.7%	63.4%	62.4%	59.4%
	% of moves up to 50 miles	**75.6%**	**70.2%**	**74.8%**	**74.8%**	**71.8%**
	% of moves up to 20 miles	**83.3%**	**82.8%**	**84.6%**	**84.1%**	**82.2%**
Demand Side (destination)						
Moved within area		10,737	24,146	20,123	17,694	17,968
Moved from elsewhere	Moves of up to 20 miles	2,860	5,972	3,432	3,312	5,472
	Moves of 20 to 50 miles	1,745	5,499	3,747	3,791	3,766
	Moves of 50 miles or more	4,619	13,651	7,504	8,671	7,374
Total demand side moves		**19,961**	**49,268**	**34,806**	**33,468**	**34,580**
Moves within area as…	% of all moves	53.8%	49.0%	57.8%	52.9%	52.0%
	% of moves up to 50 miles	**70.0%**	67.8%	**73.7%**	**71.4%**	66.0%
	% of moves up to 20 miles	**79.0%**	**80.2%**	**85.4%**	**84.2%**	**76.7%**

4.12 On the supply side (i.e. moves originating in the area); it is evident that over 70% of migrants moving within the wider area (moves of up to 50 miles) stayed within the migration zones that the analysis identified, whereas typically at least 5-in-every-6 moves of up to 20 miles (82% or more) were moves within the identified zones.

4.13 On the demand side (i.e. moves whose destination is in the area) the proportions are lower; however typically at least two thirds of those moving within the wider area (moves of up to 50 miles) originated within the migration zones, with at least 70% of moves originating in the Bedford, Luton and Milton Keynes zones staying within the identified area. Nevertheless, when considering moves of up to 20 miles it is evident that all of the identified migration zones exceeded the typical 70% that PPG suggests; the lowest being the Stevenage migration zone where over three quarters (76.7%) of those moving up to 20 miles previously lived in the area.

4.14 Based on these statistics, it is reasonable to conclude that a *"relatively high proportion of household moves"* are contained within the migration zones identified, and therefore these functional areas all meet the requirements of PPG in this regard.

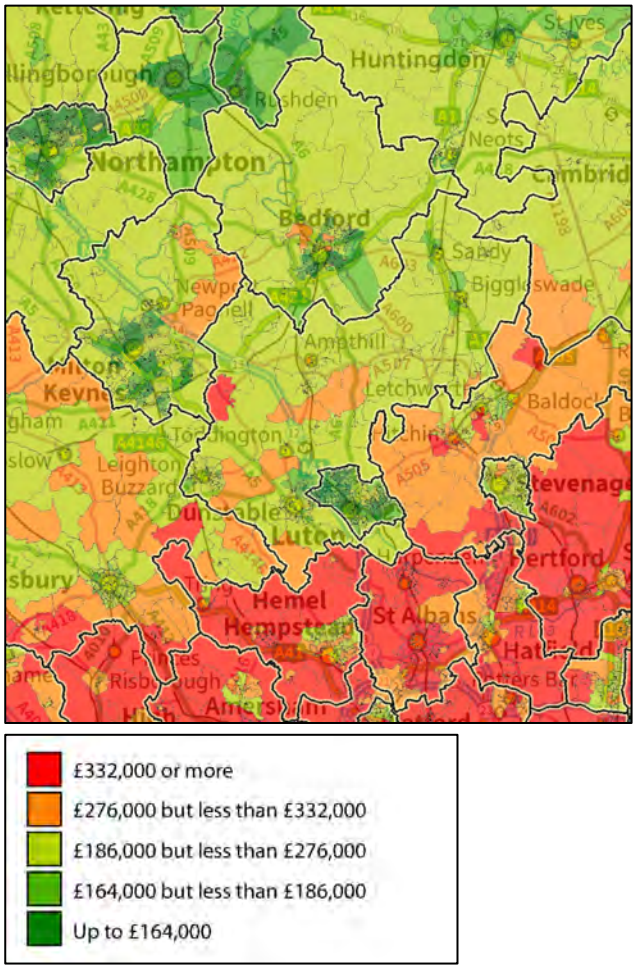
House Prices and Rents

4.15 As previously noted, CLG research and the PAS OAN technical advice note have both suggested that house prices are less relevant when defining upper-tier housing market areas but can provide a useful context for identifying housing sub-markets. Figure 35 shows current shows mix-adjusted average house prices relative to the average for the overall area, alongside the relative change in average house prices over the last 10 years.

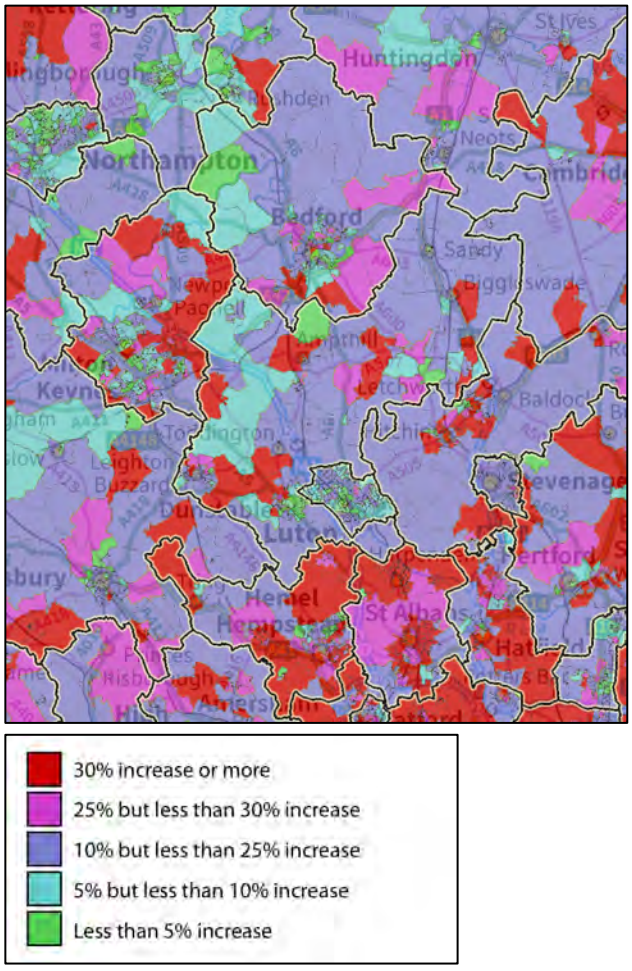
4.16 House prices are generally higher to the south and lower to the north of the area, but there are pockets of higher and lower prices in contrast to this trend.

Figure 35: Mix adjusted average house prices and 10-year change by MSOA (Source: HM Land Registry)

Current average house prices



10-year change in average house prices



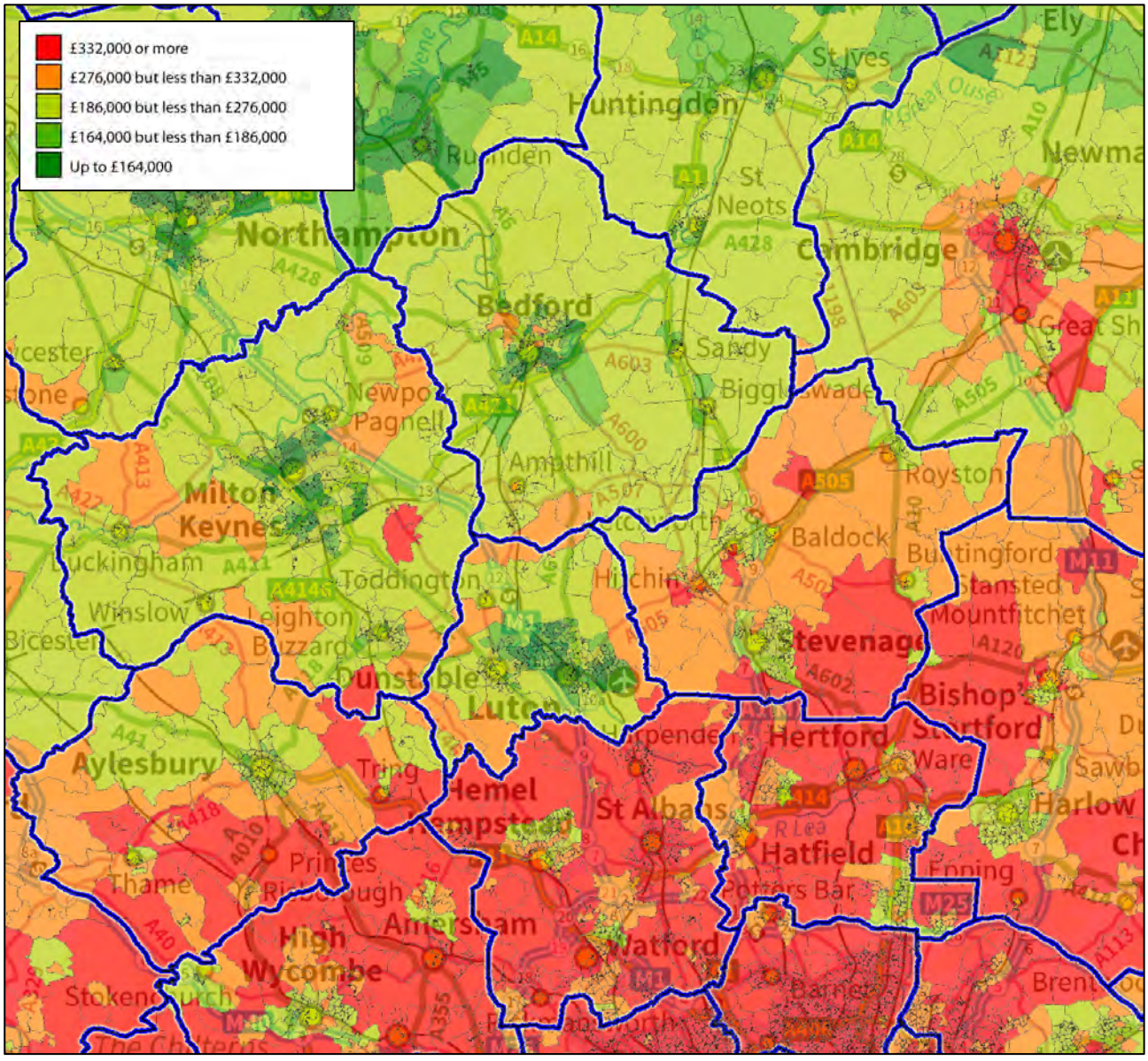
4.17 Neither the geographic spread of areas with higher and lower house prices nor the geographic spread of average house price changes would appear to provide a clear basis on which to define housing market areas. However, when this information is considered within the framework of the Valuation Office Agency (VOA) Broad Rental Market Area (BRMA) boundaries, some patterns do emerge (Figure 36).

