Housing Market Areas and Functional Economic Market Areas in Buckinghamshire and the surrounding areas

Report of Findings
March 2015
Identifying HMAs and FEMAs in Buckinghamshire and the surrounding areas

March 2015

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Executive Summary

Summary of key findings and conclusions

1. Opinion Research Services (ORS) and Atkins were jointly commissioned by the four District Councils in Buckinghamshire (Aylesbury Vale, Chiltern, South Bucks and Wycombe) to identify Housing Market Areas (HMAs) and Functional Economic Market Areas (FEMAs) for the county and surrounding areas.

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 (LPAs) and decision-takers, both in drawing up plans and making decisions about planning applications.

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). Similarly, the Framework requires local planning authorities to have a “clear understanding of business needs within the economic markets operating in and across their area” and “work together with county and neighbouring authorities and with Local Enterprise Partnerships” (paragraph 160).

4. Given the NPPF context, the aim of the study was to derive a consensus from local planning authorities and other relevant stakeholders about the most appropriate HMAs and FEMAs for Buckinghamshire and surrounding areas. These functional geographies would then provide the Buckinghamshire councils with a basis for joint working arrangements in order to develop the evidence base required for assessing the future housing and economic development needs. This analysis of functional HMAs and FEMAs, together with the separate assessments of need, will help inform decisions about housing and employment land.

5. Recognising the importance of the functional geographies to neighbouring LPAs, this study involved extensive stakeholder engagement to consider and agree 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;

   » Stakeholder feedback was invited and all responses received were recorded and responded to as the study progressed, including meetings with those stakeholders wanting to better understand the analysis and the impact of assumptions taken; and

   » A Consultation Draft of the study report was published and circulated to all stakeholders to allow feedback before the report was finalised.

6. Feedback received from all stakeholders was proactively reviewed and discussed with officers from the Buckinghamshire councils, and the study methodology was revised whenever necessary in order to respond to suggestions and address any concerns raised. Given this rigorous process, the functional geographies identified by this study would provide the Buckinghamshire councils with a basis to undertake further work and develop the evidence base required for the objective assessment of housing and economic need.

\(^1\) https://www.gov.uk/government/publications/national-planning-policy-framework
Housing Market Areas

7. 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\(^2\), Planning Practice Guidance (PPG)\(^3\) on the Assessment of housing and economic development needs (March 2014) 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. CLG research\(^4\) and the Planning Advisory Service (PAS) technical advice note about Objectively Assessed Need (OAN) and Housing Targets\(^5\) have both suggested that commuting flows and migration patterns are the most relevant information sources when seeking to establish upper-tier housing market areas; so this study initially focused on commuting and migration.

8. The analysis considered commuting patterns across the geographic area from Northampton in the north to Basingstoke in the south, and from Swindon in the west to the City of London in the east. Seed points were defined based on urban areas and employment areas, and an iterative process progressively clustered the seed points to identify commuting zones where the proportion of people both living and working in the area (the self-containment ratio) was considered to be acceptable. This level is based on a judgement, but 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.

9. To help identify the extent of London’s influence on the Buckinghamshire area, the iterative analysis was undertaken three times – firstly without any constraint to the growth of London’s HMA, secondly restricting the growth of Central London, and finally restricting the growth of London at the regional administrative boundary. This analysis showed strong links between London and parts of Buckinghamshire, but in order to understand the complex patterns that exist outside London the analysis focused on two configurations:

   » The first included separate areas for Aylesbury town, High Wycombe/Amersham, Milton Keynes (including Buckingham and the north of Aylesbury Vale) and Slough/Maidenhead (including areas of South Bucks south of the M40); and

   » The second was based on Central Buckinghamshire as a combined area, Milton Keynes and Slough/Reading as a combined area.

10. This provided a framework for analysing migration and house price data, which also confirmed separate areas Aylesbury town, High Wycombe/Amersham, Milton Keynes and Slough/Maidenhead. Furthermore, each of these four areas are comparable to separate areas identified as official Broad Rental Market Areas (BRMAs) defined by the Valuation Office Agency (VOA). The study therefore concluded that these areas should definitely be considered as distinct housing market areas – but only Milton Keynes reaches the necessary percentage thresholds used by ONS for Travel To Work Areas and the percentage targets for migration identified by PPG for housing market areas.

11. Therefore, whilst we would recommend that the Aylesbury town, High Wycombe/Amersham and Slough/Maidenhead areas could be considered as separate local housing market areas (or housing sub-markets); they are probably not strategic housing market areas in the context of the NPPF.

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\(^2\) Identifying sub-regional housing market areas (CLG, March 2007); paragraph 1.6

\(^3\) http://planningguidance.planningportal.gov.uk/blog/guidance/housing-and-economic-development-needs-assessments/

\(^4\) Geography of Housing Market Areas (CLG, November 2010); paragraph 1.6

\(^5\) Objectively Assessed Need and Housing Targets (PAS, June 2014); paragraph 1.8
12. Nevertheless, Central Buckinghamshire as a single combined area exceeds all of the percentage targets for ONS Travel To Work Areas and the percentage targets for migration identified by PPG for housing market areas:

   » 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.

13. 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. On this basis, our conclusion is that a substantial majority of Buckinghamshire (80% of the population) falls within a single Housing Market Area, which includes Aylesbury town and High Wycombe, as well as the smaller settlements of Amersham, Beaconsfield and Princes Risborough. Milton Keynes (to the north) and Reading & Slough (to the south) can also be considered to be strategic housing market areas.

14. Figure 1 illustrates the proposed functional area based on Middle-level Super Output Area (MSOA) boundaries. This functional area reflects both the commuting zone identified at 75% self-containment and also the separate migration zone that was associated with this. When more fine-grained data is published from the 2011 Census (either at Census Output Area or at Lower-level Super Output Area) it will be possible to establish a more precise boundary for the functional area.

Figure 1: Functional Housing Market Areas based on MSOA boundaries, with Local Authority Boundaries
Administrative Boundaries and Housing Market Areas

15. 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\(^6\) 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.”

16. This “best fit” approximation has also been suggested by the recent PAS OAN technical advice note\(^7\), which suggests (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.”

17. 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 for 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, paragraph 10).

 » On the other hand, and as suggested by the recent 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).

18. In summary, the approach to defining housing market areas needs to balance robust analysis with pragmatic administrative requirements. Therefore, whilst we have established the functional housing markets for Buckinghamshire and the surrounding areas, it is now necessary to consider the most appropriate working arrangements for establishing the evidence base that the NPPF requires.

19. The analysis has demonstrated that the substantial majority of Buckinghamshire county residents (80%) live in the Central Buckinghamshire functional housing market area. Chiltern and Wycombe districts fall entirely within this functional housing market area together with almost two-thirds of the Aylesbury Vale district population (with the remaining population split across three different functional housing markets). These three districts therefore comprise the “best fit” for the Central Buckinghamshire housing market area.

\(^6\) Identifying sub-regional housing market areas (CLG, March 2007)
\(^7\) Objectively Assessed Need and Housing Targets (PAS, June 2014)
When considering the analysis for South Bucks district, it is important to recognise that even when Central London’s growth was constrained, the links from South Bucks to West London were stronger than any others. Nevertheless, 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, it is pragmatic and appropriate to define Greater London using the administrative boundary and then separately consider the commuting flows outside the region.

It is apparent that the South Bucks population is divided, with approaching half living in the Central Buckinghamshire functional housing market area and the remainder all living in the Reading & Slough functional area – so in considering a “best fit”, it could be argued that South Bucks should be associated with either Central Buckinghamshire or Reading & Slough. Nevertheless, it is possible to determine a hierarchy for the “best fit” for South Bucks; with the first preference being London, the second being Berkshire and the third being with the rest of Buckinghamshire. This conclusion is supported by the data on both commuting and migration flows.

Given that we would not recommend that South Bucks is included within the London HMA, the most appropriate alternative “best fit” would be for the district to be considered as part of the Reading & Slough HMA, given the stronger relationships in terms of both commuting and migration as well as the functional HMA covering the largest proportion of the district’s population.

Based on a detailed analysis of the evidence, we would therefore recommend to the Buckinghamshire councils that the most pragmatically appropriate “best fit” for the Central Buckinghamshire housing market area comprises Aylesbury Vale, Chiltern and Wycombe districts; and that South Bucks district should be considered within the “best fit” for Reading & Slough HMA. On the basis of the detailed analysis undertaken, the evidence identifies that the “best fit” for the whole Reading & Slough HMA comprises the local authorities of Bracknell, Reading, Slough, West Berkshire, Windsor & Maidenhead and Wokingham, as well as South Bucks.

These “best fit” groupings do not change the actual geography of the functional housing market areas that have been identified – they simply provides 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.

Whilst we believe that the proposed groupings for Central Buckinghamshire and Reading & Slough HMAs 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. 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; for Chiltern and Wycombe to maintain dialogue with Reading, Slough and Windsor and Maidenhead; and for South Bucks to maintain dialogue with the other Buckinghamshire districts. Furthermore, all four districts will need to maintain dialogue with the boroughs to the West of London as well as the Mayor of London through the Greater London Authority.
Functional Economic Market Areas

26. In order to define the most appropriate FEMAs that the four Buckinghamshire authorities sit within, we have been guided by the following principles, as identified from best practice guidance and consultation with neighbouring authorities:

   » Although there is no single correct way to identify a FEMA, there is an argument for analysing commuting data as the most complete and reliable flow data, and then supplementing this with data from other key economic markets.

   » The definition of FEMAs should generally be consistent with the definition of HMAs.

27. This suggests that the definition of Travel to Work Areas should form a key component of the definition of the FEMAs in the study area. Additional analysis of the transport network, local property markets, sectoral composition, supply chains, retail catchment areas and administrative geography form additional layers of detail on which to refine and verify the definition of FEMAs.

28. With this in mind, the starting point for the definition of the FEMAs in the study area are the labour market areas which formed the basis of the functional housing market areas previously identified in Figure 1:

   » Milton Keynes: which includes much of the northern part of Aylesbury Vale District, including the town of Buckingham;

   » Central Buckinghamshire: which includes Aylesbury town and its immediate hinterland, all of the Districts of Wycombe and Chiltern, as well as northern parts of South Bucks, including Beaconsfield;

   » Berkshire: which includes the southern part of South Bucks;

   » Oxfordshire: which includes the western, mostly rural, parts of Aylesbury Vale District; and

   » Hertfordshire: which includes a small part of the eastern section of Aylesbury Vale District close to Dunstable and Luton.

Central Buckinghamshire FEMA

29. The analysis suggests that there is a single labour market that meets the tests of self-containment which includes Aylesbury town and its immediate hinterland, all of the Districts of Wycombe and Chiltern, as well as northern parts of South Bucks. However, it is also important to recognise that there are also differences between the local economies: Aylesbury town has a distinct property market, with values typically lower than southern parts of the county; Chiltern has a small economy which is broadly similar to South Bucks, and these are very much centred on serving local demand; whereas Wycombe district plays a much larger sub-regional role, with a higher concentration of manufacturing businesses.

30. High Wycombe is the largest retail and employment centre in the south of the county and has a retail catchment which extends into most of Wycombe and Chiltern Districts and also covers the town of Beaconsfield (in South Bucks). These areas share a number of concentrations of key sectors identified by the BTV LEP including higher value manufacturing (particularly manufacture of computers), ICT (particularly manufacture of computers) and media (particularly programming and broadcast activities). Aylesbury has its own distinct retail catchment to the north of the county, and its sectoral strengths are focused more towards business administration and the public sector, rather than the higher value business services firms found towards the south of the county.
Given this context, it is possible to identify two sub-FEMAs within the Central Buckinghamshire FEMA: Aylesbury Town sub-FEMA to the north, and Wycombe, Chiltern and Beaconsfield Sub FEMA to the south. This is at least partly due to the transport infrastructure in the county: whilst Buckinghamshire is relatively well connected, many routes currently suffer from congestion and north/south connectivity would particularly benefit from improvement.

Berkshire FEMA

Whilst the sectoral composition for South Bucks is closer to Chiltern’s than much of the rest of Berkshire and the Thames Valley (and is very different to that of neighbouring Slough), the labour market analysis points strongly to southern parts of South Bucks being within the Berkshire FEMA given particularly strong commuting links with Slough and Windsor & Maidenhead. On balance, we give greater weight to the labour market analysis, so the southern parts of South Bucks are included within the Berkshire FEMA and are therefore not included within the Central Buckinghamshire FEMA. This is also consistent with the definition of the functional HMA.

Other FEMAs

The implications of the further components of analysis on the other labour-market defined FEMAs are summarised below.

**Figure 2:** Summary of further components of analysis on labour-market defined FEMAs

<table>
<thead>
<tr>
<th>FEMAs</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hertfordshire</td>
<td>The Hertfordshire labour market area covers a small part of the eastern section of Aylesbury Vale District. However, there is very little economic activity located here and so there is no evidence to suggest an amendment to the definition of a FEMA based on the labour market area.</td>
</tr>
<tr>
<td>Milton Keynes</td>
<td>The definition of a labour-market defined FEMA centred on Milton Keynes, which takes in the northern part of Aylesbury Vale District, is supported by the identification of a distinct property market and distinct sectoral strengths in this part of the District, as well as a retail catchment area that is centred on Milton Keynes. The available evidence suggests no reason to change the definition of the FEMA from that identified by the labour market analysis.</td>
</tr>
<tr>
<td>Oxfordshire</td>
<td>The Oxfordshire labour market area covers part of the western section of Aylesbury Vale District. However, there is very little economic activity located here and so there is no evidence to suggest an amendment to the definition of a FEMA based on the labour market area.</td>
</tr>
</tbody>
</table>

Figure 3 defines the extent of the FEMAs and sub-FEMAs based on the conclusions set out above.
Implications of FEMAs on planning for employment growth

35. The PPG identifies that local planning authorities should (paragraph 018):

“Make an assessment of the likely change in job numbers based on past trends and/or economic forecasts as appropriate and also having regard to the growth of the working age population in the housing market area ... Where the supply of working age population that is economically active is less than the projected job growth, this could result in unsustainable commuting patterns and could reduce the resilience of local businesses.”

36. Given this context, the PAS technical advice note suggests (paragraph 4.16):

“It is useful to combine the HMA and functional economic area into a single boundary. This makes both analysis and policy-making manageable: the alternative of working with two larger-than-local areas, one for housing and one for economic land uses, adds layers of complexity. It also makes it possible to plan for alignment of jobs and workers – something which is very difficult to do at the level of individual authorities, precisely because labour markets are larger than local.”
37. Having identified functional housing market areas, the analysis also considered the most appropriate working arrangements for establishing the evidence base. This concluded that the “best fit” for the Central Buckinghamshire housing market area included Aylesbury Vale, Chiltern and Wycombe districts; and that South Bucks district should be considered within the best fit for Reading & Slough HMA.

38. The FEMA analysis has considered a range of data in order to define the most appropriate functional areas. Given that the Travel to Work Areas defined in Chapter 4 provide a key component in the analysis of both HMAs and FEMAs, it is perhaps not surprising that the identified FEMAs largely reflect the functional housing market areas. Furthermore, as with the functional housing markets, these FEMAs do not sit neatly within administrative boundaries and therefore once again it is appropriate to consider a “best fit”.

39. It is evident that Wycombe and Chiltern districts are both entirely within the Central Buckinghamshire FEMA, together with most of Aylesbury Vale’s population. Given this context, it is reasonable to conclude that Aylesbury Vale, Chiltern and Wycombe districts should all be considered within the “best fit” for Central Buckinghamshire FEMA.

40. South Bucks district is once again divided, with Beaconsfield and the northern parts of the district in the Central Buckinghamshire FEMA and the southern parts of the district in the Berkshire FEMA. Given the similarities between the economies of South Bucks and Chiltern in particular, there is some argument that the “best fit” for South Bucks is with the Central Buckinghamshire FEMA. Nevertheless, given the principle of giving greater weight to the more complete data about commuting flows, the evidence would suggest that a more appropriate “best fit” for South Bucks is with the Berkshire FEMA.

41. Therefore, on the basis of the evidence, we would recommend to the Buckinghamshire councils that the “best fit” for the Central Buckinghamshire FEMA comprises Aylesbury Vale, Chiltern and Wycombe districts; and that South Bucks district should be considered within the best fit for the Berkshire FEMA (comprised of Bracknell, Reading, Slough, West Berkshire, Windsor & Maidenhead and Wokingham, together with South Bucks). Whilst this conclusion is fundamentally based on the evidence about the functional economic markets, it is also consistent with the conclusion about the “best fit” for housing market areas.

42. This conclusion does not change the actual geography of the complex functional economic market areas that have been identified – it simply provides a pragmatic arrangement for the purposes of establishing the evidence required about the future number of jobs and developing local policies that are consistent with planned housing, as suggested by the PAS technical advice note. Nevertheless, whilst we believe that this grouping provides the overall “best fit” for joint working on the basis of the available evidence, this is not the only arrangement possible.