4.18 BRMAs are the geographical area used by the Valuation Office Agency (VOA) to determine the Local Housing Allowance (LHA), the allowance paid to Housing Benefit applicants. The BRMA area takes into account local house prices and rents, and is based on where a person could reasonably be expected to live taking into account access to facilities and services.

4.19 Figure 36 clearly shows that mix-adjusted average house prices (and consequently market rents) are highest in and around North London:

- South East Herts BRMA and South West Herts BRMA generally cover areas in the highest price band outside London, in particular those MSOAs covering areas outside the main urban centres;
- There is a greater mix of areas in the top two bands covering Aylesbury BRMA and Stevenage & North Herts BRMA;
- Bedford BRMA, Luton BRMA and Milton Keynes BRMA generally cover areas with lower house prices, with some more expensive areas particularly in rural locations;
- Huntingdon BRMA, Northampton BRMA and Northants Central BRMA generally cover the areas with the lowest house prices, especially in the more urban areas; however
- The situation in the Cambridge BRMA differs from the BRMAs surrounding London: the highest house prices tend to be in the main urban centre with most other areas in the middle price band.

Figure 36: Mix adjusted average house prices by MSOA with Valuation Office Agency Broad Rental Market Area Boundaries (Source: HM Land Registry)



4.20 The Rent Officer Handbook: Broad Rental Market Areas (Local Reference Rent)[10] identifies that:

> *"**A BRMA (LRR) is an area:** within which a tenant of the dwelling could reasonably be expected to live having regard to facilities and services for the purposes of health, education, recreation, personal banking and shopping, taking account of the distance of travel, by public and private transport, to and from those facilities and services*
>
> *The BRMA (LRR) is subject to two conditions.*
>
> > *Firstly it must contain: residential premises of a variety of types, including such premises held on a variety of tenures.*
> >
> > *Secondly, a BRMA (LRR) must contain sufficient privately rented residential premises, to ensure that, in the rent officer's opinion, the local reference rents for tenancies in the area are representative of the rents that a landlord might reasonably be expected to obtain in that area."*

4.21 The boundaries of a BRMA do not have to match the boundaries of a local authority and BRMAs will often fall across more than one local authority area. Housing Market Areas (HMAs) and Broad Rental Market Areas (BRMAs) therefore both define areas based on housing along with the need to travel for work or to access services.

4.22 Bringing this together, it can be seen that HMAs are defined by household demand and preferences for all types of housing, reflecting the key functional linkages between places where people live and work; while BRMAs are areas within which a tenant of the dwelling could reasonably be expected to live having regard to facilities and services. Given that BRMAs should include residential premises of a variety of types, including such premises held on a variety of tenures, it is evident that the two definitions will tend to identify similar geographic areas in that they will be large enough to contain sufficient properties to be a market area, but limited in size by the need to travel for work or to access services. Travel, either for work or to access services is a key element of both definitions.

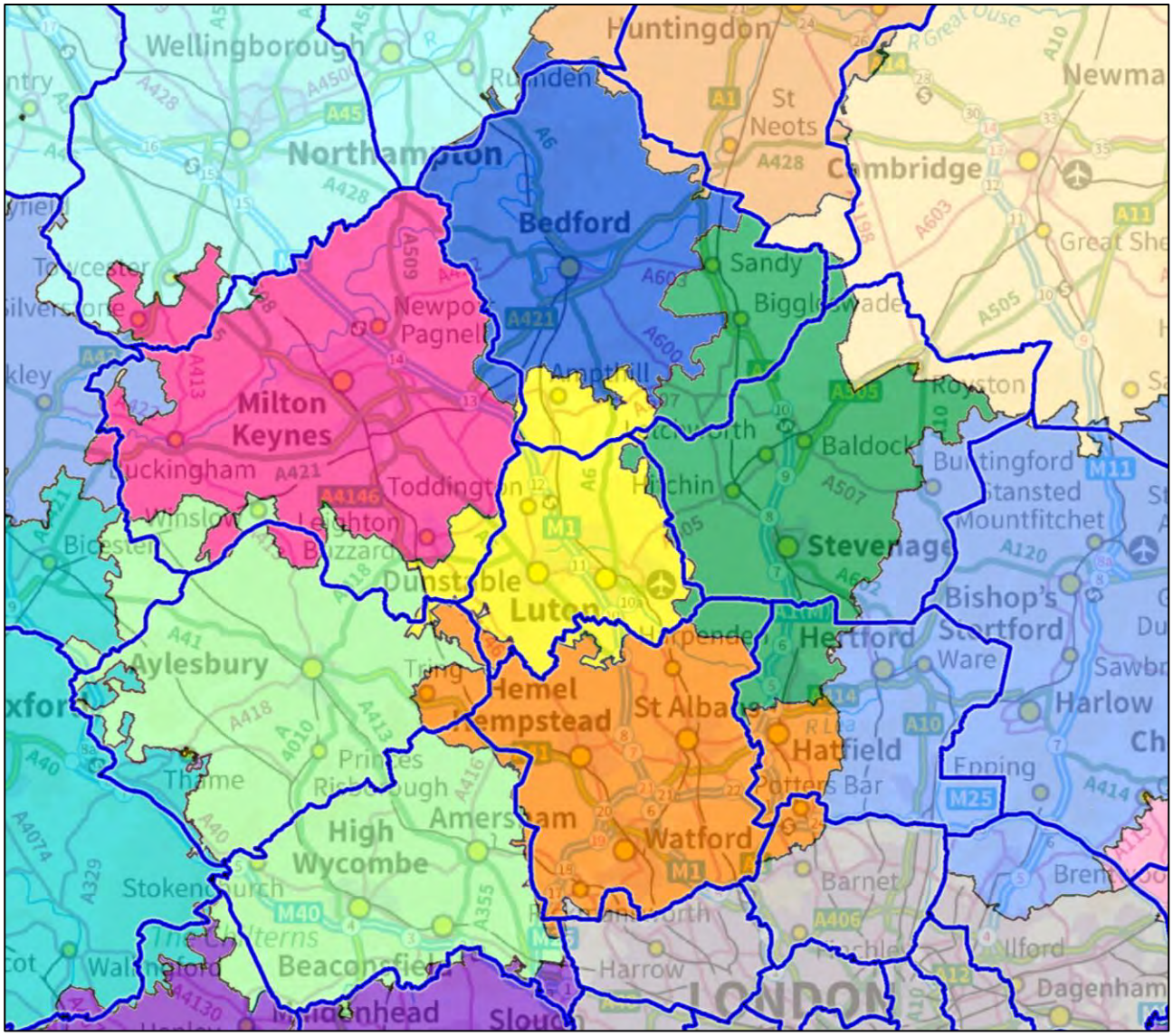
4.23 Both HMAs and BRMAs are based on *functional linkages* between where people live and work or where they live and access services. Places of work and services such as *health, education, recreation, personal banking and shopping* are predominantly based in larger settlements, becoming increasingly less common in smaller settlements and rural areas. Because of this, the definitions of HMAs and BRMAs in any area will tend to be centred around those urban centres, or on collections of settlements in rural areas without a major urban centre.

4.24 On this basis, it is helpful to review the previously identified commuting zones and migration zones (which both showed very similar patterns) with the BRMAs to understand the ways in which they are consistent and where they may differ. Figure 37 shows the BRMA boundaries overlaid on the commuting zones previously identified. It is evident that there are many similarities between the two geographies.

4.25 Whilst the precise boundaries may differ, each of the commuting zones generally corresponds with an equivalent BRMA: Bedford, Cambridge, Harlow, Luton, Stevenage and Watford were all identified as commuting zones and there is a BRMA equivalent for each. There are two BRMAs which cover the Central Buckinghamshire commuting zone; but the South East Herts BRMA (covering Broxbourne, Hatfield, Hertford, and Welwyn Garden City) does not have an equivalent commuting zone

[10] http://manuals.voa.gov.uk/corporate/publications/Manuals/RentOfficerHandbook/HousingBenefitReferral/Determination/b-roh-broad-rental-market-areas-LRR.html

Figure 37: Final commuting zones with VOA Broad Rental Market Area Boundaries



5. Conclusions

Proposed HMAs for Bedfordshire and surrounding areas

Housing Market Areas

5.1 The definition of a functional housing market area is well-established as being *"...the geographical area in which a substantial majority of the employed population both live and work and where those moving house without changing employment choose to stay"*. Consistent with previous CLG advice, PPG suggests that house prices, migration patterns and commuting flows should all be considered when defining housing markets; and by using a range of available data, judgements on appropriate geography can be made.

5.2 CLG research proposed three overlapping tiers of geography for housing markets, suggesting that information about commuting flows and migration patterns was most appropriate for identifying upper tier housing markets, with house prices being more relevant to identifying local housing markets and sub-markets. The focus on commuting flows and migration patterns is also supported by the recent PAS OAN technical advice note, which notes that *"In practice, the main indicators used are migration and commuting"* (second edition, paragraph 5.4).

Functional Housing Market Areas

5.3 Taking into account the detailed analysis of commuting, migration and house prices, it would be reasonable to conclude that there are five functional housing market areas in Bedfordshire and the surrounding study area; namely:

- Bedford housing market area;
- Central Buckinghamshire housing market area;
- Luton housing market area;
- Milton Keynes housing market area; and
- Stevenage housing market area.

5.4 Each of the areas identified by the analysis reflect *"key functional linkages between places where people live and work"* (ID 2a-010) and form a separate ONS Travel-to-Work Area. Our analysis has also demonstrated that all five are also *"areas within which a relatively high proportion of household moves are contained"* (ID 2a-011). Furthermore, these areas broadly correspond with official Broad Rental Market Areas which reflect local house prices and rents, and represent the area in which a person could reasonably be expected to live taking into account access to facilities and services.

5.5 Given this context, we would conclude that each of these five areas can be considered as separate strategic housing market areas in the context of the NPPF.

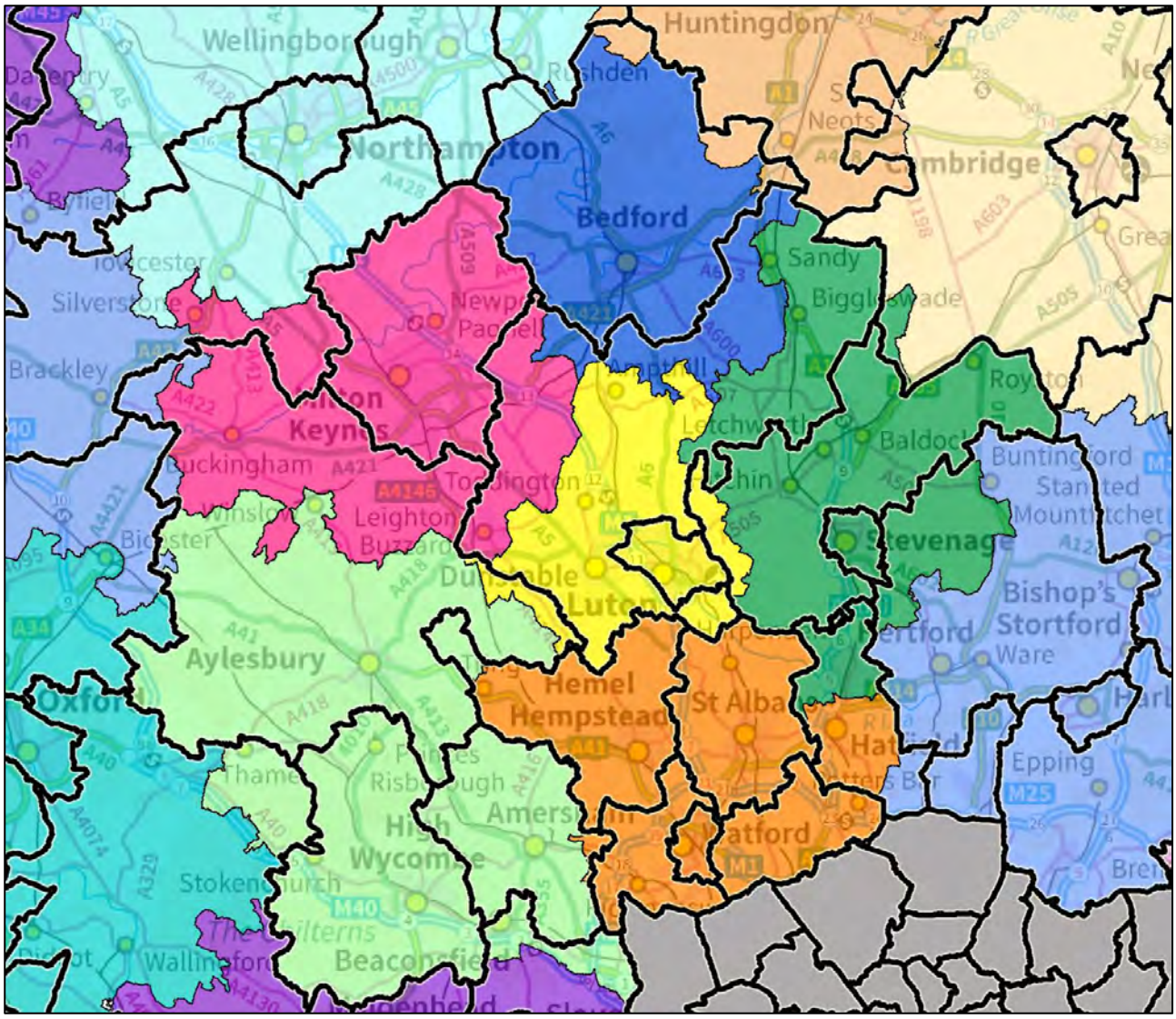
5.6 In establishing the most appropriate boundaries for these functional housing market areas, it is necessary to consider all of the evidence based on commuting zones, migration zones and house prices (based on Broad Rental Market Areas). We have previously identified clear similarities between the commuting zones

and migration zones, albeit that the direction of travel is reversed (net commuting flows tend to be towards London, whilst net migration flows tend to be away from London). Furthermore, we have demonstrated that these zones generally reflect the BRMA boundaries.

5.7 Given this context, Figure 38 illustrates the proposed functional housing market areas, which are based on majority agreement between these three geographies. Areas which fall within the same commuting zone, migration zone and BRMA are evidently allocated to that functional housing market area. Where there is disagreement between the three geographies, the functional housing market area is allocated based on the two geographies that do agree (and determined by the commuting zone in the few areas where all three geographies differ). For example:

- Ampthill is in the Bedford BRMA but in the Luton commuting zone and migration zone; so the area is allocated to the Luton functional HMA;
- Leighton Buzzard is in the Luton migration zone but in the Milton Keynes commuting zone and Milton Keynes BRMA; so the area is allocated to the Milton Keynes functional HMA; and
- Royston is in the Cambridge commuting zone but in the Stevenage migration zone and the Stevenage & North Herts BRMA; so the area is allocated to the Stevenage functional HMA.

Figure 38: Functional Housing Market Areas with Local Authority Boundaries



5.8 As previously noted, the analysis only defines the full extent of those HMAs situated entirely within the study area; neighbouring areas are only identified as far as is necessary to establish the most appropriate boundary between them and the HMAs within the study area. Figure 39 details the distribution of the resident population for the five functional housing market areas identified by local authority. Cells have been highlighted in dark green where two thirds or more of the population for a local authority area are resident in a functional housing market area. Cells have been highlighted in light green where at least a third of the population for a local authority are resident in a functional HMA.

Figure 39: Functional Housing Market Areas Resident Population by Local Authority Area (Source: 2011 Census. Note: Population rounded to nearest 100. Figures may not sum due to rounding)

Local Authority Area	Functional Housing Market Area											
	Bedford		Central Bucks		Luton		Milton Keynes		Stevenage		Elsewhere	
	N	%	N	%	N	%	N	%	N	%	N	%
Partner LAs												
Aylesbury Vale	-	-	139,100	79.9%	3,100	1.8%	29,700	17.1%	-	-	2,200	1.2%
Bedford	155,200	98.5%	-	-	-	-	-	-	-	-	2,300	1.5%
Central Beds	15,600	6.1%	-	-	114,900	45.2%	51,100	20.1%	72,800	28.6%	-	-
Luton	-	-	-	-	203,200	100.0%	-	-	-	-	-	-
Milton Keynes	-	-	-	-	-	-	248,800	100.0%	-	-	-	-
North Herts	-	-	-	-	1,700	1.3%	-	-	125,400	98.7%	-	-
Stevenage	-	-	-	-	-	-	-	-	84,000	100.0%	-	-
Surrounding LAs												
Chiltern	-	-	92,400	99.7%	-	-	-	-	-	-	200	0.3%
Dacorum	-	-	1,400	1.0%	-	-	-	-	-	-	143,500	99.0%
East Herts	-	-	-	-	-	-	-	-	8,400	6.1%	129,300	93.9%
East Northants	200	0.2%	-	-	-	-	-	-	-	-	86,600	99.8%
South Bucks	-	-	27,200	40.7%	-	-	-	-	-	-	39,600	59.3%
South Cambs	-	-	-	-	-	-	-	-	1,400	0.9%	147,400	99.1%
South Northants	-	-	-	-	-	-	10,000	11.8%	-	-	75,200	88.2%
South Oxon	-	-	20,200	15.0%	-	-	-	-	-	-	114,100	85.0%
Welwyn Hatfield	-	-	-	-	-	-	-	-	57,600	52.1%	53,000	47.9%
Wycombe	-	-	171,600	100.0%	-	-	-	-	-	-	-	-
TOTAL	**171,000**	-	**452,000**	-	**322,900**	-	**339,600**	-	**349,500**	-	-	-

5.9 The following sections summarise the distribution of population between local authority and functional housing market areas.

Bedford

5.10 With a total of 171,000 residents, Bedford functional housing market area is the smallest of the five areas identified in terms of population. It is evident that there is substantial overlap between the Bedford functional HMA and Bedford borough, with 90.7% of the HMA population resident in the borough and 98.5% of the boroughs population resident in the functional HMA. Of the borough's remaining residents, 1,300 live in the Northampton area (0.8%) and 1,000 live in the Huntingdon area (0.6%).

5.11 It is important to recognise that the Bedford functional HMA also includes 15,600 residents that live in Central Bedfordshire. However, this represents only 9.1% of the HMA population and 6.1% of the local authority's residents. A very small number of the Bedford functional HMA population (around 200) are residents of East Northamptonshire; this accounts for 0.2% of the HMA population.

Central Buckinghamshire

5.12 With a total of 452,000 residents, Central Buckinghamshire functional housing market area is the largest of the five areas identified in terms of population. The functional housing market covers the entire population of Wycombe district and almost all of Chiltern's population (99.7%, the remaining 0.3% forming part of the South West Hertfordshire area). Almost four-fifths of Aylesbury Vale's population also lives in the Central Buckinghamshire functional HMA (79.9%). Together, these three local authority areas account for 89.2% of the HMA population.