43. Regardless of the final grouping, Aylesbury Vale also need to work closely with Milton Keynes Council on employment land issues in the Milton Keynes FEMA in the north of the district. There will also be a more limited need for the Council to work with the Oxfordshire and Hertfordshire local authorities. Chiltern and Wycombe District Councils should work together with South Bucks to plan for employment growth across the Central Buckinghamshire FEMA, given the strong functional relationships with the north of South Bucks district.
1. Introducing the Study
Background to the project and wider policy context

1.1 Opinion Research Services (ORS) and Atkins were jointly commissioned by the four District Councils in Buckinghamshire (Aylesbury Vale, Chiltern, South Bucks and Wycombe) to identify Housing Market Areas (HMAs) and Functional Economic Market Areas (FEMAs) for the county and surrounding areas.

1.2 The National Planning Policy Framework (NPPF) 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). Similarly, the Framework requires local planning authorities to have a “clear understanding of business needs within the economic markets operating in and across their area” and “work together with county and neighbouring authorities and with Local Enterprise Partnerships” (paragraph 160).

1.4 Given the NPPF context, the aim of these studies was to derive a consensus from local planning authorities and other relevant stakeholders about the most appropriate HMAs and FEMAs for Buckinghamshire and surrounding areas. These functional geographies would then provide the Buckinghamshire councils with a basis for joint working arrangements in order to develop the evidence base required for assessing the future housing and economic development needs.

Analysis of 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).

Planning Practice Guidance

1.6 Planning Practice Guidance (PPG) 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:

“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.”

“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.”

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9 Local Housing Systems Analysis: Best Practice Guide. Edinburgh: Scottish Homes
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 consistent with those identified in the CLG advice note ‘Identifying sub–regional housing market areas’ published in 2007. CLG also published a report on the ‘Geography of Housing Market Areas’ in 2010 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.

1.9 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

1.10 Recent advice in a technical advice note about Objectively Assessed Need (OAN) and Housing Targets published by the Planning Advisory Service (PAS) in June 2014 also 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 areas. In practice, the main indicators used are migration and commuting.”

1.11 The PAS advice note also suggests that analysis reported in the 2010 CLG report should provide a starting point for drawing HMAs (Figure 4). However, given that the analysis of migration and commuting was based on data from the 2001 Census, the PAS advice note recognises that “more recent data should always ‘trump’ this geography” (paragraph 4.9).

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11 Identifying sub–regional housing market areas (CLG, March 2007); paragraph 1.6
12 Geography of Housing Market Areas (CLG, November 2010); paragraph 1.6
13 Objectively Assessed Need and Housing Targets (PAS, June 2014); paragraph 1.8
Analysis of Functional Economic Market Areas

1.12 The National Planning Policy Framework (NPPF) requires local authorities to work together on strategic planning issues. The NPPF specifically states in paragraph 160 that local authorities “should have a clear understanding of business needs within the economic markets in and across their area”.

1.13 Paragraph 160 of the NPPF goes onto say that local planning authorities should:

» work together with county and neighbouring authorities and with Local Enterprise Partnerships to prepare and maintain a robust evidence base to understand both existing business needs and likely changes in the market; and

» work closely with the business community to understand their changing needs and identify and address barriers to investment, including a lack of housing, infrastructure or viability.

1.14 Local authorities therefore need to be aware of the functional economic area within which they are located, to understand the contribution that the area makes to the whole, and to appreciate the influences that will shape economic development of their area. A functional economic area is effectively an area in which businesses search for sites and premises. In this respect it also makes sense to understand the nature of local property markets and their potential to impact on the definition of a FEMA.

1.15 Local authorities also need to have a good understanding of the larger economic area of which they are part, so that they can clearly identify which neighbouring authorities they need to work with for the development of their evidence base, as part of the duty to cooperate.
1.16 The outcome when defining FEMA boundaries depends as much on the method used as the specific types of flows that are analysed. There is an argument for analysing commuting data as the most complete and reliable flow data, and then supplementing this with data from other key economic markets. This is the approach that this work takes.

1.17 HMAs and FEMAs should be geographically similar, because in broad terms both are largely determined by the reach of a daily return trip. For this reason, and also for convenience, it is useful to combine the HMA and the FEMA into a single boundary, which is the approach taken by this study.

Planning Practice Guidance

1.18 Planning Practice Guidance (PPG) further emphasises the need for Local Planning Authorities to work with other authorities in the same functional economic market area to identify development needs, because such needs “are rarely constrained precisely by local administrative boundaries”.

1.19 The PPG sets out at paragraph 12 that:

“The geography of commercial property markets should be thought of in terms of the requirements of the market in terms of the location of premises, and the spatial factors used in analysing demand and supply – often referred to as the functional economic market area. Since patterns of economic activity vary from place to place, there is no standard approach to defining a functional economic market area, however, it is possible to define them taking account of factors including:

» extent of any Local Enterprise Partnership within the area;
» travel to work areas;
» housing market area;
» flow of goods, services and information within the local economy;
» service market for consumers;
» administrative area;
» catchment areas of facilities providing cultural and social well-being;
» transport network.”


1.20 This note was prepared for CLG in 2010. It recommends that FEMAs can be defined using all of the factors later set out in paragraph 12 of the PPG (shown above) and therefore appears to have been a key informant for that guidance. Although this note is not policy guidance, having been replaced by the PPG, it contains further explanation of the value for analysing each of the factors listed above, and is therefore worth considering as part of this work.

Labour Markets

1.21 The note states that the most widely accepted approach to identifying FEMAs is by reference to Travel to Work Areas (TTWAs), which are relatively self-contained, internally contiguous labour market areas. A commonly used definition is that: of the resident economically active population, at least 75% work in the
area; and of all those working in the area at least 75% also live in the area, although it notes that for TTWAs with 25,000 or more workers, this requirement is often relaxed to 66.7%.

1.22 The note states that TTWAs are often treated as the default definition of FEMAs for two reasons:

» The labour market is fundamental to policy-relevant definitions of FEMAs (as with the use of TTWAs in research on the State of the English Cities); and

» TTWAs are the only sub-regional economic area robustly defined under the remit of National Statistics.

Housing Markets

1.23 The note states that FEMAs can be defined on the basis of housing market areas (HMAs), where the area containing the origin and destination of the majority of moves is the FEMA. This is consistent with the fact that later guidance on the definition of an HMA expects both the FEMA and HMA to be aligned with each other (see below), as they are both based on the definition of labour markets as a common theme of analysis (see above).

Supply chains in industry and commerce

1.24 The note states that “measuring the flows of goods, services and information across the local economy can help to map sub-regional economic activity, such as the market and supply links of businesses and business services”. However, it also notes that supply chains are, however, very difficult to map as national data sources of sub-regional supply chains and linkages are not available. In lieu of this information, analysis of sectoral clusters can be used as a proxy. The assumption is that clusters of similar firms will interact with other, in terms of sharing ideas, labour markets, supply chains etc.

Service markets for consumers

1.25 The note states that service markets can be used to map the spatial area from which users of goods and services are drawn. Although mobility rates have increased considerably, the principle that people access services at their nearest location still largely holds. This leads to the presence of a large number of frequently used services, and a smaller number of higher order services.

1.26 On this basis FEMAs can be identified by analysing travel patterns to higher order services, which have a wider catchment area, such as: major shopping centres, airports, concert halls or hospitals. This information only shows the pull of certain services, however, and will need to be used as part of a comprehensive approach to defining FEMAs.

Administrative Areas

1.27 The note recognises that it is within administrative boundaries that services and strategies are applied and developed, based on analyses using FEMAs. The importance of administrative boundaries therefore also needs to be recognised. This can be done through ‘best fitting’ FEMA boundaries to local authority administrative areas so that they are approximated in terms of whole local authority boundaries, upper or lower tier.

Transport Networks

1.28 The transport network is a key facilitator of commuting trips in the local area. Understanding the existing transport network will be key to defining the final labour market catchment area, potential changes in
connectivity may not be limited to rail improvements but could include other transport improvements. However, the note recognises that the transport network only shapes functional linkages, rather than define them, and so should not be used as the sole source for defining FEMAs.

What method of definition should be used?

1.29 The note states that the outcome when defining FEMA boundaries depends as much on the method used as the specific types of flows that are analysed. To date, most approaches have relied upon analysing one single market out of the list of markets in the previous section. Considering just one type of market, however, overlooks the links between the decisions people make about where they live, work, shop and pursue leisure activities.

1.30 The note recommends that there is an argument for analysing Census commuting or migration data, as the most complete and reliable flow data, and supplementing this with data from other key economic markets. Key markets can be identified by the main drivers of economic activity in an area, using evidence gathered by the Local Economic Assessments.

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

1.31 Although this guidance is focused on how local authorities should go about defining an HMA as part of their work to objectively assess housing need, there are a number of references to the relationship between the definition of a FEMA and an HMA that are of relevance to this work. In particular:

» Paragraph 4.13 states that ‘Just as an HMA is an area in which households search for housing, a functional economic area is an area in which businesses search for sites and premises. Much of the demand for land for business uses can be met by sites either side of an administrative boundary, so long as these sites are in the same functional economic area’.

» Paragraph 4.14 states that ‘HMAs may be defined on the basis of migration self-containment, or ‘closure’ – which means that a high proportion of all house moves occur within the area. Similarly, as noted in the PPG, functional economic areas may be defined as labour market areas, which are areas of commuting closure – meaning that a high proportion of all journeys to work occur within the area’.

» Paragraphs 4.15 and 4.16 note that ‘One would expect HMAs and functional economic areas to be geographically similar, because in broad terms both are largely determined by the reach of a daily return trip. Just as households’ location decisions are largely driven by access to jobs and services, business location decisions are largely driven by access to the workers that fill those jobs and the customers who consume those services. For this reason, and also for convenience, it is useful to combine the HMA and functional economic area into a single boundary. This makes both analysis and policy-making manageable: the alternative of working with two larger-than-local areas, one for housing and one for economic land uses, adds layers of complexity. It also makes it possible to plan for alignment of jobs and workers – something which is very difficult to do at the level of individual authorities, precisely because labour markets are larger than local.’
2. Review of existing analysis

Previous analysis of housing markets and economic areas

2.1 The development, evidence and understanding of Housing Market Areas has developed considerably in the last 10 years.

Regional and National Studies

Sub Regional Housing Markets (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.

2.3 Wycombe was identified as a sub-regional housing market (Inner North), 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; this is particularly so to the south of Wycombe towards Reading.

Figure 5: Proposed Sub-Regional Housing Markets (DTZ 2004; for the South East Regional Housing Board)
ONS Travel to Work Areas (ONS; 2007)

2.4 The Office for National Statistics (ONS) defined Travel to Work Areas in 2007 for those involved in labour market analysis and planning. For this they undertook analysis of commuting patterns (working with Newcastle University) to define 243 Travel to Work Areas (TTWAs) for the whole of the UK. The ONS criteria for defining Travel To Work Areas is based on ‘at least 75% of an area's resident workforce work in the area and at least 75% of the people who work in the area also live in the area’. However, for areas with a working population in excess of 25,000, self-containment rates as low as 66.7% are accepted.

2.5 Figure 6 shows the defined TTWAs (2007) and these are based on the origin-destination data from the 2001 Census; this shows that the north of Buckinghamshire is largely contained within the Milton Keynes & Aylesbury TTWA whilst the south is largely within the Wycombe & Slough TTWA. The underlying data shows:

- **Milton Keynes & Aylesbury TTWA**: 76.4% of the people in employment that live in the area also work in the area; and 76.5% of jobs in the area are fulfilled by people that live in the area; and

- **Wycombe & Slough TTWA**: 68.1% of the people in employment that live in the area also work in the area; and 68.8% of jobs in the area are fulfilled by people that live in the area.

Figure 6: ONS 2001 Travel To Work Areas (Source: ONS 2007)
Sub-Regional and Local Studies

Buckinghamshire SHMA (Fordham Research; 2008)

2.6 The 2008 Buckinghamshire SHMA differed from both 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). It also showed no relationship to the south of Wycombe towards either of the DTZ 2004 HMAs for Reading-M4 West and Inner West – Slough and Hounslow or the Berkshire SHMA 2007 West Central Berkshire HMA. Overall, this indicates a series of limited relationships between Wycombe and areas to the south.

Figure 7: Extract from Buckinghamshire SHMA (2008)

The SHMA showed how:

‘Wycombe appears to have the most self-contained travel to work pattern with 63.0% of working people living in the Borough also working in the local authority area. A further 9.6% work elsewhere in Buckinghamshire and a relatively modest 10.6% working in Greater London’.

‘In the case of Wycombe the data shows that 65.3% of people working in the area also live there - a further 11.2% living elsewhere in the county. The main other places people travel from include Greater London (4.2%), South Oxfordshire (3.4%) and Windsor & Maidenhead (2.9%)’.

Source: Buckinghamshire SHMA 2008 (Fordham Research)
Berkshire Strategic Housing Market Assessment (DTZ; 2007)

2.8 In the Berkshire HMA (2007) further consideration was made of connectivity between Wycombe and the Inner West (Slough and Hounslow) sub-regional housing market as developed by DTZ in 2004.

2.9 This showed that, even though there was Travel to Work connectivity between Wycombe and Slough, there were negligible household movements and noted ‘the relatively weak relationships that this western Berkshire housing market has with Wycombe’.

2.10 Overall, the study concluded by proposing an ‘East Berkshire Plus’ HMA which included South Bucks but excluded Wycombe.

2.11 Extract from Berkshire SHMA 2007 (DTZ)

‘Figure 2.16 sets out the benchmark areas used in the subsequent SHMA analysis, which are based upon the findings above. Where appropriate, data is also provided for individual authority areas’.

Milton Keynes SHMA (ORS; 2008)

2.12 The HMA for Milton Keynes was analysed in 2008, following on from an original analysis conducted in 2006, which established Milton Keynes as a single housing market.

2.13 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:

» 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.

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

2.15 Figure 9 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 Mid Bedfordshire, South Bedfordshire and Aylesbury Vale.
Figure 8: Extract from Milton Keynes SHMA (2008): Identifying the Links between Urban Centres in the Study Area

Figure 9: Extract from Milton Keynes SHMA (2008): Identifying the Functional Housing Sub-Markets in the Sub-Region
Aylesbury Vale SHMA Validation Study (2013)

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).’

Figure 10: Extract from Aylesbury Vale SHMA Validation Study (2013): Map of the Strategic Housing Market Area
Royal Borough of Windsor and Maidenhead SHMA\textsuperscript{15} (2013)

\textsuperscript{2.17} The Royal Borough of Windsor and Maidenhead SHMA was undertaken as an update to the Berkshire SHMA (2007). The report considered commuting and migration as key indicators in defining housing market areas and said that:

‘RBWM is located within an area of significant and complex interrelationships, with no dominant town. The Housing Market Area therefore comprises, either in part or as a whole, the following Local Authority Areas: RBWM, Reading, Wokingham, Bracknell Forest, Wycombe, South Bucks, Slough, Surrey Heath, Spelthorne and Runnymede.’

Figure 11: Extract from RBWM SHMA (2013): Strategic Housing Market Area

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\textsuperscript{15} GVA Grimley Strategic housing market Assessment (2013)
Wycombe SHMA\textsuperscript{16} (2014)

2.18 The Wycombe SHMA (2014) considered the HMA followed a similar methodology to that for the Milton Keynes HMA (above), based on migration and travel to work data combined to consider levels of self-containment.

2.19 The analysis established the number of residents who both live and work in urban centres. The links that exist between the urban centres are also illustrated by the joining lines, with stronger links having heavier lines.

Figure 12: Extract from Wycombe SHMA (2013): Identifying the Links between Urban Centres in the Study Area

\textsuperscript{16} Wycombe SHMA 2013 (ORS)
2.20 Figure 13 illustrates the outcome of further refinements to this initial analysis. The solid black lines represent local authority boundaries. Essentially, the analysis identifies that the Wycombe HMA is focussed on the district of Wycombe with some extension into Aylesbury Vale (to the north) and Beaconsfield (in South Bucks) along with significant parts of Chiltern (to the east).

Figure 13: Extract from Wycombe SHMA (2013): Functional Housing Sub-Markets in and around Wycombe district
Summary of Previous Housing Market Area Analysis

2.21 Previous housing market area analysis have analysed Buckinghamshire 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.

2.22 However, broadly, the studies show how links to the north, west and east appear to be relatively aligned. For example, Wycombe has established relationships, particularly with Aylesbury, although the degree of self-containment/separation has been subject to different conclusions. Relationships to the south are more complex; it seems clear that these relationships are more challenging to understand, and harder to define, given the concentration of urban centres plus challenging travel to work and migration patterns.

Work to define FEMAs in neighbouring authorities

2.23 We have consulted with all duty to cooperate partners for all four authorities in order to understand the work completed so far to define FEMAs which might overlap with Buckinghamshire. Although most authorities have undertaken an analysis of travel to work patterns at some point using 2001 Census data, no authorities have yet undertaken an analysis of FEMAs consistent with the requirements of the PPG, using the latest 2011 Census data.
3. Analysing Commuting Patterns
An overview of the methodology and findings

Identifying Travel to Work Areas

3.1 In considering HMAs and FEMAs for Buckinghamshire and the surrounding areas, our initial analysis is based on commuting patterns across the geographic area from Northampton in the north to Basingstoke in the south, and from Swindon in the west to the City of London in the east. This approach ensures that functional relationships are properly identified without unduly focussing on the local planning authorities within the county. Nevertheless, the study can only identify the full extent of those HMAs and FEMAs for Buckinghamshire – neighbouring areas will only be identified as far as is necessary to establish the most appropriate boundary between them and the areas being identified in Buckinghamshire.