5.13 The remainder of the population is mainly divided between South Bucks (27,200 residents, equivalent to 6.0% of the HMA) and South Oxfordshire (20,200 residents, equivalent to 4.5% of the HMA). There are also a small number of residents in Dacorum (1,400, equivalent to 0.3% of the HMA). These represent only a small proportion of the overall population in Dacorum and South Oxfordshire (1.0% and 15.0% respectively) but a more substantial proportion of the population in South Bucks (40.7%).

Luton

5.14 Around two thirds of the Luton functional housing market area residents live in Luton borough (203,200 out of 322,900, equivalent to 62.9%), and all of the borough's population live in the HMA. Most of the remaining HMA residents live in Central Bedfordshire (114,900 persons, equivalent to 35.6% of the HMA) with a small number in Aylesbury Vale and North Hertfordshire (3,100 and 1,700 respectively, equivalent to 1.0% and 0.5% of the HMA).

5.15 Central Bedfordshire is split between four different functional housing market areas; and whilst just under half of its population lives in the Luton functional HMA (45.2%) this is by far the largest proportion, and comparable to the sum of the next two largest: Stevenage and Milton Keynes functional HMAs at 28.6% and 20.1% of the local authority population respectively.

Milton Keynes

5.16 All of the Milton Keynes local authority area is within the Milton Keynes functional housing market area. The borough represents 248,800 residents of the 339,600 total population (73.3%).

5.17 The remainder of the population is divided between Central Bedfordshire (51,100 residents, 15.0% of the HMA), Aylesbury Vale (29,700 residents, 8.8% of the HMA) and South Northamptonshire (10,000 residents, 2.9% of the HMA); however these all represent relatively small proportions of their respective overall local authority populations: 20.1% of Central Bedfordshire residents; 17.1% of Aylesbury Vale residents and 11.8% of South Northamptonshire residents.

Stevenage

5.18 Stevenage functional housing market area covers the whole of Stevenage borough as well as most of the population of North Herefordshire district (98.7%). Together, these two areas account for 209,400 of the 349,500 total population (59.9%).

5.19 Over half of the remaining HMA residents live in Central Bedfordshire (72,800, equivalent to 20.8% of the HMA); although this represents a notably smaller percentage of the local authority residents than the Luton functional HMA. The functional HMA also has 57,600 residents in Welwyn Hatfield (16.5% of the HMA), which represents around half of the local authority residents (52.1%). There are also a smaller number in East Hertfordshire (8,400 residents, 2.4% of the HMA) and South Cambridgeshire (1,400 residents, 0.4% of the HMA).

Administrative Boundaries and Housing Market Areas

5.20 The NPPF recognises that housing market areas may cross administrative boundaries, and PPG emphasises that housing market areas reflect functional linkages between places where people live and work. The previous 2007 CLG advice note[11] also established that functional housing market areas should not be constrained by administrative boundaries, nevertheless it suggested the need for a "best fit" approximation to local authority areas for developing evidence and policy (paragraph 9):

> *"The extent of sub-regional functional housing market areas identified will vary and many will in practice cut across local authority administrative boundaries. For these reasons, regions and local authorities will want to consider, for the purposes of developing evidence bases and policy, using a pragmatic approach that groups local authority administrative areas together as an approximation for functional sub-regional housing market areas."*

5.21 This "best fit" approximation has also been suggested by the PAS OAN technical advice note, which suggests (second edition, paragraph 5.9):

> *"boundaries that straddle local authority areas are usually impractical, given that planning policy is mostly made at the local authority level, and many kinds of data are unavailable for smaller areas."*

5.22 This means there is a need for balance in methodological approach:

- On the one hand, it is important that the process of **analysis and identification of the functional housing market areas should not be constrained by local authority boundaries**. This allows the full extent of each functional housing market to be properly understood and ensures that all of the constituent local planning authorities can work together under the duty to cooperate, as set out in Guidance (PPG, ID 2a-010).
- On the other hand, and as suggested by the PAS OAN technical advice note (and the previous CLG advice note), **it is also necessary to identify a "best fit" for each functional housing market area that is based on local planning authority boundaries**. This "best fit" area provides an appropriate basis for analysing evidence and drafting policy, and would normally represent the group of authorities that would take responsibility for undertaking a Strategic Housing Market Assessment (SHMA) or Housing and Economic Development Needs Assessment (HEDNA).

5.23 In summary, therefore, the approach to defining housing market areas needs to balance robust analysis with pragmatic administrative requirements.

5.24 Therefore, whilst we have established the most up-to-date functional housing markets for the Bedfordshire and the surrounding areas, it is now necessary to consider the most appropriate working arrangements for establishing the evidence base that the NPPF requires.

[11] Identifying sub-regional housing market areas (CLG, March 2007)

Proposed "Best Fit" Housing Market Areas

5.25 The analysis has clearly identified five functional housing market areas in Bedfordshire and the surrounding study area. The following sections consider the most appropriate "best fit" for each local authority area with the functional housing market areas that have been identified.

Bedford

5.26 We have already concluded that there is substantial overlap between the Bedford functional HMA and Bedford borough: almost all of the borough's residents live in the HMA (99%) and the substantial majority of the HMA residents live in the borough (91%). Whilst the HMA also covers part of Central Bedfordshire, this only represents a small proportion of the local authority residents.

5.27 **It is therefore reasonable to conclude that Bedford borough represents the most appropriate "best fit" for Bedford functional HMA**.

Central Buckinghamshire

5.28 The analysis shows that the Central Buckinghamshire functional HMA covers virtually all of Chiltern and Wycombe residents together with four-fifths of those living in Aylesbury Vale; and these areas combined account for almost 90% of the HMA population.

5.29 It is apparent that the South Bucks population is divided with approaching half living in the Central Buckinghamshire functional HMA and the remainder living in the Berkshire functional area – so in considering a "best fit", it could be argued that South Bucks should be associated with either of these areas. Whilst accepting that South Bucks district is divided and that the final conclusion is inevitably based on a judgement, on balance it is probably not appropriate to include the local authority within the "best fit" for Central Buckinghamshire HMA.

5.30 **We would therefore conclude that the combined area of Aylesbury Vale district, Chiltern district and Wycombe borough represents the most appropriate "best fit" for Central Buckinghamshire functional HMA**.

Luton

5.31 Almost all of the residents living in Luton functional HMA live in either Luton or Central Bedfordshire (99%). All of Luton borough's residents live in the HMA, however the HMA represents just under half (45%) of Central Bedfordshire's population. Nevertheless, Central Bedfordshire is split across four functional HMAs; and the population living in the Luton functional HMA is by far the largest.

5.32 **On this basis, we would conclude that the combined area of Luton borough and Central Bedfordshire represents the most appropriate "best fit" for Luton functional HMA**.

Milton Keynes

5.33 All of the Milton Keynes local authority area is within the Milton Keynes functional HMA and the borough represents almost three quarters of the HMA population. The remainder of the population is divided between Central Bedfordshire, Aylesbury Vale and South Northamptonshire; however the Milton Keynes functional HMA represents relatively small proportions of their overall populations.

5.34 **It is therefore appropriate to conclude that Milton Keynes borough represents the most appropriate "best fit" for Milton Keynes functional HMA**.

Stevenage

5.35 The analysis has demonstrated that Stevenage functional HMA covers the whole of Stevenage borough as well as most of the population of North Herefordshire district (99%). Together, these two areas account for three fifths of the HMA population.

5.36 Of the remaining residents, over half live in Central Bedfordshire; but this represents only around a quarter of the local authority residents. Central Bedfordshire is split across four functional HMAs, and given that almost half of the local authority population lives in the Luton functional HMA we concluded that the "best fit" for Central Bedfordshire was as part of Luton HMA.

5.37 It is apparent that the Welwyn Hatfield population is divided: around half (52%) are resident in Stevenage functional HMA, with most others (43%) resident in the South West Hertfordshire area. Therefore, in considering a "best fit", Welwyn Hatfield could be reasonably associated with either of these two areas. In terms of the Stevenage functional HMA, Welwyn Hatfield residents represent only 16% of the HMA population; so on this basis there does not appear to be an overwhelming need for the local authority area to be part of the "best fit" – in particular given that Central Bedfordshire (which represents 21% of the HMA population) is not included.

5.38 **Based on the evidence, it seems reasonable to conclude that the combined area of Stevenage borough and North Hertfordshire district provides an appropriate "best fit" for Stevenage functional HMA. Whilst this area could be expanded to include Welwyn Hatfield district, we would not consider it essential for Welwyn Hatfield to be included within the "best fit" for Stevenage functional HMA.**

Stakeholder Feedback about the Conclusions and the Proposed HMAs

5.39 A Consultation Draft of the final report was circulated to stakeholders on Wednesday 11 November 2015 and all feedback received by noon on Tuesday 8 December was considered.

Huntingdonshire District Council

5.40 Huntingdonshire District Council responded, noting that *"based on the Cambridge sub-region SHMA, Huntingdonshire is considered to be part of the wider Cambridge sub-region HMA"*; however their response also acknowledged that some geographies consider Cambridge and Huntingdon to be separate functional areas (for example, they noted that *"the ONS defines a discrete Huntingdon Travel to Work Area"*).

5.41 Given this context, they noted that the study *"helpfully states at paragraph 3.6 'the analysis only identifies the full extent of those HMAs situated entirely within this area; neighbouring areas will only be identified as far as is necessary to establish the most appropriate boundary between them and the HMAs being identified within the study area'"*. Based on this feedback, we have reiterated this point in the study conclusions (paragraph 5.8).

St Albans District Council

5.42 A response was also received from St Albans District Council; however they had more fundamental concerns about the study conclusions. They disagreed with the PAS OAN technical advice note about the *"main indicators"* when defining HMAs being commuting and migration, and emphasised the PPG definition at ID 2a-010 and the information sources set out at ID 2a-011: their response noting that these *"point to the central importance of house prices as a key market indicator"*.

5.43 As summarised at paragraph 5.4, this study has clearly recognised the importance of all three information sources listed in the PPG at ID 2a-011; nevertheless, we would not agree that house prices are of *"central importance"*. Whilst it is clearly important for house prices to be considered, the PPG definition (ID 2a-010) sets out the need for housing market areas to reflect "*key functional linkages between places where people live and work"*; which lends support to the focus on commuting, as proposed by the PAS advice note.

5.44 St Albans District Council also raised a specific concern about the study not appearing to *"reach a conclusion about the most appropriate HMA for other authorities, most specifically St Albans"*. We note this concern, and would re-emphasise that this study only seeks to define housing market areas for the commissioning partnership, as set out below in the final conclusions.

Dacorum Borough Council (on behalf of their SHMA partnership)

5.45 Finally, a joint response was received from Dacorum Borough Council on behalf of the local planning authorities in their SHMA partnership (Dacorum Borough Council, Hertsmere Borough Council, Three Rivers District Council and Watford Borough Council). Their joint response noted that *"the report provides a helpful overview of all work on HMAs in the Bedfordshire, Buckinghamshire and Hertfordshire"* and that *"the work considers all appropriate data listed in the PPG as relevant when assessing HMAs, including commuting flows, migration flows, house prices and rents"*.

5.46 The partnership agreed with the broad conclusions of this study, noting the consistency with their own SHMA which concluded for their area: *"when applying a 'best fit' approach, the logical HMA for South West Herts area comprises the Dacorum, Watford, Three Rivers, Hertsmere and St Albans Council areas"*.

Final Conclusions

5.47 Based on a detailed analysis of the evidence, we would therefore recommend to the commissioning partners that the most pragmatically appropriate "best fit" for housing market areas in Bedfordshire and the surrounding areas comprises:

- **Bedford HMA:** Bedford borough;
- **Central Buckinghamshire HMA:** Aylesbury Vale district, Chiltern district and Wycombe borough;
- **Luton HMA:** Luton borough and Central Bedfordshire;
- **Milton Keynes HMA:** Milton Keynes borough; and
- **Stevenage HMA:** Stevenage borough and North Hertfordshire district.

5.48 Whilst we believe that these proposed groupings provide the overall "best fit" for joint working on the basis of the available evidence, they are not the only arrangements possible given the complexities of the functional housing market areas in the region. It is important to note that these "best fit" groupings do not change the actual geography of the functional housing market areas identified in Figure 38 – they simply provide a pragmatic arrangement for the purposes of establishing the evidence required and developing local policies, as suggested by the CLG advice note and reaffirmed by the PAS technical advice note.

5.49 The functional housing market areas provide the most appropriate framework for spatial planning; and regardless of the final "best fit" groupings, where these functional areas cross administrative boundaries it will be important for the local planning authorities to maintain dialogue with neighbouring areas under the Duty to Cooperate. All seven districts will also need to maintain dialogue with each other, as well as with the Mayor of London through the Greater London Authority.

Table of Figures

Figure 1: NHPAU Study - PAS Advice Note 'Starting Point" 7
Figure 2: NHPAU Study - Lower tier based on migration (50%) within commuting-based upper tier (77.5%) 7
Figure 3: Proposed Sub-Regional Housing Markets (DTZ 2004; for the South East Regional Housing Board) 11
Figure 4: Extract from Buckinghamshire SHMA (2008) 12
Figure 5: Extract from LCB (West) SHMA (2008): Functional Housing Sub-Markets 13
Figure 6: Extract from Bedfordshire and Luton SHMA (2010) 14
Figure 7: Extract from Aylesbury Vale SHMA Validation Study (2013): Map of the Strategic Housing Market Area 15
Figure 8: Extract from Cambridge sub-Region SHMA (2013) 16
Figure 9: Extract from St Albans SHMA (2013) 17
Figure 10: Extract from Milton Keynes SHMA (2008): Identifying the Links between Urban Centres in the Study Area 18
Figure 11: Extract from Milton Keynes SHMA (2008): Identifying the Functional Housing Sub-Markets in the Sub-Region 19
Figure 12: Extract from Welwyn Hatfield SHMA (2014) 20
Figure 13: Extract from Buckinghamshire HMA (2015): commuting at 75% containment 21
Figure 14: ONS 2011 Travel To Work Areas (Source: ONS 2015) 23
Figure 15: Urban Areas based on DEFRA Classification 25
Figure 16: Areas with Commuting Ratio less than 1.0 25
Figure 17: Urban Areas outside London and Employment Areas 26
Figure 18: 'Seeds' for Housing Market Areas 26
Figure 19: Initial model outputs at 50% containment threshold 27
Figure 20: Model outputs with restricted growth of Central London at 60% containment threshold 28
Figure 21: Model outputs with restricted growth of Central London at 70% containment threshold 29
Figure 22: Model outputs with restricted growth of Central London at 72% containment threshold 29
Figure 23: Original seeds that have become 'unseeded' 31
Figure 24: The impact of "unseeding" smaller settlements; model outputs at 72% containment of seed clusters 31
Figure 25: COAs with absolute majorities (over 50%) of workers travelling to and from the area 32
Figure 26: COAs based on simple majorities of workers travelling to or from the area 33
Figure 27: COAs based on simple majorities of workers travelling to or from the area, including Greater London 33
Figure 28: Final commuting zones with contiguous areas based on COAs, showing LA administrative boundaries 35
Figure 29: Statistics for Commuting Zones at 72% Containment (excluding Greater London) (Source: 2011 Census; Note: Dark green cells exceed the ONS TTWA target of 75%; light green cells meet or exceed the ONS TTWA threshold of 66.7% whilst red cells do not achieve the ONS TTWA minimum threshold) 35
Figure 30: Resident Population in 2011 by Local Authority Area and Proposed Commuting Zone (Source: 2011 Census. Note: Population rounded to nearest 100. Figures may not sum due to rounding) 36
Figure 31: Final Commuting Zones showing Local Authority administrative boundaries 37
Figure 32: MSOAs with the strongest migration links to the final seed clusters, showing commuting zone boundaries 38
Figure 33: Catchment area for moves to and from Bedford migration zone, excluding long-distance moves (Note: Inner circle based on moves of up to 20 miles; outer circle based on moves of up to 50 miles) 40
Figure 34: Statistics for Migration Zones (Source: 2001 Census) 41
Figure 35: Mix adjusted average house prices and 10-year change by MSOA (Source: HM Land Registry) 42
Figure 36: Mix adjusted average house prices by MSOA with Valuation Office Agency Broad Rental Market Area Boundaries (Source: HM Land Registry) 43
Figure 37: Final commuting zones with VOA Broad Rental Market Area Boundaries 45
Figure 38: Functional Housing Market Areas with Local Authority Boundaries 47
Figure 39: Functional Housing Market Areas Resident Population by Local Authority Area (Source: 2011 Census. Note: Population rounded to nearest 100. Figures may not sum due to rounding) 48

Appendix A

List of Stakeholders

Project Partners

- Aylesbury Vale District Council
- Bedford Borough Council
- Central Bedfordshire Council
- Luton Borough Council
- Milton Keynes Council
- North Hertfordshire District Council
- Stevenage Borough Council

Neighbouring Areas

- Cambridgeshire & Peterborough Joint Strategic Planning Unit
- Dacorum Borough Council
- East Hertfordshire District Council
- East Northamptonshire Council
- Hertsmere Borough Council
- Huntingdonshire District Council
- North Northamptonshire Joint Planning Unit
- South Cambridgeshire District Council
- Three Rivers District Council
- Uttlesford District Council
- Watford Borough Council
- Wellingborough Borough Council
- Welwyn Hatfield Borough Council

Appendix B

Study Method Statement

Identifying Housing Market Areas: A proposed approach from Opinion Research Services for Bedfordshire and the surrounding areas

1. The National Planning Policy Framework (NPPF) (CLG, March 2012) requires local planning authorities to have a *"clear understanding of housing needs in their area … working with neighbouring authorities where housing market areas cross administrative boundaries"* (paragraph 159).

2. Given this context, Opinion Research Services (ORS) was jointly commissioned by the councils that cover the former county of Bedfordshire (Luton, Central Bedfordshire and Bedford) together with Aylesbury Vale, Milton Keynes, Stevenage and North Hertfordshire councils, to identify the Housing Market Areas (HMAs) in their administrative areas.

3. Planning Practice Guidance on the Assessment of housing and economic development needs (PPG) (CLG, March 2014) provides guidance on how Housing Market Areas (HMAs) can be defined. Whilst this Guidance provides the basis for identifying HMAs for Bedfordshire and the surrounding areas, this Paper sets out the specific methodology for the proposed approach for the Bedfordshire study.

4. The study hopes to derive a consensus from local planning authorities and other relevant stakeholders about the most appropriate HMAs for Bedfordshire and surrounding areas. These functional geographies will then provide the Councils basis to undertake further work and develop the evidence base required for the objective assessment of housing and economic need.

Housing Market Areas

5. Planning Practice Guidance sets out at paragraph 10 that:

> *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.*
>
> *Where there is a joint plan, housing requirements and the need to identify a five year supply of sites can apply across the joint plan area. The approach being taken should be set out clearly in the plan.*

6. It subsequently states that *"housing market areas can be broadly defined by using three different sources of information"*, these being:

- House prices and rates of change in house prices
- Household migration and search patterns
- Contextual data (for example travel to work area boundaries, retail and school catchment areas)

7. However, advice recently published in the Planning Advisory Services (PAS) technical advice note "Objectively Assessed Need and Housing Targets" (PAS, June 2014) suggests that the main indicators will be migration and commuting (paragraph 4.4).

> *The PG provides a long list of possible indicators, comprising house prices, migration and search patterns and contextual data including travel-to-work areas, retail and school catchments. With regard to migration, it explains that areas that form an HMA will be reasonably self-contained, so that a high proportion of house moves (typically 70%) occur within the area[5]. In practice, the main indicators used are migration and commuting.*

8. The PAS advice note also suggests that analysis reported in the CLG report "Geography of Housing Market Areas" (CLG, November 2010) should provide a starting point for drawing HMAs. This study was commissioned by the former National Housing and Planning Advice Unit (NHPAU) and undertaken by the Centre for Urban and Regional Development Studies (CURDS) at Newcastle University. However, the analysis of migration and commuting was based on data from the 2001 Census, so the PAS advice note recognises that *"more recent data should always 'trump' this geography"* (paragraph 4.9).