3.2 Given that our analysis initially focuses on commuting flows, the areas established will be travel to work areas rather than HMAs or FEMAs. Nevertheless, as previously outlined, commuting patterns form an important element of the analysis required to establish both functional Housing Market Areas and Functional Economic Market Areas.

Analysis Method and Framework

3.3 To summarise the initial steps in our approach:

» **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 (DEFRA, September 2011). The 2011 Rural Urban Classification is used to distinguish between rural and urban areas, an area is classified as rural if it falls outside of a settlement with more than 10,000 residents.17

» **Step 2**: We grouped together any contiguous urban MSOAs and each formed a single seed point, except for the contiguous urban area for London (Figure 14). Note that the London urban area 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 cannot be based simply on it being a contiguous urban area. London MSOAs are introduced into the process from step 3 onwards.

» **Step 3**: MSOAs within the geographic area (including those in the London contiguous urban area) were identified where the commuting ratio that was less than 1.0; i.e. those MSOAs where the workplace population is larger than the resident population (Figure 15).

» **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 16).
Figure 14: Urban Areas based on DEFRA Classification (Note: Contiguous urban area for London shown in purple)

Figure 15: Areas with Commuting Ratio less than 1.0
Figure 16: Urban Areas outside London and Employment Areas

Figure 17: ‘Seeds’ for Housing Market Areas
3.4 Figure 17 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.

3.5 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).

3.6 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% 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

3.7 Figure 18 shows the outcome of this process at different stages: 20% self-containment (the starting point), 50%, 60% and 67% (the minimum threshold for ONS travel to work areas).

Figure 18: Initial model outputs at 20%, 50%, 60% and 67% containment thresholds
3.8 In summary:

» At the initial level of 20% self-containment, there are a large number of distinct areas visible, but at 50% there are fewer distinct areas as the seeds points (or seed point clusters) begin to merge.

» At 60% self-containment, the number of distinct areas is reduced even further and it starts to become apparent that the strongest link for many of the seeds (or seed point clusters) is to London.

» At the threshold of 66.7% self-containment (the minimum threshold for ONS Travel-To-Work Areas that have a working population in excess of 25,000 workers), the majority of the seeds areas (or seed cluster points) in Buckinghamshire and the surrounding areas have the strongest links with London. It is worth noting that this final output is similar to the NHPAU map in Figure 4.

Further modelling restricting the growth of Central London

3.9 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.

3.10 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 50% self-containment, various housing market areas are visible as distinct areas – including Oxford, Milton Keynes, Aylesbury, High Wycombe and Hemel Hempstead; but also smaller areas such as Bicester and Thame.

> At 55% self-containment, some of the smaller seeds have been merged with other seeds to which they have the strongest link. For example, Bicester and Thame both merge into the Oxford area and Amersham merges with High Wycombe.

> At 65% self-containment, all of the smaller seeds have merged with larger areas, and it is evident that some of these areas have merged too. For example, Hemel Hempstead and Watford have
joined together, and Maidenhead and Slough have both amalgamated with West London; however the High Wycombe/Amersham area and area around Aylesbury town both remain separate at this stage.

» At 70% self-containment there is very little further change – however High Wycombe/Amersham and Aylesbury town join together to form a single area covering most of Central Buckinghamshire.

3.12 Figure 20 sets out the key statistics for the commuting zones identified at 65% and 70% containment (when flows to Central London are excluded).

Figure 20: Statistics for Commuting Zones at 65% and 70% Containment (excluding Central London) (Source: 2011 Census; Note: Dark green cells exceed the ONS TTWA target of 75%; light green cells exceed the ONS TTWA threshold of 67% whilst red cells do not achieve the ONS TTWA minimum threshold)

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<th>Resident Population</th>
<th>Containment Score</th>
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<td>All workers</td>
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At 65% containment

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At 70% containment

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<td>Exc. Central London</td>
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<td>161,717</td>
<td>74.8%</td>
<td>180,798</td>
</tr>
</tbody>
</table>

3.13 It is evident for both High Wycombe/Amersham and Aylesbury town separately, more than 70% of the workplace population live in the area; however only 62-63% of the residents work in the area. Nevertheless, for the Central Buckinghamshire combined area, almost 75% of the workplace population live in the area and 67% of residents work in the area – therefore this area would satisfy ONS definitions for official TTWAs. Nevertheless, whilst many of these areas defined at 70% containment would satisfy the ONS definitions for official TTWAs (insofar as the proportions exceed the 66.7% threshold) it is evident that only Oxford achieves the 75% target.

3.14 This is perhaps to be expected, given that the containment for official TTWAs defined using 2001 commuting flows also failed to reach this target in almost every area surrounding London. Figure 21 shows the self-containment figures for all of the TTWAs around London, where it is evident that none reach the 75% target on supply side self-containment (i.e. the proportion of people in employment that live in the area who also work in the area), and only Maidstone & North Kent TTWA and Southend & Brentwood TTWA reach the 75% target on demand side self-containment (i.e. the proportion of jobs in the area fulfilled by workers that live in the area).
Reaching a 75% containment leads to many more areas joining up with the growing West London zone. Figure 22 shows the outcome of this analysis.

Figure 22: Model output with restricted growth of Central London at 75% containment thresholds
Further modelling restricting the growth of the London region

3.16 Whilst the analysis restricting the growth of Central London provided a helpful context to develop our understanding of the functional areas, the eventual growth of West London meant that London continued to dominate South Bucks. Of course, this is due to the strong relationships that exist between South Bucks and London; but in order to better understand the functional relationships, the latter part of the modelling analysis (steps 5–7) was undertaken for a third time.

3.17 On this iteration, when the seed (or seed cluster point) with the weakest self-containment was joined to the seed to which it had the strongest links, all seed points in the London region were excluded as an option. Figure 23 shows how the outcomes of the analysis develop at higher levels of containment.

Figure 23: Model outputs with restricted growth of the London region at 67-78% containment (excluding Greater London)
3.18 In summary:

» At 67% self-containment, similar to the output from the previous modelling iteration, separate areas are identified for Slough and Maidenhead, High Wycombe and Amersham, and Aylesbury town – but, unlike the previous output, the Aylesbury town area also includes Thame and this affects the boundaries with Oxford and Milton Keynes.

» At 72% self-containment there is very little further change – however High Wycombe/Amersham and Aylesbury town join together to form a single area covering most of Central Buckinghamshire, but different to the output from the previous modelling iteration, this area includes Beaconsfield and other parts of South Bucks to the north of the M40. However, when the Aylesbury town cluster was dissolved the strongest links from Thame were to the Oxford seed cluster, which is consistent with the previous modelling iteration.

» At 74% self-containment the key point to note is that the Slough, Windsor and Maidenhead seed cluster dissolved, and the strongest links from all three of these individual settlements were to the Reading seed cluster. Therefore, although the previous modelling iteration showed that the strongest links from Slough and Maidenhead were to West London, the strongest alternative extends the Reading cluster along the M4.

» At 78% self-containment, Brackley merges with the Oxford cluster, Luton and Dunstable merge with the Watford cluster and Bedford merges with the Milton Keynes cluster. Nevertheless, it is important to treat these conclusions with caution given that these zones are all at the periphery of the area being modelled and data for areas to the north of Bedford, to the east of Stevenage and parts of North and East London have not been included within the analytical framework. The key conclusion is that there is a clear zone identified focused on Central Buckinghamshire, which includes Aylesbury town and High Wycombe as well as the smaller settlements of Amersham, Beaconsfield, Princes Risborough and Stokenchurch.

3.19 Figure 24 sets out the key statistics for the commuting zones identified at each level of containment (when flows to and from Greater London are excluded). It is evident that overall containment level is dictated by the commuting zone with the lowest containment score. Given that the zones are presented in descending order of commuting score, at each stage it is the zone in the final row that is dissolved in order to proceed to the next iteration.

3.20 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 67% in green (dark green and light green respectively), with the remaining flows (that fail to reach the ONS threshold of 67%) highlighted in red.

3.21 Although the Central Buckinghamshire area shows the lowest overall self-containment at the final iteration, the containment score of 78.3% (when Greater London is excluded) is clearly very high. The overall commuting flows for this area are also well within the acceptable range that is adopted by ONS. The proportion of jobs in the area fulfilled by workers that live in the area is 74.8% (which very nearly meets the 75% target) and the proportion of people in employment that live in the area who also work in the area is 67.9% (comfortably higher than the 66.7% threshold).
### Figure 24: Statistics for Commuting Zones at 69%, 72%, 74% and 78% Containment (excluding Greater London)
(Source: 2011 Census; Note: Dark green cells exceed the ONS TTWA target of 75%; light green cells exceed the ONS TTWA threshold of 67% whilst red cells do not achieve the ONS TTWA minimum threshold)

<table>
<thead>
<tr>
<th>Workplace Population</th>
<th>Resident Population</th>
<th>Containment Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All workers</td>
<td>Exc. Greater London</td>
</tr>
<tr>
<td></td>
<td>Total workers</td>
<td>% working in area</td>
</tr>
</tbody>
</table>

#### At 69% containment

<table>
<thead>
<tr>
<th>Area</th>
<th>Living and Working in area</th>
<th>Workplace Population</th>
<th>Resident Population</th>
<th>Containment Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxford</td>
<td>2,338,500</td>
<td>281,119</td>
<td>83.2%</td>
<td>2,738,750</td>
</tr>
<tr>
<td>Reading</td>
<td>2,562,244</td>
<td>331,750</td>
<td>77.2%</td>
<td>3,379,996</td>
</tr>
<tr>
<td>Milton Keynes</td>
<td>1,416,614</td>
<td>189,250</td>
<td>74.8%</td>
<td>1,875,575</td>
</tr>
<tr>
<td>Watford</td>
<td>1,559,798</td>
<td>231,953</td>
<td>67.2%</td>
<td>2,548,894</td>
</tr>
<tr>
<td>High Wycombe/Amersham</td>
<td>940,877</td>
<td>133,349</td>
<td>70.6%</td>
<td>1,450,209</td>
</tr>
<tr>
<td>Luton</td>
<td>1,083,333</td>
<td>145,910</td>
<td>74.2%</td>
<td>1,646,675</td>
</tr>
<tr>
<td>Slough</td>
<td>914,087</td>
<td>147,640</td>
<td>61.9%</td>
<td>1,462,964</td>
</tr>
<tr>
<td>Aylesbury town</td>
<td>51,641</td>
<td>72,082</td>
<td>71.6%</td>
<td>82,902</td>
</tr>
</tbody>
</table>

#### At 72% containment

<table>
<thead>
<tr>
<th>Area</th>
<th>Living and Working in area</th>
<th>Workplace Population</th>
<th>Resident Population</th>
<th>Containment Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxford</td>
<td>2,49,816</td>
<td>300,697</td>
<td>83.1%</td>
<td>2,95,612</td>
</tr>
<tr>
<td>Reading</td>
<td>2,56,244</td>
<td>331,750</td>
<td>77.2%</td>
<td>3,37,996</td>
</tr>
<tr>
<td>Watford</td>
<td>2,65,212</td>
<td>387,462</td>
<td>68.4%</td>
<td>3,95,674</td>
</tr>
<tr>
<td>Central Buckinghamshire</td>
<td>1,38,316</td>
<td>184,794</td>
<td>74.8%</td>
<td>2,03,694</td>
</tr>
<tr>
<td>Milton Keynes</td>
<td>1,38,224</td>
<td>185,599</td>
<td>74.5%</td>
<td>1,82,351</td>
</tr>
<tr>
<td>Luton</td>
<td>1,05,872</td>
<td>143,371</td>
<td>73.8%</td>
<td>1,60,815</td>
</tr>
<tr>
<td>Slough</td>
<td>91,408</td>
<td>147,640</td>
<td>61.9%</td>
<td>146,296</td>
</tr>
</tbody>
</table>

#### At 74% containment

<table>
<thead>
<tr>
<th>Area</th>
<th>Living and Working in area</th>
<th>Workplace Population</th>
<th>Resident Population</th>
<th>Containment Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxford</td>
<td>2,49,816</td>
<td>300,697</td>
<td>83.1%</td>
<td>2,95,612</td>
</tr>
<tr>
<td>Reading &amp; Slough</td>
<td>3,73,461</td>
<td>481,800</td>
<td>77.5%</td>
<td>4,88,686</td>
</tr>
<tr>
<td>Watford</td>
<td>3,31,513</td>
<td>455,790</td>
<td>72.7%</td>
<td>4,82,410</td>
</tr>
<tr>
<td>Central Buckinghamshire</td>
<td>1,38,316</td>
<td>184,794</td>
<td>74.8%</td>
<td>2,03,694</td>
</tr>
<tr>
<td>Milton Keynes</td>
<td>1,38,224</td>
<td>185,599</td>
<td>74.5%</td>
<td>1,82,351</td>
</tr>
<tr>
<td>Luton</td>
<td>1,08,333</td>
<td>145,910</td>
<td>74.2%</td>
<td>1,64,675</td>
</tr>
</tbody>
</table>

#### At 78% containment

<table>
<thead>
<tr>
<th>Area</th>
<th>Living and Working in area</th>
<th>Workplace Population</th>
<th>Resident Population</th>
<th>Containment Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxford</td>
<td>2,97,917</td>
<td>351,856</td>
<td>84.7%</td>
<td>3,47,771</td>
</tr>
<tr>
<td>Watford &amp; Luton</td>
<td>4,61,590</td>
<td>590,988</td>
<td>78.1%</td>
<td>6,32,091</td>
</tr>
<tr>
<td>Reading &amp; Slough</td>
<td>3,73,461</td>
<td>481,800</td>
<td>77.5%</td>
<td>4,88,686</td>
</tr>
<tr>
<td>Milton Keynes</td>
<td>2,11,972</td>
<td>271,274</td>
<td>78.1%</td>
<td>2,73,609</td>
</tr>
<tr>
<td>Central Buckinghamshire</td>
<td>1,38,316</td>
<td>184,794</td>
<td>74.8%</td>
<td>2,03,694</td>
</tr>
</tbody>
</table>
Proposed Commuting Zones

3.22 Greater London is evidently important when considering HMAs and FEMAs 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 much of Buckinghamshire and the surrounding areas. Furthermore, there are also well established commuting patterns to west London from the southern parts of Buckinghamshire and eastern parts of Berkshire.

3.23 Nevertheless, 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.

3.24 On this basis, our proposed commuting zones are based on the final iteration of the modelling analysis that excluded Greater London. Figure 25 shows the commuting zones proposed for Buckinghamshire and the local authority administrative boundaries, and Figure 26 details the distribution of the resident population for the four Buckinghamshire districts.

3.25 It is evident that 80% of Buckinghamshire’s population is in the Central Buckinghamshire commuting zone, which covers all of Chiltern and Wycombe together with the south of Aylesbury Vale and north of South Bucks districts. The remaining population is distributed across four other commuting zones that surround the county: Reading & Slough (7.8%), Oxford (4.1%), Milton Keynes (6.4%) and Watford & Luton (1.9%).

3.26 However, whilst this study has clearly defined the boundaries for these other commuting zones inside Buckinghamshire, the boundaries outside the county should be treated with caution given the geographic area that was included within the modelling analysis. In particular, we would note that it may not be the case that Brackley would merge with the Oxford cluster, Luton and Dunstable would merge with the Watford cluster and Bedford would merge with the Milton Keynes cluster if the full extent of areas surrounding these zones had been considered by the model – but this would not affect the boundaries or distribution within Buckinghamshire, which is the focus of this study.

3.27 It is also important to note that the modelling analysis is based on commuting flows between Middle-layer Super Output Areas (MSOAs) and therefore this geography provides the basic building block for the commuting zones that we have identified. When the ONS publish the 2011 Census commuting flow data for more fine-grained geographies, it will be possible to refine the boundaries between those zones that have been identified. Where commuting zones have self-containment levels that are marginally above or below the threshold targets, this could lead to changes in the overall geography; but it seems unlikely that these detailed boundary changes would impact on the commuting zones that have been defined.
Figure 25: Proposed Commuting Zones showing Local Authority administrative boundaries

Figure 26: 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)

<table>
<thead>
<tr>
<th>Local Authority Area</th>
<th>Central Buckinghamshire</th>
<th>Reading &amp; Slough</th>
<th>Oxford</th>
<th>Milton Keynes</th>
<th>Watford &amp; Luton</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N  %</td>
<td>N  %</td>
<td>N  %</td>
<td>N  %</td>
<td>N  %</td>
</tr>
<tr>
<td>Aylesbury Vale</td>
<td>111,700 64.2%</td>
<td>-</td>
<td>20,500 11.8%</td>
<td>32,400 18.6%</td>
<td>9,500 5.5%</td>
</tr>
<tr>
<td>Chiltern</td>
<td>92,600 100.0%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>South Bucks</td>
<td>27,200 40.7%</td>
<td>39,600 59.3%</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Wycombe</td>
<td>171,600 100.0%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL</td>
<td>403,200 79.8%</td>
<td>39,600 7.8%</td>
<td>20,500 4.1%</td>
<td>32,400 6.4%</td>
<td>9,500 1.9%</td>
</tr>
</tbody>
</table>
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 technical 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 two relevant configurations of commuting zones for the Buckinghamshire and the surrounding areas at different levels of self-containment. Figure 27 shows the areas that the analysis identified: at 67% self-containment, Aylesbury town and High Wycombe/Amersham form separate commuting zones; at higher levels these areas merge to form a single zone covering Central Buckinghamshire.

Figure 27: Commuting Zones at 67% and 75% containment thresholds (excluding Greater London)
4.4 Figure 28 illustrates how these commuting zones correspond to the ONS Travel To Work Area (TTWA) boundaries based on 2001 Census data. It is evident that the ONS analysis of the 2001 data also concluded that Aylesbury and High Wycombe were separate areas, but neither area had sufficient self-containment to be considered an independent TTWA.

4.5 It is interesting to note that the boundary between these areas was similar to that suggested by the analysis of the 2011 Census data at 67% self-containment. However, on the basis of the final TTWAs defined by ONS, it is evident that the analysis of the 2001 data suggested that the strongest commuting links from Aylesbury town were to Milton Keynes and that the strongest commuting links from High Wycombe were to Maidenhead and Slough.

4.6 Analysis of the 2011 data identifies that commuting links between Aylesbury town and High Wycombe/Amersham are now stronger than those with either Milton Keynes or Maidenhead and Slough, as illustrated by the analysis at 75% self-containment. This is a notable change, which provides a clear evidence base that the northern and southern parts of central Buckinghamshire could now be considered within the same travel to work area and consequently form part of a single housing market area.

Figure 28: Commuting Zones at 67% and 75% containment thresholds (excluding Greater London), with ONS 2007 Travel To Work Area boundaries

Migration flows

4.7 Data about migration flows from the 2011 Census is only published at local authority level. Unfortunately, this does not provide the necessary granularity for understanding the functional relationships between individual settlements. Given this context, our analysis of migration patterns has been based on the fine-grained data from the 2001 Census.

4.8 Figure 29 shows the relationship between the final seed clusters identified by the analysis of commuting patterns and each individual MSOA on the basis of the highest levels of migration. It is evident that the strongest relationships in terms of migration flows from the 2001 Census data mirror the relationships in terms of commuting flows from 2011 Census data for both Aylesbury town and High Wycombe/Amersham.
Figure 29: Migration Patterns for Commuting Zone Clusters at 67% and 75% containment thresholds (excluding Greater London), with LA boundaries

<table>
<thead>
<tr>
<th>Containment</th>
<th>Percentage of all migrants</th>
<th>Percentage of all migrants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>living in the area on Census day</td>
<td>living in the area 12 months before Census day</td>
</tr>
<tr>
<td></td>
<td>% of all movers</td>
<td>% excluding long-distance moves</td>
</tr>
<tr>
<td>High Wycombe/Amersham</td>
<td>45.4%</td>
<td>67.3%</td>
</tr>
<tr>
<td>Aylesbury town</td>
<td>44.6%</td>
<td>61.8%</td>
</tr>
<tr>
<td>Central Buckinghamshire</td>
<td>48.5%</td>
<td>70.5%</td>
</tr>
</tbody>
</table>

4.9 Figure 30 sets out the key statistics for the migration zones identified based on commuting zone clusters at 67% and 75% containment.

4.10 It is evident for both Aylesbury town and High Wycombe/Amersham separately, more than 60% of the population living in the area that had moved in the 12 months prior to Census day had moved within the respective areas when long distance moves (likely to involve a change of job or lifestyle, for example retirement) are excluded. Nevertheless, for the Central Buckinghamshire combined area, more than 70% of those that had moved had stayed in the area.

4.11 This is consistent with the PPG expectation that housing market areas will normally be defined by:

“...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..."
4.12 When we consider the population that used to live in the area 12 months prior to Census day (and continued to live somewhere in the UK), more than 65% of migrants had moved within the respective areas in both Aylesbury town and High Wycombe/Amersham. However, for the Central Buckinghamshire combined area, more than 70% of those that had moved had stayed in the area.

4.13 Given that this analysis is based on 2001 Census data, it will be appropriate to review the analysis once detailed migration flow data is published from the 2011 Census.

House Prices

4.14 As previously noted, CLG research and the PAS OAN 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 31 shows mix-adjusted average house prices relative to the Buckinghamshire average alongside the relative change in house prices over the last 10 years.

Figure 31: Mix-adjusted average house prices relative to Buckinghamshire average and 10-year change by MSOA (Source: HM Land Registry)

4.15 It is evident that house prices in Wycombe tend to be around the Buckinghamshire average (with lower prices in High Wycombe and higher prices in the more rural areas). House prices in South Bucks and in Chiltern (with the exception of Amersham) tend to be higher than the county average, whereas prices in Aylesbury Vale tend to be lower than the county average.
When we consider the surrounding area, it is evident that prices in urban areas such as Hemel Hempstead, Luton, Milton Keynes, Reading, Slough and Watford, as well as parts of outer London, are notably lower than the Buckinghamshire county average. Nevertheless, house prices in Harpenden, St Albans and Oxford, as well as places towards Central London, are notably higher than the Buckinghamshire average.

Most areas have seen average house prices increase by a similar amount (25-50%). Whilst some of those areas that currently have relatively higher house prices have also seen a greater proportionate increase over the last 10 years (such as St Albans, Oxford and Central London), some of the average and less expensive areas have also seen substantial house price growth.

It would appear that neither the geographic spread of areas with higher and lower house prices nor the geographic spread of average house price changes provides 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 32).

Figure 32: Average house prices relative to Buckinghamshire average and 10-year change by MSOA with Valuation Office Agency Broad Rental Market Area Boundaries (Source: HM Land Registry)

BRMAs are areas within which the VOA consider rent levels to be broadly similar, or alternatively that it would be reasonable to expect a household needing housing benefit or local housing allowance support to move to another settlement within the area in order to find suitable housing. The Aylesbury BRMA includes Thame, Tring and Princes Risborough; whilst the Chilterns BRMA includes High Wycombe and Amersham as well as Beaconsfield and all other settlements in South Bucks to the north of the M40.

It is evident that the boundary for the Aylesbury BRMA tends to encompass areas with house prices that are around (or marginally below) the Buckinghamshire average, whereas the Chiltern BRMA tends to cover...
areas with house prices that tend to be above the county average – but with the notable exception of the urban centres. This differential in house prices is consistent with different rent levels being charged in the private rented sector, insofar as properties with higher values tend to have higher rents. It is therefore understandable why the Aylesbury BRMA and Chiltern BRMA are separate.

Figure 33 shows the BRMA boundaries overlaid on the commuting zones previously identified, where it is apparent that the BRMAs are almost identical to the commuting zones at 67% self-containment. The only substantive difference is that Princes Risborough and Tring are in the Aylesbury BRMA, whilst neither is in the Aylesbury town commuting zone. Although there are fewer commuting zones at 75% self-containment, the Central Buckinghamshire zone is still very similar to the Aylesbury and Chiltern BRMAs combined.

Figure 33: Commuting Zones at 67% and 75% containment thresholds (excluding Greater London), with VOA Broad Rental Market Area Boundaries
5. Functional Economic Market Areas
Establishing the evidence base for identifying FEMAs

Transport Connectivity

5.1 This section identifies the strategic transport connections within Buckinghamshire and the links to other parts of the South East and the rest of England. Their influence on travel to work patterns (set out in Chapter 3) is noted, whilst the potential for planned transport investment to alter commuting flows is also considered.

Transport Connections

5.2 Buckinghamshire is a well-connected county with several motorways and important A-roads, although a number of routes currently suffer from congestion. Many rail and public transport connections pass through and across the county and the county also has canal and river connections and is proximate to a number of airports outside its borders. Figure 34 illustrates the key road and rail connections whilst Figure 35 describes these connections, including their direction and flow.

Figure 34: Strategic transport connections in Buckinghamshire
**Figure 35: Main Transport Connections in Buckinghamshire**

<table>
<thead>
<tr>
<th>Transport Type</th>
<th>Links to elsewhere</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Roads</strong></td>
<td></td>
</tr>
<tr>
<td><strong>M40 motorway:</strong> Begins in Buckinghamshire and ends up in Birmingham via Oxford.</td>
<td>Oxfordshire, London (and particularly West London)</td>
</tr>
<tr>
<td><strong>M25 motorway:</strong> passes into Buckinghamshire with one junction (J16-interchange for the M40) – helping Buckinghamshire residents access mainly London, Hertfordshire and Surrey. The M25 also connects with the A41 at J20 which provides direct links to Aylesbury.</td>
<td>Hertfordshire and Surrey, Wiltshire, Berkshire, Windsor and Maidenhead, Milton Keynes and Bedfordshire.</td>
</tr>
<tr>
<td><strong>M4 motorway:</strong> passes through the very south of the county with only J7 in Buckinghamshire, helps residents access London, Wiltshire and Berkshire and eventually Bristol.</td>
<td></td>
</tr>
<tr>
<td>A404: Within Buckinghamshire it goes south from Amersham through High Wycombe into Windsor and Maidenhead.</td>
<td></td>
</tr>
<tr>
<td>A355: Links Amersham to the M40</td>
<td></td>
</tr>
<tr>
<td>A413: Links Aylesbury with Amersham, London and the M25</td>
<td></td>
</tr>
<tr>
<td>A4010: Links High Wycombe with Aylesbury and the M40</td>
<td></td>
</tr>
<tr>
<td>A41: Links Aylesbury with Oxfordshire and the M25</td>
<td></td>
</tr>
<tr>
<td>A418/A4146: Links Aylesbury with Milton Keynes and Bedfordshire</td>
<td></td>
</tr>
<tr>
<td>A421: Crosses across the North of Buckinghamshire linking Oxfordshire with Milton Keynes and Bedfordshire, as well as the M40 and M1.</td>
<td></td>
</tr>
<tr>
<td><strong>Waterways</strong></td>
<td></td>
</tr>
<tr>
<td>Buckinghamshire’s waterways do not contribute significantly to the economic geography. However, their past use, routes and legacy affects the economic history of Buckinghamshire. For examples the Thames effectively acts as the border between Buckinghamshire and Windsor and Maidenhead and Slough (although several crossings exist). The River Wye (linking High Wycombe to the Thames) and Great Ouse (Milton Keynes and Bedfordshire). The Grand Union Canal also links Birmingham with London via Buckinghamshire via the ‘Aylesbury Arm’.</td>
<td>Windsor and Maidenhead, Milton Keynes and Bedfordshire, Oxfordshire</td>
</tr>
<tr>
<td><strong>Railways</strong></td>
<td></td>
</tr>
<tr>
<td>National Rail: Buckinghamshire is largely served by national rail which connects the West Midlands with London. The West Coast Main line is accessible from Milton Keynes. London to Aylesbury Line serves Aylesbury and other settlements along the A413 towards London.</td>
<td>Berkshire, Greater London, Oxfordshire, Warwickshire, Wiltshire, Hertfordshire, Bedfordshire.</td>
</tr>
<tr>
<td>Chiltern Main Line: serves towns throughout Buckinghamshire including Gerrards Cross, Beaconsfield, High Wycombe, Princes Risborough, Chorleywood, Amersham, Wendover, Haddenham and Thame Parkway and Aylesbury.</td>
<td></td>
</tr>
<tr>
<td>London South Midland provides local services connecting Cheddington, Leighton Buzzard and Tring to Milton Keynes and London.</td>
<td></td>
</tr>
<tr>
<td>Great Western Main Line: runs through Slough (Berkshire) with Taplow and Iver both having stations in Buckinghamshire.</td>
<td></td>
</tr>
<tr>
<td>Marston Vale Line: between Bletchley and Bedford</td>
<td></td>
</tr>
<tr>
<td>Marlow Branch Line: between Marlow, Bourne End and Maidenhead.</td>
<td></td>
</tr>
<tr>
<td>In the future Cross Rail will also stop at Iver.</td>
<td></td>
</tr>
<tr>
<td>Future East West Rail line will connect Princes Risborough to Milton Keynes via Aylesbury and Winslow, and will also link Oxford to Bedford</td>
<td></td>
</tr>
<tr>
<td><strong>Other Public Transport</strong></td>
<td></td>
</tr>
<tr>
<td>Tube Stations in Buckinghamshire (Amersham station, Chalfont &amp; Latimer station and Chesham tube station) serve the Metropolitan line and commuters could access almost all areas of London by public transport connections.</td>
<td>London</td>
</tr>
<tr>
<td>Although the bus network is only constrained in theory by roads, the network is often limited by Local Authority boundaries. Given the strong road connections, the linkages are mainly with neighbouring Local Authorities.</td>
<td>All Surrounding Counties and Local Authorities.</td>
</tr>
<tr>
<td>There are also regular bus links to Heathrow airport from High Wycombe, Beaconsfield, Amersham, Chesham and Gerrards Cross.</td>
<td></td>
</tr>
</tbody>
</table>
5.3 Figure 36 below summarises the key transport issues as set out in each of the Buckinghamshire Local Authorities (e.g. core or transport strategies) and two Local Enterprise Partnerships (through Strategic Economic Plans), providing further detail of the key connections to places within and outside of Buckinghamshire for each district.

Figure 36: Overview of Transport Connectivity at Local Authority Level

<table>
<thead>
<tr>
<th>Aylesbury Vale</th>
<th>Chiltern</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Road transport links in the south of the district, and in Aylesbury in particular, are generally reasonably good to places such as London, Heathrow and Luton airports, and the Midlands as well as access to the M40 and M25 motorways. The A41 provides a direct link to J20 of the M25. Large parts of the northern half of the district tend to be less well served by good road links although places such as Silverstone and Buckingham are relatively close to the M1/M40 motorway. The district has good rail links to London from Aylesbury, Stoke Mandeville, Haddenham and Wendover with average journey times of less than an hour. Services are also available from Haddenham to Birmingham and beyond. Express bus services operate between Aylesbury and Milton Keynes, and between Cambridge and Oxford via Buckingham.”</td>
<td>“Amersham is the main focus for the local road network which is dominated by three main roads which cross the District, the A404, the A413 and the A416/A355. These routes provide direct access to the M25 and M40, with the M1, M3 and M4 being within easy reach. Regular bus services run across the District, many terminating in towns outside the District’s boundary. There are railway stations providing rail services to London, Aylesbury and Birmingham at Great Missenden, Amersham, Chalfont &amp; Latimer and Seer Green. There are also connections to London via the Metropolitan Underground Line at Chesham, Amersham and Chalfont and Latimer. Two of the South East’s main airports Heathrow (30km; 19 miles) and Luton (40km; 25 miles) are relatively accessible by private transport via the M25, M4 and M1.”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Wycombe</th>
<th>South Bucks</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Wycombe is in a prime location with excellent access to the M25/M40/M4 corridor, good rail links between London and Birmingham and close proximity to Heathrow airport and London.”</td>
<td>“The District is well served by the strategic road network (M40, M25 and M4). Frequent rail services are provided by the Birmingham - Marylebone line, serving Beaconsfield, Gerrards Cross and the Denham area, and the Bristol - Paddington mainline serving Burnham, Taplow, Iver and Richings Park. There are frequent bus services serving the larger settlements, and those smaller settlements located on the principal route network. Other settlements have poor public transport accessibility.”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>South East Midland LEP</th>
<th>Buckinghamshire Thames Valley LEP</th>
</tr>
</thead>
<tbody>
<tr>
<td>“SEMLEP is in the optimum location between London, Oxford, Cambridge and the rest of the Midlands. It is well served by major radial routes from London (including the M40, M1, A1(M) and M11 motorways), as well as by major rail routes (Chiltern Line, West Coast Mainline, Midland Mainline and East Coast Mainline). However, some routes running from west to east are in need of improvement. The area also benefits from London Luton airport and proximity to both Heathrow and Stansted.”</td>
<td>“There are no major roads that run directly between the south and north of the county (e.g. between High Wycombe and Milton Keynes). As far as rail is concerned, Buckinghamshire is served by the Chiltern railway line between London and Birmingham, the Great Western railway line between London and the West Country, and the West Coast Mainline between London and the North. In addition to this Amersham, Chesham and Chalfont and Latimer are served by the London Underground network. Most lines in the south survived as busy London commuter routes.”</td>
</tr>
</tbody>
</table>

Source: Core Strategies and Strategic Economic Plans
Urban Area Connectivity

5.4 The figure below provides an assessment of transport connections from areas within Buckinghamshire to major urban areas. It should be noted that these travel times are based upon free flowing traffic and could be somewhat longer during peak hours when traffic is heavier. Times are highlighted where road or public transport takes double the time than the other transport options. In all cases this is where public transport takes over double the time compared with driving.