Functional Housing Market Areas

9. The NPPF recognises that housing market areas will cross administrative boundaries, although the PAS advice note suggests that (paragraph 4.11):

> *It is best if HMA boundaries do not cut across local authority areas. Dealing with areas smaller than local authorities causes major difficulties in analysing evidence and drafting policy. For such small areas data availability is poor and analysis is complex.*

10. Nevertheless, the PPG emphasises that housing market areas reflect functional linkages between places where people live and work.

11. The previous CLG advice note "Identifying sub-regional housing market areas" (CLG, March 2007) established that functional housing market areas were not constrained by administrative boundaries, though recognised the need for a "best fit" approximation to local authority areas for developing evidence and policy (paragraph 9):

> *The extent of sub-regional functional housing market areas identified will vary and many will in practice cut across local authority administrative boundaries. For these reasons, regions and local authorities will want to consider, for the purposes of developing evidence bases and policy, using a pragmatic approach that groups local authority administrative areas together as an approximation for functional sub-regional housing market areas.*

12. When identifying housing market areas, it remains important to properly differentiate between functional housing market areas and the pragmatic need for a "best fit" to local authority boundaries. It is also important that the process for identifying functional housing market areas is not constrained by local authority boundaries. This allows the full extent of each functional housing market to be properly understood and ensures that all of the constituent local planning authorities can work together under the duty to cooperate, as set out in Guidance (PPG, paragraph 10).

13. However, as suggested by the recent PAS advice note (and the previous CLG advice note), it is also necessary to identify a "best fit" for each functional housing market area that is based on local planning authority boundaries. This "best fit" area provides an appropriate basis for analysing evidence and drafting

policy, and would normally represent the group of authorities that would take responsibility for undertaking a Strategic Housing Market Assessment (SHMA).

Defining Housing Market Areas

14. When defining housing market areas, it is important that functional housing markets are not constrained to local authority boundaries – so it is necessary to use smaller geographic areas as the basic "building block". Whilst we would normally focus initially on migration patterns, migration data from the 2011 Census is only publically available at local authority level, and the most recent data that is readily available at a sufficiently fine-grained geography is still the 2001 Census. However, commuting flow data from the 2011 Census has recently been published for smaller areas, namely Middle-layer Super Output Areas (MSOAs). Given this context, it is appropriate to start our analysis using the commuting flow data.

15. In considering the housing market areas for Bedfordshire and the surrounding areas, our initial analysis will be based on the geographic area from Peterborough in the north to the City of London in the south, and from Oxford in the west to Cambridge in the east. This will ensure that all functional housing market areas are properly identified without unduly focussing on the local planning authorities within the study area. Nevertheless, the study will only identify the full extent of those housing market areas for the commissioning local authorities – neighbouring housing markets will only be identified as far as is necessary to establish the most appropriate boundary between them and the housing market areas being identified in and around Bedfordshire.

Identifying Travel to Work Areas

16. Insofar as the proposed analysis will initially focus on commuting flows, the areas established will be travel to work areas rather than housing market areas. Nevertheless, as previously outlined, commuting patterns form an important element of the analysis required to establish functional housing market areas.

17. The process for identifying the travel to work areas can be summarised as follows:

- **Step 1:** Identify MSOAs within the geographic area (but outside the Greater London region) where all of the constituent Census Output Areas have been classified as being "urban" under the 2011 Rural Urban Classification (DEFRA, September 2011).
- **Step 2:** Group together any contiguous urban MSOAs (outside the Greater London region) into single seed points.

  Note that the Greater London MSOAs are excluded from steps 1 and 2 as almost all MSOAs within the region are urban, and this would create a single seed point covering the whole of London at the outset of the analysis process. Whilst Greater London will clearly be an important housing market, we do not want this to be based simply on it being a contiguous urban area. Greater London MSOAs are introduced into the process from step 3 onwards.
- **Step 3:** Identify MSOAs within the geographic area (including those in Greater London) with a commuting ratio that is less than 1.0 (i.e. where the workplace population is larger than the resident population).
- **Step 4:** Associate those MSOAs with concentrations of employment with the existing seed point with which they have the strongest relationship. Where these MSOAs are not contiguous with an urban area (including all MSOAs in Greater London) and have only weak relationships with the existing seed points, employment MSOAs will form a new independent seed point.

- **Step 5:** For every MSOA in the geographic area, associate it with the seed point (or seed point cluster) that has the largest number of workers resident in that MSOA.
- **Step 6:** Based on the MSOAs associated with each seed point (or seed point cluster) at Step 5, calculate the proportion of the resident population that work in the area and the proportion of the workplace population that live in the area to establish a self-containment ratio.
- **Step 7:** If all seed points (or seed point clusters) have an acceptable self-containment ratio, the process will stop; otherwise for the seed point with the lowest self-containment ratio, the seed point with which it has the strongest relationship (based on the commuting flows and distance between the two seed points) is identified and the two seed points are clustered together. Where the seed point with the lowest self-containment ratio is already formed of a cluster of seed points, the cluster is separated and the strongest relationship is identified for each of the original seed points before new clusters are formed.

  The process from Step 5 to Step 7 is then repeated until an acceptable self-containment ratio is achieved across all seed points (or seed point clusters).

18. The final distribution of areas will depend on the level at which the self-containment ratio is considered to be acceptable. The higher that the self-containment ratio is required to be, the larger (and more strategic) the identified areas will become – as smaller areas will tend to have lower levels of self-containment.

Self-Containment Thresholds

19. Given that there is no single correct threshold for self-containment, the analysis will consider the distribution of areas at different threshold points. These will include:

- 75% which is the target for ONS Travel-To-Work Areas;
- 70% which is set out as representing "a relatively high proportion of household moves" in paragraph 11 of the Planning Practice Guidance; and
- 66.7% which is the minimum threshold for ONS Travel-To-Work Areas that have a working population in excess of 25,000 workers.

20. It is likely that the London housing market will be important given the number of workers that commute from the study area to London, and the number of people that migrate from London to the study area each year. Given the potential influence of London, it is important to note that paragraph 10 of the Planning Practice Guidance recognises that *"it might be the case that housing market areas overlap"* and it would be important to identify local housing market areas that might also exist.

21. Given this context, depending on the outputs and the extent to which London is shown to extend into the study area on the basis of these thresholds, it may be appropriate to sensitivity test self-containment ratios at lower thresholds. If this is considered necessary, we would initially review the analysis based on thresholds of 40, 50 and 60%. It may also be appropriate to repeat the analysis excluding all workers who work in the centre of London, but ensuring that local patterns (such as those workers commuting to Heathrow and other parts of outer London) continue to be included within the analysis.

Migration and House Price Data

22. The analysis of commuting patterns from the 2011 Census will form an important part of the evidence used to establish housing market areas – but it will also be important to review the available migration and house price data.

23. Local-level Census data about detailed migration flows will be reviewed to understand the proportion of movers that stayed within the areas identified using the commuting flow data; although this analysis will exclude long-distance moves where it is likely that people will also change employment at the time of their move.

24. More recent data about migration between local authorities will also be considered (such as from the NHS Central Register), although this is often less useful as the main relationships tend to normally be with neighbouring areas. This is recognised in the PAS advice note, which states (paragraph 4.5):

> *One problem in drawing boundaries is that, if each local planning authority were to draw an HMA centred on its area, there would be almost as many HMAs as local authorities. This is because the largest migration flows in and out of any individual authority are usually those linking it with immediately adjacent authorities. But each of these adjacent authorities will most probably find that their largest migration flows link them to their immediate neighbours, and the chain continues indefinitely.*

25. With regard to house prices, whilst the analysis will consider the latest absolute (and relative) prices, it is arguably more important to understand the rate of change – for whilst a housing market area is likely to include houses with a range of different prices, prices are likely to increase (or reduce) at a comparable rate in each housing market area. However, once again, the proximity of London is likely to also be a significant influence on house price patterns across Bedfordshire and the surrounding areas.

Reviewing the Evidence

26. Whilst the analysis of the housing market geography in and around Buckinghamshire proposed above will inevitably be based on more recent data than previous studies, we will also review the conclusions from earlier work. This will include:

- Geography of Housing Market Areas in England (NHPAU/CURDS, 2010);
- Broad Rental Market Areas (VOA); and
- Strategic Housing Market Assessments and other studies undertaken in and around Bedfordshire.

27. The evidence from the analysis of commuting flows, migration flows and house prices will be reviewed collectively in the context of these previous studies to provide recommendations about the most appropriate functional housing market areas.

28. Once the functional housing market areas have been established, the study will also consider the most appropriate “best fit” housing market areas based on local planning authority boundaries.

Involving Stakeholders

29. The study includes provision for extensive stakeholder involvement on both method and outputs.

Stakeholder feedback on Methodology

30. This Methodology Paper is being circulated by email to stakeholders, together with an invitation to a stakeholder workshop.

31. Stakeholders are invited to feedback by **Monday 1 June** if they have any specific concerns or comments about the approach. If there are any queries about the methodology, these can be sent by email to trevor.baker@ors.org.uk and we will get in touch (either by telephone or email) to discuss these.

32. Any feedback received and responses made will be recorded, and any issues which propose changes to study methodology will be discussed and agreed with the project steering group.

Stakeholder Workshop

33. A stakeholder workshop will be held on **Tuesday 16 June**. A paper setting out the emerging outputs of the analysis will be prepared and reviewed by the project steering group. Once agreed by the project steering group, we will circulate a copy by email to stakeholders in advance of the workshop. This paper will be circulated as soon as possible, but the final date will depend on the nature of feedback received about the proposed method, and any changes to the study methodology agreed.

34. The emerging study analysis will presented and explained at the workshop, and Stakeholders will have the opportunity to ask any questions to clarifying the approach and the initial conclusions of the study. Stakeholders will also have the opportunity to discuss the emerging evidence and provide initial feedback.