5.5 Figure 37 shows that, whilst there are very few destinations considered which take longer than two hours to access from Buckinghamshire by car, public transport is more problematic with some difficulty in connecting places within Buckinghamshire but strong links with London and Birmingham. This analysis also suggests that Luton, Bedford and parts of Outer London are not as accessible by public transport as car. There are also some long public transport journeys within Buckinghamshire, particularly from North to South.

Figure 37: Transport Access Times (Note: travel times are based on non-peak free-flowing traffic)

<table>
<thead>
<tr>
<th>Destination</th>
<th>Aylesbury</th>
<th>High Wycombe</th>
<th>Chesham</th>
<th>Amersham</th>
<th>Marlow</th>
<th>Buckingham</th>
<th>Burnham</th>
<th>Gerrards Cross</th>
<th>Beaconsfield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode of Transport</td>
<td>Road</td>
<td>Public</td>
<td>Road</td>
<td>Public</td>
<td>Road</td>
<td>Public</td>
<td>Road</td>
<td>Public</td>
<td>Public</td>
</tr>
<tr>
<td>Aylesbury</td>
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<td>0.25</td>
<td>0.41</td>
<td>0.27</td>
<td>0.21</td>
<td>0.43</td>
<td>1.30</td>
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</tr>
<tr>
<td>High Wycombe</td>
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<td>0.42</td>
<td>0.16</td>
<td>0.33</td>
<td>0.13</td>
<td>0.36</td>
<td>0.51</td>
</tr>
<tr>
<td>Chesham</td>
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<td>0.42</td>
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<td>0.09</td>
<td>0.26</td>
<td>1.17</td>
<td>0.54</td>
</tr>
<tr>
<td>Amersham</td>
<td>0.27</td>
<td>0.21</td>
<td>0.16</td>
<td>0.33</td>
<td>0.08</td>
<td>0.09</td>
<td>0.26</td>
<td>1.17</td>
<td>0.54</td>
</tr>
<tr>
<td>Marlow</td>
<td>0.43</td>
<td>1.30</td>
<td>0.13</td>
<td>0.36</td>
<td>0.32</td>
<td>1.28</td>
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</tr>
<tr>
<td>Buckingham</td>
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<td>0.54</td>
<td>1.47</td>
<td>0.55</td>
</tr>
<tr>
<td>Burnham</td>
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<td>2.03</td>
<td>0.21</td>
<td>1.01</td>
<td>0.29</td>
<td>1.54</td>
<td>0.25</td>
<td>1.20</td>
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</tr>
<tr>
<td>Gerrards Cross</td>
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<td>0.17</td>
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</tr>
<tr>
<td>Beaconsfield</td>
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<td>0.05</td>
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<td>0.57</td>
<td>0.11</td>
<td>0.47</td>
<td>0.17</td>
</tr>
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<td>Oxford</td>
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<td>0.40</td>
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<td>1.00</td>
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<td>1.41</td>
<td>1.06</td>
<td>1.47</td>
<td>1.24</td>
</tr>
<tr>
<td>Milton Keynes</td>
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<td>1.03</td>
<td>1.37</td>
<td>0.50</td>
<td>1.11</td>
<td>0.55</td>
<td>1.35</td>
<td>1.12</td>
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<tr>
<td>Bedford</td>
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<td>1.19</td>
<td>1.56</td>
<td>0.56</td>
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<td>1.08</td>
<td>2.10</td>
<td>1.18</td>
</tr>
<tr>
<td>Luton</td>
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<td>0.44</td>
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<td>0.35</td>
<td>1.55</td>
<td>0.36</td>
<td>1.44</td>
<td>0.51</td>
</tr>
<tr>
<td>Watford</td>
<td>0.35</td>
<td>0.55</td>
<td>0.36</td>
<td>1.15</td>
<td>0.26</td>
<td>0.42</td>
<td>0.27</td>
<td>0.37</td>
<td>0.37</td>
</tr>
<tr>
<td>Brentford</td>
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<td>1.52</td>
<td>0.40</td>
<td>1.25</td>
<td>0.45</td>
<td>1.25</td>
<td>0.40</td>
<td>1.25</td>
<td>1.06</td>
</tr>
<tr>
<td>Central London</td>
<td>1.20</td>
<td>1.09</td>
<td>0.50</td>
<td>0.44</td>
<td>0.59</td>
<td>1.01</td>
<td>0.48</td>
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<td>0.52</td>
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<tr>
<td>Slough</td>
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<td>0.25</td>
<td>0.53</td>
<td>0.33</td>
<td>1.27</td>
<td>0.30</td>
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<td>0.22</td>
</tr>
<tr>
<td>Reading</td>
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<td>0.37</td>
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<tr>
<td>Birmingham</td>
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<td>1.32</td>
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<td>2.35</td>
<td>1.40</td>
<td>2.20</td>
<td>1.38</td>
</tr>
</tbody>
</table>

Source: Atkins, AA & Google, 2014. Those in yellow is where the journey by public transport is double the time of journey by car.
5.6 A briefing from the Department for Transport (DFT)\(^{18}\) shows that the average journey time to work has been steadily increasing since the 1990s and it takes on average 28 minutes for most people to commute to work. The average journey to work for London residents takes just over 41 minutes, 48% longer than the national average. On average, commuting trips by car take 24 minutes, by bus 41 minutes, and by surface rail 69 minutes.

5.7 Figure 38 shows the potential commuting destinations which are accessible by car and by rail within the average commuting times set out above. We have used the time taken for rail to be the maximum national average. On average, commuting trips by car take 24 minutes, by bus 41 minutes, and by surface rail 69 minutes.

---

**Figure 38: Commuting Transport Access Times (Note: travel times are based on non-peak free-flowing traffic)**

<table>
<thead>
<tr>
<th>Destination</th>
<th>Aylesbury</th>
<th>High Wycombe</th>
<th>Chesham</th>
<th>Amersham</th>
<th>Marlow</th>
<th>Buckingham</th>
<th>Burnham</th>
<th>Gerrards Cross</th>
<th>Beaconsfield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport Mode</td>
<td>Road</td>
<td>Public</td>
<td>Road</td>
<td>Public</td>
<td>Road</td>
<td>Public</td>
<td>Road</td>
<td>Public</td>
<td>Road</td>
</tr>
<tr>
<td>Aylesbury</td>
<td>0:29</td>
<td>0:42</td>
<td>0:25</td>
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<tr>
<td>High Wycombe</td>
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<td>Chesham</td>
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<tr>
<td>Amersham</td>
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<tr>
<td>Marlow</td>
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<tr>
<td>Burnham</td>
<td>0:43</td>
<td>2:03</td>
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<tr>
<td>Gerrards Cross</td>
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<td>Banbury</td>
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<td>Northampton</td>
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<td>Milton Keynes</td>
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<tr>
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<tr>
<td>Central London</td>
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</tbody>
</table>

Source: Atkins, AA & Google, 2014

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Transport Constraints

5.8 A range of transport infrastructure constraints exist in Buckinghamshire. These are identified through the local transport plans and core strategies. A key constraint is the perceived poor connectivity between Buckinghamshire and neighbouring urban areas. A ‘Delivering a Sustainable Transport System’ conducted for Milton Keynes and Aylesbury Vale highlights how some neighbouring areas are poorly connected by public transport, as illustrated by the analysis above. In some cases the point-to-point journey times can be over two to two-and-a-half times longer than by car.

5.9 Further constraints highlighted by Buckinghamshire Local Transport Plan are highlighted including:

- Large parts of the northern half of Buckinghamshire tend to be less well connected by road and rail links;
- High dependence on car travel across the county;
- Poor north-south highway connections, in terms of journey times, speeds and reliability;
- Rail improvements required due to the length of time in connecting with major urban areas (e.g. East West Rail and some station upgrades);
- Highway capacity upgrades, potential downgrading of A-roads and improvements of walking and cycling routes between urban and rural areas;
- Poor bus links connecting urban areas in Buckinghamshire with areas outside;
- Connections by road and rail to London tend to be heavily congested. There is also evidence of congestion between Bedford, Milton Keynes, Aylesbury and Oxford (East to West).

5.10 The Buckinghamshire Transport Strategy highlights the importance of cross border economic growth and how increased economic growth will create pressures on strategic routes in Buckinghamshire. An assessment of the constraints in Buckinghamshire suggests that East to West and linkages to London contribute to the area’s economic geography and that there are constraints on several linkages including North to South by Road and Rail.

New Transport Links

5.11 There is potential for new transport linkages to change the economic geography, by unlocking access to areas and changing travel patterns. To overcome the transport infrastructure constraints listed above a range of transport projects have been planned by the four Local Authorities and County Council. These broadly have the aim of:

- Transfer journeys in the urban area from the car to walking, cycling, rail and bus use;
- Re-route cross town journeys from radial routes to appropriate distributor roads;
- Intercept longer distance journeys at the edge of the urban area with Park and Ride or other public transport services;
- Manage the transport network to make best use of capacity for all travellers;

5.12 A range of transport improvements have been identified in Local Authority and Local Enterprise Partnership policy documents. Figure 39 summarises these transport improvements, providing an approximate assessment of the linkages it will create (in brackets).
### Buckinghamshire Transport Plan

- A range of new transport improvements are listed including:
  - Improved multi-modal access to the Thames Valley and MK including provision towards East West Rail (Through Buckinghamshire - North to South)
  - East West Rail (London to Oxford, Bedford and East Anglia)
  - A355 Traffic Management (North to South)
  - Inter-regional coach network (across Southern Buckinghamshire)
  - Aylesbury – High Wycombe Rail Improvements (North – South within Buckinghamshire)
  - Aylesbury Eastern Link Road (Aylesbury to Leighton Buzzard)
  - A421 Improvements (West to East – Milton Keynes)
  - A418 Improvements (Buckinghamshire to Milton Keynes)
  - Chiltern Railways Evergreen 3 (Birmingham and London)
  - Crossrail (Iver and Taplow to London)
  - Metropolitan Line Upgrade (London)

### Buckinghamshire Local Transport Body - Initial Priority Scheme List

- The LTB has identified the following schemes as highly important:
  - Aylesbury Eastern Link Road
  - East West Rail (London to Oxford, Bedford and East Anglia)
  - Stocklake Improvement (East of Aylesbury)
  - High Wycombe Southern Quadrant Package (High Wycombe)
  - A355 improvements with Gore Hill and Wilton Park.
  - Inter-regional coach network (across Southern Buckinghamshire)

### South East Midland LEP

- The strategic economic plan lists a number of key transport connections which are of importance for economic growth. Many are outside of the county including:
  - The A45/A4500 corridor (Daventry and Northampton)
  - The A421 corridor (Milton Keynes and Bedford)
  - The A43 (Towcester and Brackley).
  - Woodside Link (Dunstable to Houghton Regis)
  - London Luton Airport Highway Access Luton (M1 to Luton)
  - A421 Dualling from Fen Farm to J13 (Cambridge through Milton Keynes to Oxford)
  - Abthorpe Roundabout (Silverstone & Northamptonshire)
  - Bletchley Station (Oxford, Milton Keynes Central and Bedford)
  - Waterside North (within Aylesbury)
  - Eastern Link Road including Stocklake Link Road (Aylesbury)

### Buckinghamshire Thames Valley LEP

- The BTV LEP strategic economic plan makes it clear that the “major viable strategic opportunities are to improve north-south connectivity”. The following schemes are seen as highly important to unlocking growth:
  - Aylesbury East Link Road (Aylesbury to Leighton Buzzard) and improvements to the A418.
  - East West Rail (London to Oxford, Bedford and East Anglia)
  - Stocklake Link, (East of Aylesbury)
  - High Wycombe Southern Quadrant Transport Strategy (High Wycombe)
  - Dualling of Junction 3a of the M40
  - A355 Wilton Park/ Gore Hill (North to South)

### Other Important Projects

- A number of other projects are listed as important including:
  - EWR Phase 1 - Marylebone-Oxford service via Wycombe, Princes Risborough and Bicester.
  - CrossRail - connecting Maidenhead to Acton Main Line, with an underground spur to Heathrow Airport
  - Re-opening the Wycombe to Bourne End Rail Link.
  - Establishing a Halt on the East-West Rail Line in the Bernwood Fores

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5.13 In summary the projects presented in Figure 39 may have the impact of:

  » Strengthening existing transport connections, reducing congestion and increasing capacity and travel times to existing areas;
  » Improving North to South transport linkages within Buckinghamshire, with connections to areas beyond including Northampton and Bedford;
  » Improving East to West connections across the county with the South of Buckinghamshire benefitting from Tube and Cross Rail improvements.

5.14 In addition to the new transport links above the Government’s Road Investment Strategy (December 2014) sets out a long-term vision for motorways and major roads to improve the network and create better roads for users. In particular it looks to improve the connection between Oxford and Cambridge by creating an Oxford to Cambridge Expressway, which would create a high-quality link between the two cities, via Bedford and Milton Keynes.

**Expected impact of East West Rail**

5.15 The transport investment with perhaps the greatest potential to alter the existing economic geography of Buckinghamshire is East West Rail, which is due to open in 2019. The Western Section, which runs from Aylesbury and Reading to Milton Keynes and Bedford (Figure 40), will provide fast new connections between settlements that are not currently linked. In particular, there will be a new direct link from High Wycombe, Princes Risborough and Aylesbury to Milton Keynes and Bedford. A new station will also be built at Winslow in the northern part of Aylesbury Vale District.

*Figure 40: East West Rail Western Section*
5.16 The new link is expected to reduce the potential travel time from Aylesbury to Milton Keynes by 26%, as the 41min journey time by car is reduced to just under 30 minutes by rail. Journey times from Aylesbury to Bletchley will fall by 57% and to Bedford by 54%. However, this is not expected to generate a significant amount of additional trips, with just over 50 new commuting journeys made between Aylesbury and Milton Keynes, and 77 new journeys between Aylesbury and Bletchley per weekday. This is partly because much of Milton Keynes’ employment is not easily located from the rail station and so mode shift will be more difficult to achieve. The East-West rail link to Aylesbury will play a role in supporting growth in the Aylesbury, with 885 residential units and approximately 115,000 sqm of office floorspace supported by improved connectivity facilitated by the railway. In summary, although East West Rail will have the impact of enabling more of study area residents to work in Milton Keynes and Bedford, and by supporting growth in Aylesbury it is not expected to have a significant impact on existing economic geography.

5.17 This conclusion appears to be supported by most businesses in Buckinghamshire, with just under 20% of businesses rating the impact as positive (very or fairly positive), whilst less than 10% rate it negative (Figure 41). However, the majority feel the impact will be neither positive nor negative. Those businesses in Aylesbury Vale and Wycombe are more likely than average to rate the impact positively. Businesses in Chiltern are more likely to rate the East West Rail as having a negative impact, whilst fewer than 2% of businesses in South Bucks saw the potential impact as negative.

Figure 41: Impact of East West Rail will have on the business

<table>
<thead>
<tr>
<th>Impact</th>
<th>Bucks Total</th>
<th>Aylesbury Vale</th>
<th>Chiltern</th>
<th>South Bucks</th>
<th>Wycombe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very positive</td>
<td>9%</td>
<td>13%</td>
<td>7%</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>Fairly positive</td>
<td>10%</td>
<td>11%</td>
<td>6%</td>
<td>6%</td>
<td>13%</td>
</tr>
<tr>
<td>Neither positive nor negative</td>
<td>70%</td>
<td>64%</td>
<td>75%</td>
<td>83%</td>
<td>67%</td>
</tr>
<tr>
<td>Fairly negative</td>
<td>3%</td>
<td>4%</td>
<td>4%</td>
<td>0%</td>
<td>5%</td>
</tr>
<tr>
<td>Very negative</td>
<td>5%</td>
<td>6%</td>
<td>8%</td>
<td>1%</td>
<td>4%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
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<td>8%</td>
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<tr>
<td>Unweighted bases</td>
<td>1000</td>
<td>315</td>
<td>199</td>
<td>140</td>
<td>346</td>
</tr>
</tbody>
</table>

Source: BBF Survey 2013

Future Growth and Impact on Travel Demand

5.18 The distribution of future employment and residential growth has the potential to impact on the future travel to work movements. The future shape of the transport network is clearly key to this too.

5.19 The Buckinghamshire LEP is of course highly aware of the position of Buckinghamshire in driving growth. It also notes that Buckinghamshire is also influenced by growth in neighbouring areas and the pressures and benefits that this provides. They note that neighbouring areas (particularly to the North) are likely to accommodate significant growth in the next 15 years. It identifies the following areas that are expected to grow significantly: Milton Keynes, West Northamptonshire (including Northampton, Daventry, Brackley and

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21 East West Rail Central Section Conditional Outputs Study 2014
Towcester), Wokingham, Dacorum (focused on Hemel Hempstead) and Central Bedfordshire (focused on Luton/Dunstable/Houghton Regis and Leighton-Linslade), Slough and Maidenhead.

5.20 This is supported by the South East Midlands LEP which highlights the number of housing completions needed in order to meet existing development plan targets is around the provision of 127,000 new dwellings by 2026 (with 86,700 by 2021) – which is a higher rate than is currently being achieved.