Stakeholder feedback on Emerging Outputs

35. If any queries about the study arise after the workshop, these can be sent by email and we will get in touch (either by telephone or email) to discuss these. We would then ask for any formal comments about the emerging study outputs to be provided no later than **Friday 26 June**.

36. Where it would be helpful to discuss any feedback with individual stakeholders, we will do this by telephone or email in the first instance. Where any stakeholders had concerns that would benefit from one-to-one discussions, we propose to host a sequence of appointment-based face-to-face drop-in sessions at an agreed central venue to seek to respond to and, where realistically possible, resolve such issues. The date for this will be confirmed at the Workshop, if not sooner.

37. Any feedback received and responses made (including any subsequent discussions) will be recorded, and responses will be agreed with the project steering group. This will include any recommendations for changes to the assumptions associated with the emerging outputs and the initial conclusions of the study.

38. Following this process, the emerging study outputs and the study conclusions would be finalised and reported to the project steering group. The final study report will be published, together with supporting data, once the document has been agreed by the steering group.

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Appendix C

Stakeholder Workshop Presentation Slides

www.ors.org.uk

Identifying HMAs in Bedfordshire and the surrounding areas

Workshop to Review Emerging Outputs
16 June 2015

Overview of Workshop

- Review of previous HMA analysis
- Commuting Flows from 2011 Census
- Further information for HMAs

www.ors.org.uk

REVIEW OF PREVIOUS ANALYSIS OF HOUSING MARKET AREAS

Sub-Regional Housing Markets: East of England (2008)

Sub-Regional Housing Markets in the South East (2004)

NHPAU Study – PAS advice note "starting point"

NHPAU Study – alternative output

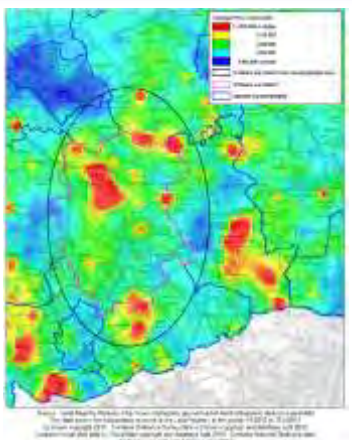
ONS Travel To Work Boundaries (2007)

Functional Housing sub-markets: LCB East (2008)

Housing Market Area: Cambs and West Suffolk (2013)

Source: CCCRG, December 2013

Core Housing Market: St Albans (2013)

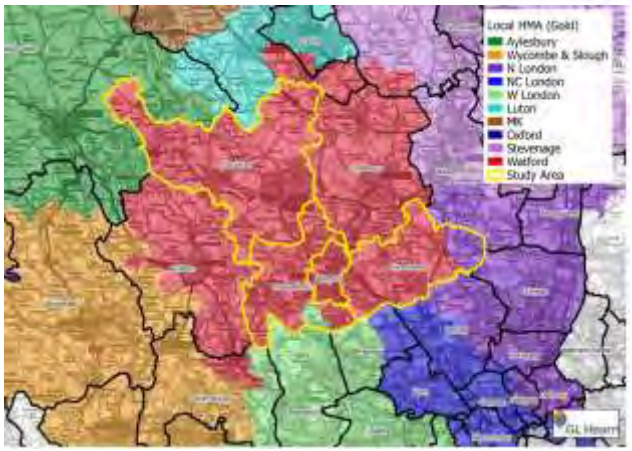


Housing Market Areas: Buckinghamshire (2015)

Strategic HMAs
(left)

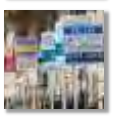
Local HMAs
(below)

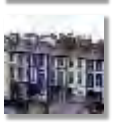
Housing Market Areas: South-West Hertfordshire (2015)

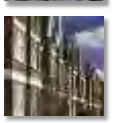


A perspective on the London HMA: NLP (2014)

www.ors.org.uk

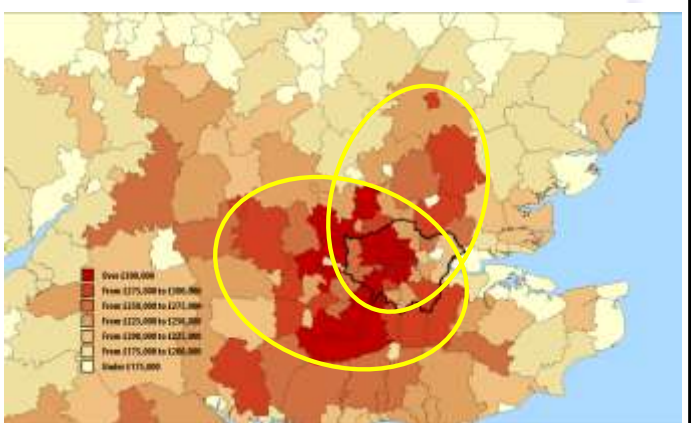




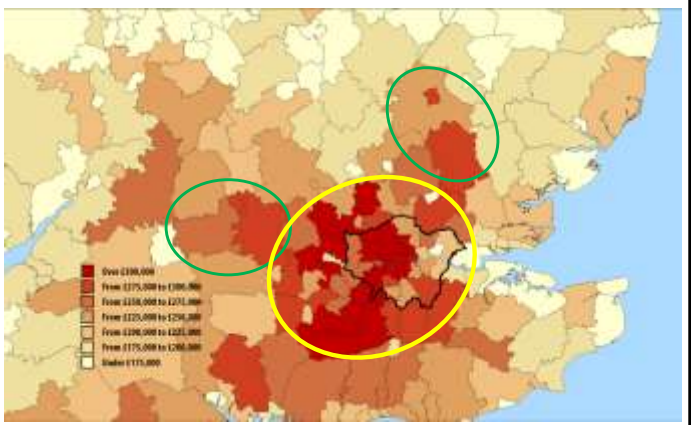


IDENTIFYING THE LONDON HMA

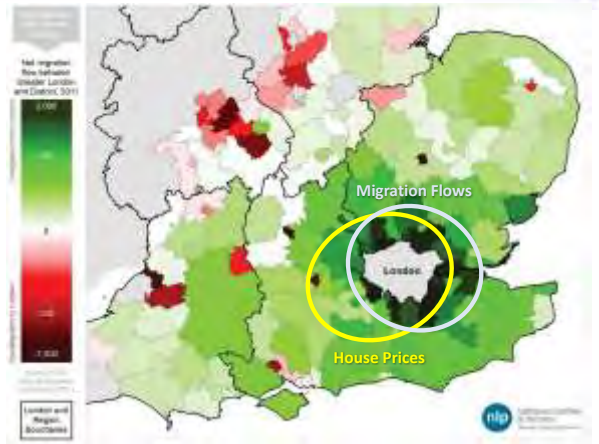
Median House Price by LA (CLG Live Tables, 2012)



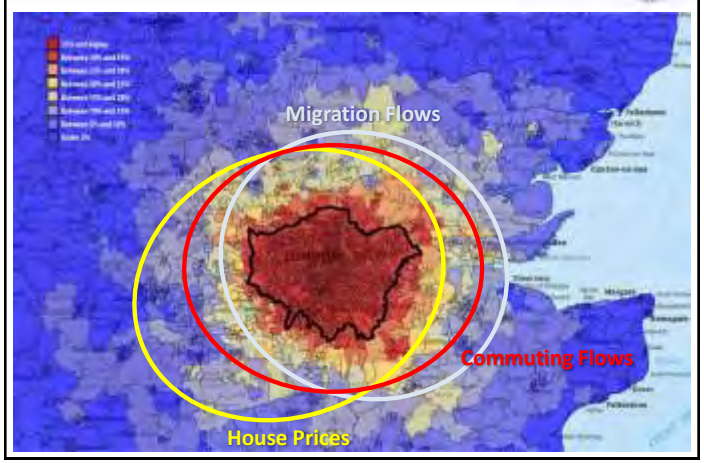
Median House Price by LA (CLG Live Tables, 2012)



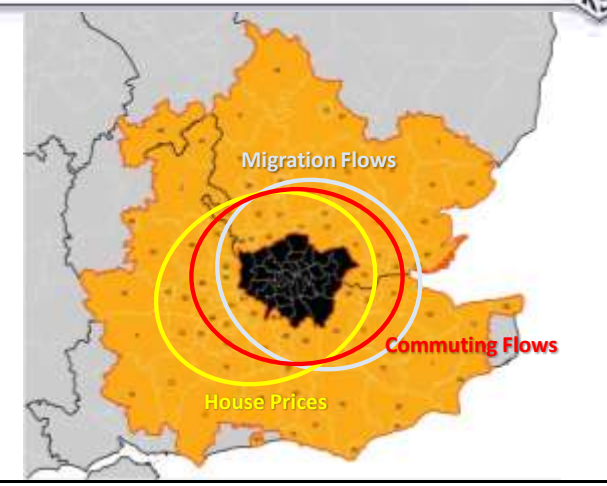
Net migration flows



Commuting flows into London



A perspective on the London HMA: NLP (2014)



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COMMUTING FLOW ANALYSIS BASED ON 2011 CENSUS DATA

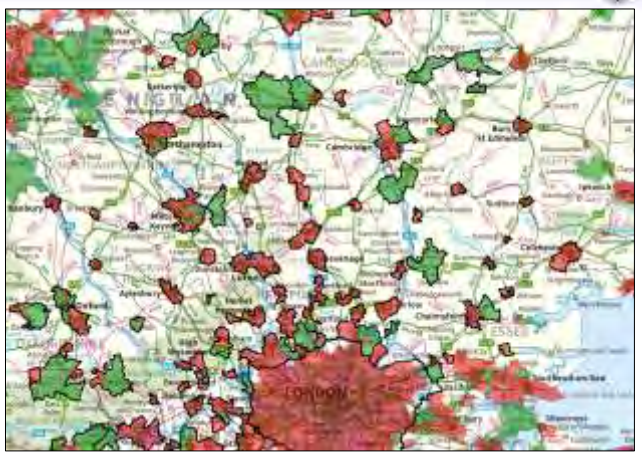
Approach for defining HMAs – establishing a framework