5.21 The LEP is also seeking to generate 6,800 additional net new jobs above the pre-recession peak by 2020. It is not stated where these jobs will be based, but it is likely that they will be linked to the key sectors, particularly:

» High Performance Technologies;
» Film, TV and Visual Effects;
» Games and Connected Digital Economy;
» The Visitor Economy;
» Life Sciences and Medical Technologies; and
» Food and Drink

5.22 The implication for economic geography in the Buckinghamshire Area is that greater employment in the Milton Keynes area could increase the commuting flows from some parts of Buckinghamshire, particularly from northern parts of Aylesbury Vale. However, this will be balanced by a significant amount of growth within Buckinghamshire. It should also be noted that the estimate of 130 new commuting trips from Aylesbury town to Milton Keynes and Bletchley as a result of East West Rail (see above) takes full account of the future likely distribution of growth in 2030, as set out in Local Plans. The continued growth of Milton Keynes is therefore unlikely to mean that travel to work flows will increase by enough to change the labour market catchments set out in Chapter 4.
Transport Connectivity: Conclusions

» The strategic transport network in Buckinghamshire provides excellent connections to London, as well as other parts of the South East and West Midlands via the M25, M4 and M40. Whilst there are number of key routes that link the key settlements of Wycombe, Amersham, Beaconsfield and Amersham, routes running east-west are somewhat poorer. Road links between much of the south of the county and the North of Aylesbury Vale, particularly Buckingham, are also relatively poor.

» Unsurprisingly, the commuting patterns shown in Chapter 4 are consistent with the strategic transport network. The northern sections of Aylesbury Vale have much greater linkages with Milton Keynes, simply because it is quicker to travel to work there than other parts of Buckinghamshire. Travel times to London by rail are particularly quick, resulting in very high numbers of commuters across much of Buckinghamshire. Wycombe, Chiltern and South Bucks all have strong links with each other, as well as their respective neighbouring authorities, where transport links are good.

» A number of transport improvements are planned which will support growth. The investment with the most potential to alter current patterns of economic geography is East West Rail. However, although travel times are expected to be significantly reduced from current levels, transport modelling undertaken for East West Rail suggests that there will be a net growth in commuting from Aylesbury to Milton Keynes and Bletchley of about 130 additional journeys as a result of the link. Although this will strengthen the functional relationship between Aylesbury Vale and Milton Keynes, it is unlikely to do so by enough to change the labour market areas defined in Chapter 4.

Implications for the definition of the FEMA:

» Travel times from Buckingham to Milton Keynes are much quicker than to other towns in Buckinghamshire, which suggests Buckingham and other northern parts of the Aylesbury Vale District would fit better within a Milton Keynes FEMA.

» Travel times between most of the towns in the central and south of the county are generally within acceptable commuting times, which suggests that most towns within High Wycombe, Chiltern and the northern part of South Bucks, particularly Beaconsfield, could be a single FEMA.

» Aylesbury town has acceptable commuting times by public transport to many other towns in south and central Buckinghamshire, but most settlements are outside the average commuting time by car. Travel times to Milton Keynes are also relatively lengthy. This suggests that Aylesbury town could be the centre of its own FEMA, although it certainly looks more towards High Wycombe and other Buckinghamshire settlements than to Milton Keynes.

» Much of the southern and central parts of South Bucks, including Burnham, have quicker travel times to Slough and other parts of the Thames Valley, reinforcing the commuting analysis in Chapter 3.
Commercial Property Markets

A FEMA is effectively an area in which businesses search for sites and premises. A FEMA can therefore be defined as an area which has common locational criteria, in terms of infrastructure, and proximity to major urban settlements, and aligns with a defined commercial property market.

This section considers the extent of local property markets in the study area, drawing upon secondary analysis from employment land studies undertaken at the district level, and supplemented by our own analysis of Valuation Office floorspace data (see Appendix A). Conclusions are drawn on how this might affect the definition of FEMAs in the study area.

Property Market Characteristics

South Bucks

The South Bucks Employment Site Appraisals, undertaken for the Council in 2013, includes a brief summary of the local property market in the District:

- The South Bucks property market is relatively small, with take-up of office space averaging just 18,800 sq.m per annum over the five years to 2013. Over the last five years take-up has been falling.
- The office market is focused more towards demand from local, Small and Medium-sized Enterprises (SMEs) requiring small office units, with 65% of deals for small office units of less than 185 sq.m. In contrast, just 14% of deals have been for units of over 465 sq.m.
- Take-up of industrial floorspace in the District is also relatively small, averaging at around 8,000 sq.m per annum over the last five years to 2013. The number of deals is strongly biased towards medium-sized industrial properties, although there have been a small number of large deals, particularly in Iver.
- Average rateable values are higher, both for office and industrial premises, given the District’s proximity to London and the M25.

Chiltern

The Chiltern Employment Land Needs Assessment (2013) summarises the extent of local property markets in the District:

- Chiltern has a relatively localised and self-contained commercial property market with a mixed industrial and office character, which largely services the District’s key employment sectors of professional services, digital and creative media and healthcare.
- Employment space is generally concentrated within the main settlements of Chesham, Amersham and Chalfont St Peter and dispersed across a range of small to medium-sized sites.
- Whilst the majority of the area’s stock of employment space is industrial, the District also has a sizeable stock of office premises. The main attractions for firms are relatively low rents (particularly compared to adjoining centres and Central London), the presence of a skilled local workforce and high quality of life.
- Partly reflecting its location and more limited access to strategic routes (particularly within northern parts of the District), the market is viewed as quite insular and localised, with lower rents often proving an insufficient incentive to draw firms from other areas. Feedback from some local agents...
suggests that local firms account for as much as 95% of enquiries/deals on commercial sites and premises.

» The District generally lacks large employment sites (with the exception of some single-occupier Green Belt sites such as Chalfont Grove and Pollards Wood) with the majority of existing sites being small to medium in size. This affects the type of businesses that can operate from Chiltern, and favours small, local firms that value the quality of life offer over infrastructure and expansion potential.

» Many firms in the area are long-established, with locally-based owners/directors and often reflecting historic investment and growth by larger businesses, for example GE Healthcare which has been operating in Chiltern for many years through earlier acquired businesses and across a number of different sites.

» Infrastructure and accessibility constraints limit the size of firm that can realistically locate within Chiltern, with the exception of southern fringes of the district (e.g. around Chalfont St Peter) which benefit from better transport links to the M25, Greater London and Heathrow. Unless these factors significantly improve, the market for employment space will remain largely localised. In this respect, Chiltern is unlikely to compete with better connected nearby centres such as Beaconsfield, Gerrards Cross and High Wycombe.

**Wycombe**

5.27 The Wycombe Economy Study and Employment Land Review sets out the property market dynamics in the District:

» In Wycombe, occupier demand is broadly of two kinds. Local demand is generated mostly by small and medium occupiers who sell goods and services to the area’s residents and businesses. Regional, national and global demand is partly generated by large corporate occupiers, who in the south of the district especially may be part of the Thames Valley technology cluster. In this wider market, Wycombe is in close competition with core locations such as Reading and Maidenhead which are well above even the highest rents in Wycombe district.

» Geographically, local demand is spread across the district, very roughly in proportion to the size of different settlements and their hinterlands. Regional, national and global occupiers are concentrated in the south east corner of the district, to the High Wycombe and around Marlow, Wooburn and Bourne End.

» Most of Wycombe’s office stock is in the south east of the district, at High Wycombe, Marlow, and in smaller quantities at Wooburn Green and Bourne End. In that general area there are also a number of large vacant ‘country house offices’. In the north of the district there are offices at Princes Risborough.

» Office take-up in recent years has been mainly by small and medium local businesses, often on short leases. Larger corporate occupiers have generally gone to out-of-town business parks, where access, car parking and the quality of buildings are better.

» In office market terms, Marlow is on the fringes of the Thames Valley. For many occupiers it may be a good alternative to core Thames Valley locations such as Maidenhead and Reading, but its potential is restricted by lack of critical mass and distance from the M4. Rail links are also poor, which means that car parking is important to office occupiers.
The district’s industrial stock is generally currently well occupied and in demand. The shortage of space means some occupiers continue to take poor quality space in less than ideal locations. For offices the story is much more variable. At the moment the regional office market remains oversupplied and also applies to Wycombe; in the longer term, as the market improves this oversupply will be reduced.

Aylesbury Vale

The Aylesbury Vale Employment Land Review Update, undertaken for the Council in 2012, provides a summary of the property market in the District:

- Aylesbury Vale has a relatively modest office market. Aylesbury is the largest centre and accommodates the bulk of office deals in the District; but is a notably smaller (and more localised) market relative to surrounding centres such as Milton Keynes or Hemel Hempstead.
- Deals continue to be focused primarily towards smaller units of less than 185 sq.m. 65% of deals are for units of less than 185 sq.m, whilst just 2% of deals at the other end of the spectrum have been for over 1850 sq.m of floorspace between 2005-12 period.
- Headline rents remain, as reported in the Housing and Economic Growth Assessment, at around £16 psf based on the new-build development at Bell Business Park. This compares to around £19 psf in Hemel Hempstead, £20 psf in Milton Keynes and £20.50 psf in Oxford.
- There is very limited new-build office space in the District, particularly in Aylesbury Town Centre. Some new development has been brought forward at Fairford Leys in Aylesbury, with space at Riverside House and Enterprise House being marketed at £12.50 psf.
- Take up of industrial floorspace has been much larger than office, averaging at about 45,000 sq.m per annum. There has been a general upward trend in take-up.
- Industrial take-up is much more strongly skewed towards larger units, with medium-sized and larger units making up the majority of take-up. There are however very few very large deals, and not evident market in the Vale for large scale warehouse/ distribution activities.
- The industrial market is focused largely on the M1 Corridor.
Commercial Property Markets: Conclusions

» Whilst the South Bucks market is relatively self contained, providing space for small, local businesses, it does also form part of the wider M25 market area for office and industrial floorspace, including sites at Iver for larger industrial and distribution units. In some respects, the District’s sites also form part of the wider Thames Valley market area, which runs along the M4 corridor, although it does not have the critical mass to attract the type and scale of occupiers that other parts of the Thames Valley does, despite being very well located.

» Chiltern’s market is very self contained, catering very much to local demand. Chiltern also does not have the sites or the critical mass to compete with other parts of the Thames Valley, or other parts of Buckinghamshire, such as Wycombe.

» Wycombe’s market is different in that its occupier demand is broadly of two kinds. Local demand is generated mostly by small and medium occupiers who sell goods and services to the area’s residents and businesses. Regional, national and global demand is partly generated by large corporate occupiers, who in the south of the district especially may be part of the Thames Valley technology cluster. In this wider market, Wycombe is in close competition with core locations such as Reading and Maidenhead. However, rents for these locations are generally well above even the highest rents in Wycombe district, which does make its market somewhat differentiated from the core Thames Valley area.

» Aylesbury town centre has a relatively self contained market serving local demand. However, the north of the District is distinct in that it has a much larger proportion of industry and distribution, focused on the M1 market. Both office and industrial rental values are much cheaper than the rest of Buckinghamshire, and are closer to levels seen in Milton Keynes.

Implications for the definition of the FEMA:

» The fact that the northern part of Aylesbury Vale is clearly part of a very different property market that has a much greater concentration of warehousing space, suggests that the northern part of Aylesbury Vale is within its own FEMA.

» Aylesbury Vale town centre also appears to be a distinct property market, with rental levels and occupier types that are distinct to other settlements in the county. This suggests Aylesbury Vale could be within its own FEMA, at least in property market terms.

» There is clearly a distinct property market centred on Wycombe, which is distinct from other parts of the Thames Valley, and is therefore part of a FEMA which is separate to that in the core Thames Valley area.

» Although both South Bucks and Chiltern both have very localised property markets, neither of them are part of property markets that are significant enough to be part of their own FEMA. At a strategic level, Chiltern and the northern part of South Bucks, including Beaconsfield and Gerrards Cross, are probably part of a wider M40 property market which includes High Wycombe, whilst southern and eastern parts of South Bucks are part of an M4/M25 property market area.
Sectoral Composition and Business Growth

This section provides an assessment of the sectoral composition and business growth characteristics at a local level in Buckinghamshire. This analysis has been undertaken to identify clusters of firms who may share ideas and suppliers, in lieu of detailed information on the flow of goods and services. The section builds upon the work of Buckinghamshire Business First who produce a range of reports which explore the local economy, enterprise and labour market.

Sectoral Composition

Buckinghamshire’s sector profile is shown in Figure 42. This shows that Buckinghamshire has specific strengths, where there is a significant difference compared to the national average, in:

- Professional, scientific and technical services (10.6% compared with 8.0%)
- Information and Communication (6.2% compared with 4%)
- Wholesale (7.4% compared to 4.2%)
- Construction (5.6% compared with 4.6%)

Figure 42: Sector Strengths

Source: BRES 2014
5.31 Figure 43 shows the sectoral composition of each Buckinghamshire authority. The following observations can be made about the similarities and differences between each authority:

- Both Wycombe and Aylesbury Vale have a higher proportion of jobs in the manufacturing, construction and motor trade sectors, whilst the two southern authorities of Chiltern and South Bucks are less well represented in these sectors;
- Wycombe has a much higher proportion of jobs in the retail, wholesale, transport and storage sectors compared to other three authorities;
- Both Chiltern and Aylesbury Vale have much higher proportions of employees in the public sector compared to Wycombe and South Bucks;
- South Bucks, Chiltern and Wycombe all have relatively high proportions of employees in Business and Professional Services sectors when compared to Aylesbury Vale.

5.32 Overall, the picture of sectoral composition could be summarised as one where the southern authorities in Buckinghamshire, particularly South Bucks and Chiltern, tend to have a somewhat higher proportion of higher value sectors, and a smaller proportion of lower value sectors such as manufacturing and business admin. Aylesbury Vale is the inverse of this. Wycombe has both a relatively large manufacturing sector and a high proportion of jobs in business and professional services, with a smaller public sector as a result. This analysis is consistent with the analysis of property markets (previous chapter), which identified a large market for industrial and warehousing premises in Aylesbury Vale compared to the rest of the district, but also a relatively sizeable office and industrial market focused on Wycombe too.

Figure 43: Sectoral Composition 2013 – all Buckinghamshire authorities

Source: BRES 2014
LEP Sector Priorities

5.33 There are two LEPs which cover Buckinghamshire:

» Buckinghamshire Thames Valley covers all four districts in the study area; and
» SEMLEP which covers Aylesbury Vale, as well as Milton Keynes, Bedfordshire and Northamptonshire.

5.34 Hertfordshire LEP, Oxfordshire LEP and Thames Valley Berkshire LEP also border Buckinghamshire.

5.35 The key growth sectors for each LEP are shown in Figure 44 below.

Figure 44: LEP Priorities

<table>
<thead>
<tr>
<th>LEP</th>
<th>Sectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buckinghamshire Thames Valley LEP</td>
<td>Food; ICT/Film/Digital Media; Advanced Engineering; Healthcare; and the Visitor Economy</td>
</tr>
<tr>
<td>SEMLEP</td>
<td>Automotive Trade; Business and other services; Construction; Engineering; Food and Drink Manufacturing; Recreation, Tourism and Hospitality; Information and Communication; Transport and Logistics</td>
</tr>
<tr>
<td>Hertfordshire LEP</td>
<td>Science and Technology; Life Sciences; Creative Industries; Advanced Engineering</td>
</tr>
<tr>
<td>Oxfordshire LEP</td>
<td>Space Related Technologies; Life Sciences; Advanced Engineering; Energy and Environmental Technologies; Creative Industries; Information Technology; and Tourism.</td>
</tr>
<tr>
<td>Thames Valley Berkshire LEP</td>
<td>Information Technology and Technology-based activity; and the Knowledge-based Economy</td>
</tr>
</tbody>
</table>


5.36 To explore economic strengths in more detail, we have undertaken an analysis of concentrations of each of the key sectors from the BTV LEP at an MSOA level. This should be read alongside the analysis of specific sectoral strengths at a local authority level set out in Appendix B.
Food

5.37 Figure 45 below illustrates clusters of employment in the food manufacturing sector. There is a clear cluster south west of Aylesbury town, as well as some higher concentrations of employment across north western parts of Aylesbury Vale District. There also appear to be some concentrations of this sector in South Bucks and central Wycombe, but little in Chiltern.

Figure 45: Clusters of employment in Food Manufacturing
ICT/Film/Digital Media

5.38 Buckinghamshire is known as a strong location for creative industries. A report for Buckinghamshire Business First highlights the importance of the creative industries to the local economy and labour market and particularly the National Film and Television School and Pinewood studios.

5.39 The EU Software Cluster Benchmark in 2013 identified the Berkshire, Buckinghamshire and Oxfordshire (BBO) area and its linkages to London as an important area for computer software which has the “ability to fuse technological innovation with economic success”. This cluster is due to the Large ICT firms which are based in the area including; BT, Microsoft, Oracle, Cisco, Vodafone and Siemens.

5.40 Appendix B shows that South Bucks (in particular) and Chiltern have the highest concentrations of employment in the ‘motion picture and production’ sector. It does not feature strongly in Wycombe and Aylesbury Vale.

5.41 Figure 46 shows the concentration of employment in Information and Communication sectors, which covers a broader definition than the motion picture sector described above. The figure shows the concentrations of employment along the M4 corridor. The southern parts of Wycombe, Chiltern and South Bucks also exhibit some degree of clustering in this sector, with less evidence of employment in Aylesbury Vale. Both Wycombe and Chiltern have high concentrations of computer programming (as shown in Appendix B).

Figure 46: Clusters of employment in Information and Communication
Advanced Engineering

5.42 Advanced Engineering is a difficult sector to define and therefore map. Research by the LEP Network suggests that the Buckinghamshire Thames Valley LEP has a similar proportion of manufacturing compared with the national average although this has contracted since 2009. The areas with the highest proportions of high and medium technology manufacturing employment in the UK exist in Gloucestershire (6.9%) Coventry and Warwickshire (5.4%). This suggests that the economic geography of this sector is more focused upon areas west of Buckinghamshire, perhaps benefitting from the research knowledge from universities in the local area and the comparatively cheap labour in these areas.

5.43 Little publicly available work has been undertaken by LEPs or Government in seeking to understand this sector and as such, there is little evidence or shared definitions from which to create an analysis of the sector. The Sector Skills Council for engineering (SEMTA) shows most of the Leading-Edge Technology Industries are based in the South East of England, with evidence from 2008 showing that there are high proportion of employment to the west of Buckinghamshire, mainly in Gloucestershire, Bristol and the West Midlands.

5.44 Appendix A shows that both Wycombe and Chiltern have high concentrations of employment in the manufacture of computer, electronic and optical products whilst Chiltern has a very high concentration of pharmaceutical manufacturing. Figure 47 below shows that there is a cluster of high tech manufacturing to the north of Aylesbury Vale, extending into South Northamptonshire, which is highly likely to be related to Motorsport Valley.

Figure 47: Clusters of employment in High Tech Manufacturing
Motorsport Valley is located around Oxfordshire and Northamptonshire and Warwickshire with approximately 4,500 companies, boasting an annual turnover of £6 billion. Motorsport Valley is seen as a major source of value-added to the British economy – its average R&D spend of 30% of turnover dwarfing even the UK Pharmaceutical and IT industries. Buckinghamshire contains Silverstone Grand Prix Circuit (borders Northamptonshire where most development in this sector is occurring) and there are many firms located within the local area.

Those firms identified by Henry and Pinch (2001) showed the concentration of economic activity in the motorsport sector around Oxford. This suggests a wider geography which includes East Warwickshire, Oxfordshire, Reading and Northamptonshire.

Health

Unsurprisingly, the concentrations of employment in the health sector are located in major centres of population, where health services are more likely to be provided. There are no major clusters evident which could inform the definition of a FEMA.

Figure 48: Clusters of employment in Health
Visitor Economy

The Visitor Economy encompasses a wide definition of sectors. Here we map employment in the arts, entertainment and recreation as a result of the availability of data. There are no discernable clusters of note from this analysis to help inform the definition of FEMAs. There are also some visitor attractions of note in Buckinghamshire including the National Trust Gardens at Stowe, the Chilterns and Waddesdon Mansion; however we have no available data on visitor numbers for these attractions. Nevertheless, it is reasonable to conclude that the visitor economy is not a significant sector of the Buckinghamshire economy as an employer and is not considered to be having an impact on the FEMA.

Figure 49: Clusters of employment in Arts, Entertainment and Recreation Sector

Business Demography

Business births provide an assessment of the entrepreneurial nature of the local economy. Figure 50 provides an assessment of the rate of business births. It shows that central London is a focus of entrepreneurial activity and this ‘radiates’ out from the centre in an almost concentric pattern. Strong areas of entrepreneurial activity also follow the M3 and M4 motorways to the South of Buckinghamshire (Chiltern, South Bucks and Wycombe), with less entrepreneurial areas further in Aylesbury Vale. Other pockets of enterprise exist in Milton Keynes, Northamptonshire and Swindon.
This assessment of the enterprise geography is further developed by looking at an average of three years start-up rates, which shows that Buckinghamshire is divided with South Buckinghamshire demonstrating higher business birth rates than the other Local Authorities. This places it within a wider economic geography displayed in green and blue.

**Figure 51: Business Birth Rate (3 Year Average)**

Source: Atkins 2014 (ONS & Google – 2014)
Sectoral Composition and Business Growth: Conclusions

» There are some similarities between the South Bucks and Chiltern economies in that they have
the largest proportions of employment in higher value business and professional services.
However, neither of the authorities is particularly distinct from Wycombe, whose share of
employment in business and professional services is only squeezed by the larger amount of
employment it supports overall, across a wider range of sectors;

» Aylesbury Vale is somewhat distinct from the other three authorities with a lower proportion of
employment in business and professional services, and higher levels of employment in the public
sector and business administration. This is consistent with the property market analysis that
found Aylesbury Vale was a less desirable location for office-based occupiers than more southern
locations in the county;

» There are a number of key sectors for the BTV LEP which have strong concentrations of
employment across the county. In particular, South Bucks and Chiltern have the highest
concentrations of employment in the ‘motion picture and production’ sector. This sector does
not feature strongly in Wycombe and Aylesbury Vale. Both Wycombe and Chiltern have high
concentrations of employment in the manufacture of computer, electronic and optical products
whilst Chiltern has a very high concentration of pharmaceutical manufacturing;

» Aylesbury Vale, by contrast, features more strongly in terms of high tech manufacturing,
particularly related to Motorsport. It is part of a cluster which extends from Oxford to
Northampton across the northern section of the District;

» Business growth has been stronger towards the south of the county over the past three years, as
London has led the way out of recession;

» This analysis suggests that the northern part of Aylesbury Vale looks somewhat distinct, in terms
of its sectoral make up, from other parts of the county. Aylesbury town is also somewhat
different to many of the more southern locations. Both Chiltern and South Bucks have similarities
to each other, to Wycombe and to other authorities further south and east.

Implications for the definition of the FEMA:

» The fact that the composition of Aylesbury Vale’s economy is quite different to that of the South
Bucks, Wycombe and Chiltern economies suggest it is part of its own FEMA. This is also
supported by the property market information set out in the previous section. However, it is
evident that the northern part of Aylesbury Vale District has a different sectoral make up to the
south, with employment in the south, centred on Aylesbury itself, having a much greater share in
ICT and health, and the north having a much greater share in advanced engineering. This would
support the idea that Aylesbury Vale is made up of at least two FEMA’s (or sub FEMA’s), with
one centred on Aylesbury town and one looking towards Milton Keynes.

» Chiltern’s and South Bucks’ economies have a very similar sectoral composition. They feature
strengths in many similar sectors, including sectors which are a priority for the BTV LEP. The
composition of the South Bucks economy is much closer to that of Chiltern and Wycombe than it
is to neighbouring Slough (see Appendix B). The South Bucks economy is also closer in its sectoral
make up to that of Chiltern and Wycombe than it is to the wider Thames Valley, with less
strengths in ICT, and a greater focus on retail and wholesale.
Supply Chain Analysis

5.51 This section presents a short analysis of secondary data on supply chain linkages in Buckinghamshire, drawing solely upon data collected from the Buckinghamshire Business First (BBF) business survey.23

Supply chain data

5.52 Figure 52 shows the location of business purchases from firms in Buckinghamshire. Almost 20% of businesses in Buckinghamshire do not make any purchases in Buckinghamshire and just under half of businesses (44%) in Buckinghamshire do not make purchases in neighbouring counties/towns.

5.53 A small proportion of businesses make all their purchases in Buckinghamshire (14%) whilst only 3% of businesses make all of their purchases in the neighbouring counties and towns. 30% of businesses make between 70-100% of their purchases in Buckinghamshire, but only 9% of businesses make a similar proportion in neighbouring counties and towns. On average, 41% of purchases made by Buckinghamshire firms are to firms within the county, with a further 18% to neighbouring counties and towns. This analysis suggests that, although Buckinghamshire businesses are more likely to have supply chain linkages with firms located outside of the county than inside, when firms in neighbouring counties are included, this suggests there is a strong sub-regional supply chain.

Figure 52: Approximate proportion of purchases made by firms in Buckinghamshire in different locations

<table>
<thead>
<tr>
<th>% of Businesses</th>
<th>Bucks</th>
<th>Neighbouring counties/towns</th>
<th>Rest of UK</th>
<th>Within the EU</th>
<th>Outside the EU</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>18%</td>
<td>44%</td>
<td>41%</td>
<td>73%</td>
<td>76%</td>
</tr>
<tr>
<td>1-9%</td>
<td>8%</td>
<td>6%</td>
<td>4%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>10-19%</td>
<td>10%</td>
<td>9%</td>
<td>4%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>20-29%</td>
<td>8%</td>
<td>8%</td>
<td>4%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>30-49%</td>
<td>4%</td>
<td>5%</td>
<td>4%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>50-69%</td>
<td>9%</td>
<td>5%</td>
<td>8%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>70-99%</td>
<td>15%</td>
<td>6%</td>
<td>13%</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>100%</td>
<td>14%</td>
<td>3%</td>
<td>8%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Don't know</td>
<td>14%</td>
<td>14%</td>
<td>14%</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>Mean %</td>
<td>41%</td>
<td>18%</td>
<td>31%</td>
<td>6%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Source: BBF Survey 2013

5.54 Figure 53 shows sales locations and linkages and presents a similar picture to the purchases. Almost 20% of businesses in Buckinghamshire do not make any sales in Buckinghamshire. On average, half of all sales from Buckinghamshire businesses are to people or businesses from outside the county. However, when sales to customers from neighbouring counties and towns are included, a total of 69% of all sales are to customers from either within Buckinghamshire or neighbouring counties, which suggests strong sub-regional markets for the counties firms.

23 One constraint on this analysis, is the wording of questions. The survey is to be used alongside other surveys from the council and is designed to understand the Buckinghamshire ‘customer voice’ and to measure performance. As such, an analysis of supply chains is limited by the wording of the survey, coding of the answers and analysis output tables requested by the council.
Figure 53: Approximate proportion of sales by firms in Buckinghamshire in different locations

<table>
<thead>
<tr>
<th>% of Businesses</th>
<th>Bucks</th>
<th>Neighbouring counties/towns</th>
<th>Rest of UK</th>
<th>Within the EU</th>
<th>Outside the EU</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>18%</td>
<td>42%</td>
<td>50%</td>
<td>82%</td>
<td>82%</td>
</tr>
<tr>
<td>1-9%</td>
<td>8%</td>
<td>5%</td>
<td>3%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>10-19%</td>
<td>4%</td>
<td>9%</td>
<td>5%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>20-29%</td>
<td>5%</td>
<td>10%</td>
<td>5%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>30-49%</td>
<td>5%</td>
<td>9%</td>
<td>5%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>50-69%</td>
<td>13%</td>
<td>10%</td>
<td>7%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>70-99%</td>
<td>17%</td>
<td>6%</td>
<td>10%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>100%</td>
<td>20%</td>
<td>1%</td>
<td>7%</td>
<td>&lt;0.5%</td>
<td>&lt;0.5%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>9%</td>
<td>9%</td>
<td>9%</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td>Mean %</td>
<td>50%</td>
<td>19%</td>
<td>25%</td>
<td>3%</td>
<td>3%</td>
</tr>
</tbody>
</table>

Source: BBF Survey 2013

Overall the analysis of the purchasing and supply chain linkages in Buckinghamshire suggest significant local and sub-regional economic linkages. However, one major limitation of the analysis is the difficulty in assessing where the ‘neighbouring counties and towns’ that businesses have linkages to actually are.

Linkages with educational institutions also provides an indication into the economic geography and shows the main knowledge transfer and training linkages. The main Further Education (FE) and Higher Education (HE) Institutions that businesses have links with is Buckinghamshire New University (26%), University of Buckingham (11%) and Amersham & Wycombe College (9%). A smaller proportion of businesses had linkages with Reading (8%) and Oxford (7%) universities. An assessment of these university linkages suggests that FE and HE institutions within Buckinghamshire are important and that linkages are mainly ‘West facing’ with a higher proportion of businesses having linkages with Reading and Oxford Universities as well as Oxford Brookes, Birmingham and Warwick. It should be noted that the University Technical College at Aylesbury opened in September 2013, although this was after completion of the BBF survey in 2013 and therefore no data is available on the firms with links to this institution.

Figure 54: FE or HE institutions that Buckinghamshire firms have links with
Supply Chain Analysis: Conclusions

» 41% of all purchases by Buckinghamshire businesses are from suppliers that are located outside of the county, with 18% of all purchases to ‘neighbouring counties and towns’.

» Half of all sales of Buckinghamshire businesses are to customers that are located outside of the county, with 19% of all sales to ‘neighbouring counties and towns’.

» Whilst this information is useful to identify the overall importance of sub-regional business linkages, it is not possible to be any more specific about the geographical extent of these linkages.

Implications for the definition of the FEMA:

» Although this information suggests that, based on supply chain linkages, there is a strong local and sub-regional FEMA centred on Buckinghamshire, it is not possible to use this information to define the extent of that FEMA.
Service Market for Consumers

This section reviews the service and retail markets for Buckinghamshire within and outside of Buckinghamshire. The analysis draws heavily upon the various retail studies that each Local Authority has undertaken as the key informant of the extent of service market catchments.

Analysis of Bucks Retail Catchments

Figure 55 illustrates the Aylesbury Vale retail catchment map for the Local Authority. The figure demonstrates that the District has linkages to many areas outside of Buckinghamshire including Leighton Buzzard in Bedfordshire, Berkhamsted and Tring in Hertfordshire, and Thame in Oxfordshire. However, the catchment of Aylesbury town, shown in red and light blue, is relatively well defined around the town and the local authority boundary. A ‘fringe’ zone which extends into parts of Wycombe and Chiltern is also evident for the town. Northern parts of the District are part of separate retail catchment areas, with a distinct zone for Buckingham, and fringe catchments for Milton Keynes and Leighton Buzzard.

Figure 55: Aylesbury Vale Retail Map

Chiltern and South Bucks undertook their retail study together. The retail study geography lists 11 retail zones across Chiltern and South Buckinghamshire (Figure 56) which shows linkages into the neighbouring High Wycombe Local Authority as well as Hemel Hempstead, Beckhamstead and Rickmansworth (Hertfordshire), Ruislip (Hillingdon), Slough (Berkshire). These linkages with the Local Authorities outside of Buckinghamshire are all with neighbouring Local Authorities:
Zone 1 - Chesham & North Chiltern. North into Hertfordshire.
Zone 2 - Amersham - Buckinghamshire
Zone 3 – Beaconsfield - Buckinghamshire
Zone 4 - Gerrards Cross/Chalfonts - Buckinghamshire
Zone 5 - Central South Bucks - Buckinghamshire
Zone 6 - Burnham/Slough west. South into Berkshire.
Zone 7 - Iver/Iver Heath. Buckinghamshire.
Zone 8 - Denham/Harefield. East towards London and London Borough of Hillingdon.
Zone 9 - Chorleywood/Bovingdon. East towards Hertfordshire.
Zone 10 - Great Missenden/Holmer Green. Buckinghamshire.
Zone 11 - Loudwater/Flackwell Heath. Buckinghamshire.

The key finding here is that none of the catchments are particularly large, probably because none of the retail centres in either District have a significant amount of retail floorspace and degree of choice. Although Zones 9, 8 and 11 in particular reach beyond the South Bucks and Chiltern local authority boundaries, they are unlikely to draw a considerable amount of potential customers to each authority’s retail centres, given their proximity to the larger centres of Hemel Hempstead, Uxbridge and High Wycombe respectively.

**Figure 56: Chiltern & South Bucks Retail Map**

Source: Chiltern and South Bucks Retail Study 2009 - Appendix
5.61 Figure 57 illustrates the retail catchment map for High Wycombe. The geography for the retail zones broadly matches the Local Authority boundary, although the catchments do extend into South Bucks and Chiltern to the east and Oxfordshire to the west.