1. Select contiguous urban areas (except in London)
2. Identify adjoining areas where the commuting ratio < 1.0
3. Associate employment areas with the urban area where the largest number of workers live
4. Define seed areas based on urban centre + associated employment area, infilling any areas that are completely surrounded by MSOAs that have been selected

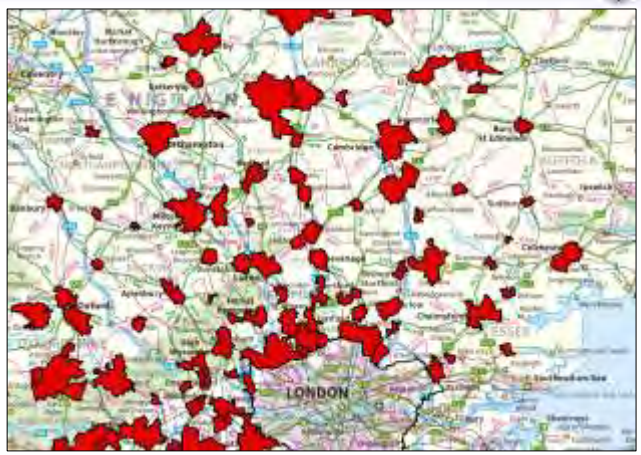
Urban Areas (DEFRA classification)

Areas with commuting ratio less than 1.0

Urban areas + Employment areas



"Seeds" for Housing Market Areas



Approach for defining HMAs – iterative process

5. Associate all MSOAs with the seed with strongest links
6. The seed with the area of weakest self-containment is joined to the seed to which it has strongest links
7. If all seed points/clusters have acceptable self-containment the process stops; else steps 5 to 7 are repeated with the new seed points/clusters

London HMA rapidly expands: 50% containment

NHPAU Study – PAS advice note "starting point"

Approach for defining HMAs – iterative process

5. Associate all MSOAs with the seed with strongest links
6. The seed with the area of weakest self-containment is joined to the seed to which it has strongest links, excluding Greater London
7. If all seed points/clusters have acceptable self-containment the process stops; else steps 5 to 7 are repeated with the new seed points/clusters

Modelling @ 60% containment

Modelling @ 70% containment

Modelling @ 72% containment

72% containment with ONS 2007 TTWA boundaries

72% containment with VOA Broad Market Rental Areas

72% containment with LA boundaries

Best Fit HMAs

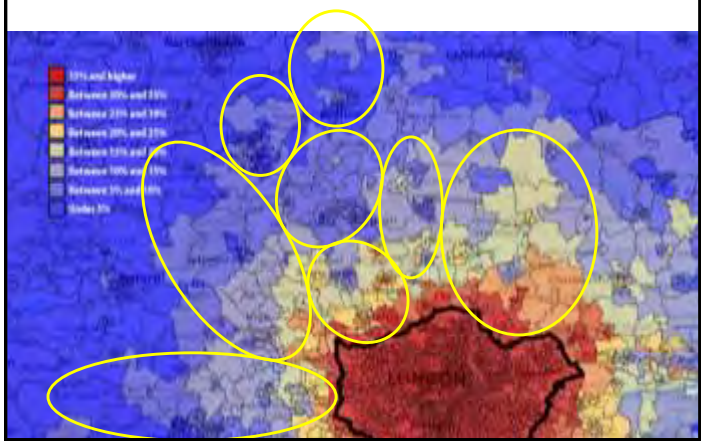
- **Bedford**: Bedford
- **Central Bucks**: Aylesbury Vale, Chiltern, Wycombe
- **Harlow**: Broxbourne, East Herts, Epping Forest, Harlow, Uttlesford
- **Luton**: Central Bedfordshire, Luton
- **Milton Keynes**: Milton Keynes
- **Stevenage**: North Herts, Stevenage, Welwyn Hatfield
- **West Herts**: Dacorum, Hertsmere, St Albans, Three Rivers, Watford

Summary Data (including London flows)

Commuting Zone	Living and Working in area	Workplace Population		Resident Population		Score
		Total workers	% living in area	Total workers	% working in area	
Cambridge	296,137	351,145	84.3%	351,519	84.2%	84.3%
Oxford	253,400	304,554	83.2%	298,490	84.9%	84.0%
Harlow	137,548	189,350	72.6%	213,128	64.5%	68.4%
Milton Keynes	125,064	172,311	72.6%	162,270	77.1%	74.8%
Central Bucks	129,075	171,308	75.3%	190,321	67.8%	71.4%
Watford	175,480	257,936	68.0%	281,543	62.3%	65.1%
Luton	121,183	159,996	75.7%	184,756	65.6%	70.3%
Bedford	67,465	92,365	73.0%	98,194	68.7%	70.8%
Stevenage	116,514	171,891	67.8%	173,073	67.3%	67.6%

Implications of London commuting on 75% target

Commuting flows into London



Alternative targets for areas with high commuting

Summary Data (including London flows)

Commuting Zone	Living and Working in area	Workplace Population		Resident Population		Score
		Total workers	% living in area	Total workers	% working in area	
Cambridge	296,137	351,145	84.3%	351,519	84.2%	84.3%
Oxford	253,400	304,554	83.2%	298,490	84.9%	84.0%
Harlow	137,548	189,350	72.6%	213,128	64.5%	68.4%
Milton Keynes	125,064	172,311	72.6%	162,270	77.1%	74.8%
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Summary Data (excluding London flows)

Commuting Zone	Living and Working in area	Workplace Population		Resident Population		Score
		Total workers	% living in area	Total workers	% working in area	
Cambridge	296,137	351,145	84.3%	338,824	87.4%	85.8%
Oxford	253,400	304,554	83.2%	289,906	87.4%	85.3%
Harlow	137,548	189,350	72.6%	166,134	82.8%	77.4%
Milton Keynes	125,064	172,311	72.6%	154,974	80.7%	76.4%
Central Bucks	129,075	171,308	75.3%	167,422	77.1%	76.2%
Watford	175,480	257,936	68.0%	214,168	81.9%	74.3%
Luton	121,183	159,996	75.7%	168,354	72.0%	73.8%
Bedford	67,465	92,365	73.0%	93,301	72.3%	72.7%
Stevenage	116,514	171,891	67.8%	152,774	76.3%	71.8%

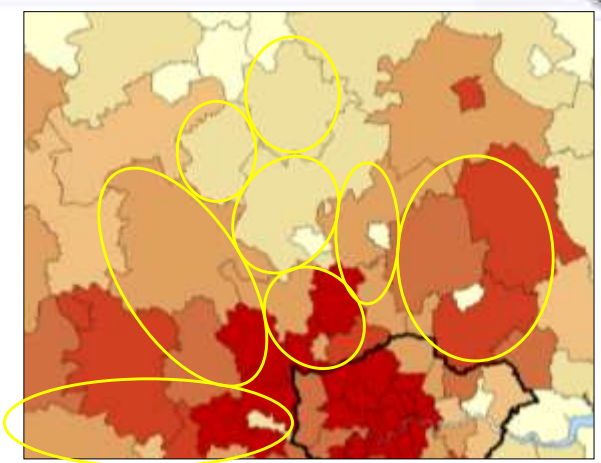
UK Migration (including long distance moves)

"Best Fit" HMAs		Moves to area	Moves from area
Bedford		62%	64%
Aylesbury Vale (to/from Central Bucks)		60%	57%
Luton		66%	64%
Milton Keynes		65%	67%
Stevenage	(exc. Welwyn Hatfield)	59%	59%
	(inc. Welwyn Hatfield)	63%	61%

In-migrant flows	AV	Bedford	C Beds	Luton	MK	N Herts	Stev'ge
Aylesbury Vale	9,425	31	429	30	580	12	4
Bedford	28	10,564	698	154	341	63	37
Central Beds	351	1,044	11,624	963	922	635	160
Luton	68	431	1,933	14,821	336	200	42
Milton Keynes	472	365	512	132	18,106	23	14
North Herts	34	79	935	87	56	5,903	737
Stevenage	10	28	254	63	33	809	4,384
Welwyn Hatfield	22	51	193	96	50	418	384
Cherwell	297	15	20	9	136	2	5
Chiltern	435	14	28	12	186	13	2
Dacorum	553	34	443	101	115	81	28
East Hertfordshire	14	28	98	14	8	308	274
East Northants	5	213	39	18	110	3	3
Huntingdonshire	9	250	171	31	59	44	25
Northampton	38	87	85	50	315	20	2
South Cambs	6	57	162	15	32	266	32
South Northants	180	48	46	13	487	14	4
South Oxfordshire	262	3	23	11	19	6	0
St Albans	59	85	422	296	43	240	101
Wycombe	658	20	38	19	89	13	7

Out-migrant flows	AV	Bedford	C Beds	Luton	MK	N Herts	Stev'ge
Aylesbury Vale	9,425	28	351	68	472	34	10
Bedford	31	10,564	1,044	431	365	79	28
Central Beds	429	698	11,624	1,933	512	935	254
Luton	30	154	963	14,821	132	87	63
Milton Keynes	580	341	922	336	18,106	56	33
North Herts	12	63	635	200	23	5,903	809
Stevenage	4	37	160	42	14	737	4,384
Welwyn Hatfield	17	28	126	101	67	223	216
Cherwell	218	26	14	17	52	12	2
Chiltern	163	4	22	7	28	9	0
Dacorum	293	37	253	108	65	62	34
East Hertfordshire	8	14	64	11	9	214	185
East Northants	35	321	83	18	68	13	9
Huntingdonshire	29	272	288	61	58	124	34
Northampton	71	148	138	83	383	15	7
South Cambs	9	27	160	26	9	354	34
South Northants	241	18	69	15	599	7	1
South Oxfordshire	314	11	36	5	31	4	6
St Albans	28	32	195	228	58	157	53
Wycombe	416	7	45	18	48	16	8

Median House Price by LA (CLG Live Tables, 2012)



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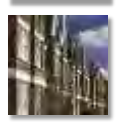

THANK YOU FOR LISTENING

Any Comments or Questions?