**Figure 57: High Wycombe Retail Map**

Source: High Wycombe Retail Study 2014

5.62 Figure 58 presents a summary of where retail studies undertaken by authorities outside Buckinghamshire have identified a catchment area for that authority which extends into the county. The table suggests that:

- parts of Chiltern and Aylesbury are served by Hemel Hempstead;
- rural parts of Aylesbury Vale are served by Oxford;
- northern parts of Aylesbury Vale are served by Milton Keynes;
- parts of South Bucks are served by Uxbridge; and
- parts of Aylesbury Vale are served by Leighton Buzzard.
Figure 58: Retail Studies outside of Buckinghamshire

<table>
<thead>
<tr>
<th>Local Authority</th>
<th>Comment</th>
<th>Source:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dacorum</td>
<td>Zones 6, 7 and 8 link into Buckinghamshire, particularly Tring, Aylesbury and Amersham.</td>
<td>Dacorum Retail Study Update</td>
</tr>
<tr>
<td>Oxford</td>
<td>Zone 4 links into much of rural Aylesbury Vale</td>
<td>Oxford Retail needs Update</td>
</tr>
<tr>
<td>Milton Keynes</td>
<td>Zones 24, 19 and 18 link with rural Aylesbury Vale, Aylesbury Town and Leighton Buzzard.</td>
<td>Milton Keynes Retail Update</td>
</tr>
<tr>
<td>Maidenhead &amp; Windsor</td>
<td>Zone 4 passes into Buckinghamshire by Bourne End</td>
<td>Maidenhead and Windsor Retail Capacity Update.</td>
</tr>
<tr>
<td>South Oxfordshire</td>
<td>Zone 1, 4 and 5 link into the Western parts of Aylesbury Vale</td>
<td>South Oxfordshire Retail and Leisure Needs Assessment</td>
</tr>
<tr>
<td>Central Bedfordshire</td>
<td>Zones 9,8 and 5 link Aylesbury Vale</td>
<td>Central Bedfordshire retail study.</td>
</tr>
<tr>
<td>Hillingdon</td>
<td>Beaconsfield mentioned but not mapped.</td>
<td>South Northamptonshire Retail Study</td>
</tr>
<tr>
<td>Cherwell</td>
<td>Zone 8 has links with Aylesbury and Aylesbury Vale</td>
<td>Cherwell Retail Study Update</td>
</tr>
</tbody>
</table>

Note: Evidence from Three Rivers, South Northamptonshire and Slough Retail Studies not clear or mapped.

Service Market for Consumers: Conclusions

» Aylesbury town centre has a clear catchment that extends across much of the south of Aylesbury Vale District and into northern parts of Wycombe District;

» Northern parts of the Aylesbury Vale District are part of separate retail catchment areas, with a distinct zone for Buckingham, and fringe catchments for Milton Keynes and Leighton Buzzard;

» High Wycombe has its own retail catchment which extends across much of the Wycombe District and into parts of Oxfordshire and Chiltern/South Bucks;

» There is a much smaller network of retail catchments across Chiltern and South Bucks which reflects the smaller size and offer of the retail centres in these authorities.

Implications for the definition of the FEMA:

» Retail catchment areas are better for defining sub-markets within the sub-regional FEMA, than for defining the FEMA itself;

» The retail catchments suggest that the northern part of Aylesbury Vale looks towards Milton Keynes, and therefore supports the analysis that this area is part of a wider Milton Keynes FEMA. Western sections of Aylesbury Vale are part of a retail catchment centred on Leighton Buzzard, which suggests this area might be part of a separate FEMA that takes in part of Hertfordshire;

» Aylesbury town has a relatively well defined retail catchment, being the only key retail centre in this part of Buckinghamshire, and suggests it is part of its own FEMA;

» Wycombe is the key retail centre in the south of the county and there is certainly a FEMA which includes the town and much of the rest of the southern sections of the county. This would include much of the northern part of South Bucks, particularly Beaconsfield and Gerrards Cross, as well as much of Chiltern. Southern parts of South Bucks however are part of a retail catchment that looks towards Slough and Windsor.
Cultural and Social Wellbeing and Administrative Geography

5.63 There are a range of ways to assess the economic geography of cultural and social wellbeing in Buckinghamshire, including looking at cultural or wellbeing similarities, the structure of the local economy, participation in arts and culture, access to services administrative boundaries from cultural and social organisations. These are explored below.

Creative & Cultural Participation

5.64 Exploring the cultural and creative participation of an area’s economic geography enables an assessment of how the local population interacts with creative and cultural experiences. Figure 59 shows that a large proportion of the South East of England access Museums (between 50% and 60%). There is little pattern in terms of a cultural geography, although Chiltern and South Bucks have higher proportion of residents that access museums, which may reflect these areas connections to central London, as well as its socio-economic mix.

Figure 59: % of people that access museums

5.65 A similarly varied cultural geography exists when looking at proportions of residents accessing the Arts. This is presented in Figure 60 which shows that Chiltern and South Bucks have a higher proportion of residents accessing the Arts (between 50 and 60%) compared with Aylesbury and High Wycombe (40 to 50%).
More detailed data about the creative markets that exist is available from the Arts Council and DCMS\textsuperscript{24}. This data categorises people into a broad classification of their consumption of art. These include:

- **Highly engaged** – Categories include: Urban arts eclectic, Traditional culture vultures.
- **Some engagement** – Categories include: Fun, fashion and friends, Mature explorers, Dinner and a show, Family and community focused, Bedroom DJs, Mid-life hobbyists, Retired arts and crafts
- **Not currently engaged** – Categories include: Time-poor dreamers, A quiet pint with the match, Older and home-bound, Limited means, nothing fancy.

The data for Buckinghamshire is presented in Figure 61 which supports the split between North and South Buckinghamshire, showing that Chiltern and South Bucks have a higher proportion of ‘highly engaged’ consumers than Wycombe and Aylesbury Vale, particularly within the ‘traditional culture vultures’ sub category. This places Chiltern and South Bucks amongst the Oxfordshire (11.2%) and Surrey (10.9%) in the areas outside of London with a high proportion of highly engaged consumers. As such, there is a stronger cultural engagement compatibility in the Southern part of Buckinghamshire (particularly Chiltern and South Bucks) with London, Surrey, Hertfordshire and Oxfordshire than the North (Aylesbury Vale).

\textsuperscript{24} http://www.artscouncil.org.uk/what-we-do/research-and-data/arts-audiences/arts-based-segmentation-research/13-segments/#sthash.gP33wKDA.dpuf
Administrative Geography

The administrative geography of various government, public and private bodies presents another consideration to test the functional economic geography. These administrative or geographical designations have often been created on the basis of strategic linkages, transport connections and strong relationships.

Socio-Economic Bodies

Under the NHS, the NHS England South regional team groups together Buckinghamshire, Berkshire and Oxfordshire together as the local arm of NHS England. It also works closely with the Wessex Area regional team. Clinical Commissioning Groups (CCGs) are NHS organisations which organise the delivery of NHS services. Aylesbury Vale and Chiltern Clinical Commissioning Group are the two main CCGs which cover Buckinghamshire’s four Local Authorities. Looking in more detail at the geography of these, they largely fit the geography of the Local Authorities apart from in the North where, Milton Keynes CCG is larger and covers some areas which are designated as being in the Aylesbury Vale Local Authority (e.g. Newton Longville).

Education jurisdiction is linked to Local Authority boundaries and many educational establishments have catchment areas which are less straightforward to map but at a primary and secondary school level are often limited by Local Authority boundaries. However, health education within the Local Education and Training Board for Thames Valley covers Berkshire, Buckinghamshire and Oxfordshire.

A range of Chambers of Commerce exist in Buckinghamshire including Thames Valley Chambers of Commerce covering Aylesbury Vale and Wycombe & South Bucks. The Milton Keynes Chamber of Commerce covers northern Buckinghamshire but also has strategic links with Northampton. A further separate Chiltern Chamber also exists.

---

**Figure 61: Consumer Arts Segments**

<table>
<thead>
<tr>
<th>Area</th>
<th>% Urban arts eclectic</th>
<th>% Traditional culture vultures</th>
<th>% Fun, fashion and friends</th>
<th>% Mature explorers</th>
<th>% Dinner and a show</th>
<th>% Family and community focused</th>
<th>% Bedroom DJs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aylesbury Vale</td>
<td>4.2%</td>
<td>4.6%</td>
<td>20.7%</td>
<td>13.1%</td>
<td>20.3%</td>
<td>12.3%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Chiltern</td>
<td>4.7%</td>
<td>8.7%</td>
<td>21.0%</td>
<td>13.0%</td>
<td>19.6%</td>
<td>11.0%</td>
<td>1.5%</td>
</tr>
<tr>
<td>South Bucks</td>
<td>4.7%</td>
<td>7.4%</td>
<td>21.0%</td>
<td>12.2%</td>
<td>20.0%</td>
<td>10.6%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Wycombe</td>
<td>5.1%</td>
<td>5.0%</td>
<td>19.9%</td>
<td>12.4%</td>
<td>20.5%</td>
<td>11.7%</td>
<td>1.9%</td>
</tr>
<tr>
<td>English Average</td>
<td>4.5%</td>
<td>3.8%</td>
<td>18.3%</td>
<td>10.5%</td>
<td>19.8%</td>
<td>11.2%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Buckinghamshire</td>
<td>4.7%</td>
<td>5.8%</td>
<td>20.5%</td>
<td>12.7%</td>
<td>20.2%</td>
<td>11.6%</td>
<td>1.8%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area</th>
<th>% Mid-life hobbyists</th>
<th>% Retired arts and crafts</th>
<th>% Time-poor dreamers</th>
<th>% A quiet pint with the match</th>
<th>% Older and home-bound</th>
<th>% Limited means, nothing fancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aylesbury Vale</td>
<td>4.4%</td>
<td>2.2%</td>
<td>5.5%</td>
<td>5.0%</td>
<td>4.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Chiltern</td>
<td>3.6%</td>
<td>2.1%</td>
<td>4.4%</td>
<td>4.1%</td>
<td>4.5%</td>
<td>1.9%</td>
</tr>
<tr>
<td>South Bucks</td>
<td>3.7%</td>
<td>2.4%</td>
<td>4.4%</td>
<td>5.0%</td>
<td>5.3%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Wycombe</td>
<td>4.4%</td>
<td>2.3%</td>
<td>5.1%</td>
<td>5.3%</td>
<td>4.4%</td>
<td>1.9%</td>
</tr>
<tr>
<td>English Average</td>
<td>4.3%</td>
<td>2.8%</td>
<td>6.7%</td>
<td>7.8%</td>
<td>5.5%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Buckinghamshire</td>
<td>4.2%</td>
<td>2.3%</td>
<td>5.0%</td>
<td>4.9%</td>
<td>4.4%</td>
<td>1.9%</td>
</tr>
</tbody>
</table>

Source: Arts Council and CACI Ltd 2011
The Federation of Small Businesses (FSB) has 5 branches in the Thames Valley Region:

- East Berkshire - Winnersh in the west to Slough in the East; Wokingham, Bracknell, Windsor, Maidenhead and Slough.
- North Buckinghamshire - Milton Keynes and Aylesbury Vale.
- Oxfordshire – County.
- Reading & West Berkshire – County.
- South Bucks & Aylesbury - Aylesbury Vale, Chiltern, South Bucks and Wycombe Districts.

### Cultural Bodies

The Arts Council England, English Heritage and National Trust work across England and Wales, funding schemes, projects and work as well as maintaining buildings, land and structures. As national organisations they work across local areas to share resources and maintain the assets within their portfolio. In the past their structures have matched Government structures (e.g. Government Office Regions). The figure below shows their structure.

**Figure 62: Cultural Bodies Geography**

<table>
<thead>
<tr>
<th>National Trust</th>
<th>English Heritage</th>
<th>Arts Council</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within London and South East area, Buckinghamshire and Oxfordshire are grouped together for visitor attractions.</td>
<td>Berkshire, Buckinghamshire, East Sussex, Hampshire, Isle of Wight, Kent, Oxfordshire, Surrey, West Sussex.</td>
<td>Bedfordshire, Berkshire, Buckinghamshire, Cambridgeshire, East Sussex, Essex, Hertfordshire, Kent, Norfolk, Oxfordshire, Suffolk, Surrey and West Sussex.</td>
</tr>
</tbody>
</table>

Visit Buckinghamshire, the body established to promote the visitor economy and attract visitors to Buckinghamshire promotes Buckinghamshire and also has some linkages to areas just outside the Buckinghamshire border, including Maidenhead and Slough to the South, Rickmansworth to East and Milton Keynes to the North. The lack of linkages to Oxford may represent the competition with this area.
Other public services

A range of other public services which have various geographical boundaries across and including Buckinghamshire include:

- The Police in Buckinghamshire cover Buckinghamshire, Oxfordshire, Berkshire West, Berkshire East and Milton Keynes.
- The Job Centre Plus covers the Buckinghamshire County boundary.
- The Buckinghamshire & Milton Keynes Fire & Rescue Service, as its name suggests, covers Buckinghamshire and Milton Keynes.
- The Buckinghamshire and Milton Keynes Natural Environment Partnership, again, covers Buckinghamshire and Milton Keynes.
- There are a number of charities and trusts like the Berks, Bucks & Oxon Wildlife Trust (BBOWT) which cover Buckinghamshire, Berkshire and Oxfordshire.
- The FA in Buckinghamshire, one of the oldest Football Associations covers Buckinghamshire and Berkshire.

In addition to these boundaries, the changes made to the County’s boundaries also provides an indication on Buckinghamshire’s historical linkages and how they have been updated to reflect political or functional requirements. These show how certain areas have moved or become separate for different reasons. Since the 1972 Local Government Act, several areas have transferred to Berkshire including Slough, Eton and Datchet. Border changes have seen some boundaries which are mainly uninhabited have transferred to Northamptonshire, Oxfordshire and Hertfordshire. More recently in 1991 and 1995 some villages have transferred from Buckinghamshire to Bedfordshire and Berkshire.
Cultural and Social Wellbeing and Administrative Geography: Conclusions

» Chiltern and South Bucks have a higher proportion of residents that access museums than Wycombe and Aylesbury Vale, which may reflect the good connections to central London, as well as the socio-economic mix of each authority;

» Chiltern and South Bucks have a higher proportion of ‘highly engaged’ culture consumers than Wycombe and Aylesbury Vale, particularly within the ‘traditional culture vultures’ sub category. This places Chiltern and South Bucks amongst Oxfordshire (11.2%) and Surrey (10.9%) in the areas outside of London with a high proportion of highly engaged consumers;

» The vast majority of administrative bodies cover the whole county or a much larger sub-region. However, the county is largely split into two Clinical Commissioning Groups (which are NHS organisations which organise the delivery of NHS services). These two CCGs largely conform to local authority boundaries, with the Aylesbury Vale CCG covering much of the Aylesbury Vale District and Chiltern CCG covering the Districts of Chiltern, Wycombe, and South Bucks.

Implications for the definition of the FEMA:

» There are strong similarities, in terms of cultural participation, between South Bucks and Chiltern, which suggest they might be part of a single FEMA. These indicators also suggest that Aylesbury Vale is separate, with Wycombe somewhere between the two. However, this analysis is not strong enough to provide a robust input into the definition of FEMAs.
6. Duty to co-operate
Engaging with LPAs in the surrounding areas

Involving Stakeholders

6.1 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
- Stakeholder feedback was invited and all responses received were recorded and responded to as the study progressed.

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

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

Feedback from Stakeholders about the Methodology

6.4 The Method Statement that was circulated to stakeholders is included in Appendix E. Comments received about the proposed methodology for the study were generally supportive and these are included in Appendix F.

6.5 Specific comments encouraged the following issues to be considered:

- The impact of infrastructure might have on commuting and thereby influence how Housing Market Areas might develop in future were highlighted.
- The relationship with London and the impact of migration and commuting flows between Greater London and Buckinghamshire on the HMA.
- The FEMA part of the study, under “Service Market for Consumers” and the “Catchment Areas for Cultural and Social Welfare”, could also include reference to access to a wider range of services than just retail, i.e. leisure, health and education - other studies have also referred to “travel to learning” areas for further education.

6.6 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.
Engagement with neighbouring authorities to define FEMAs

6.7 Following on from the method statement, we consulted with all duty to cooperate partners to understand the work completed so far to define FEMAs which might overlap with Buckinghamshire. Although most authorities have undertaken an analysis of travel to work patterns at some point using 2001 Census data, none of the neighbouring authorities have yet undertaken an analysis of FEMAs consistent with the requirements of the PPG, using the latest 2011 Census data.

Stakeholder Workshop

6.8 A Stakeholder Workshop was held on Monday 29 September. 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 G.

6.9 The first part of the presentation summarised the review of existing HMA analysis in and around Buckinghamshire, 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 up to 70% self-containment. 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. Key points included:

» Is it helpful to define higher tier and lower tier areas?
» To what degree should London be an influence?
» To what extent is Heathrow affecting the growth of West London?
» What is the most appropriate way to treat London?
» Would it be possible to show the impact of the modelling at 75% self-containment?
» Will the study conclusions be recommending a preferred output?

6.10 In response to these issues, it was decided to further develop the existing modelling analysis up to a target of 75% self-containment. In addition, it was agreed to undertake the third iteration of modelling analysis which restricted the growth across all of Greater London; and the study has identified a preferred output for Buckinghamshire.

6.11 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. The questions raised included:

» To what extent can house prices be used?
» Are individuals who can only afford cheap housing in a different housing market to those that have the option of purchasing more expensive housing?
» How will migration analysed in the absence of detailed flow data from the 2011 Census?
» Will we wait for migration flow data from the 2011 Census before finalising the study conclusions?
» Could we use the LA-LA migration data that has been published, or could NHS data be used instead?

6.12 It was confirmed that data on house prices and migration would be considered as part of the process.
6.13 The second part of the presentation then set out the evidence base that had been established for defining FEMAs. Once again, a number of high-level questions were raised about the analysis, as well as some more detailed points about the process that had been undertaken:

- What is the purpose of defining FEMAs?
- How can we make sure that the areas that are defined are useful for local planning authorities?
- To what extent is London important?
- Are the emerging FEMAs large enough?
- Why were particular settlements selected for the travel time analysis, and why were others not?
- What weight should be placed on consistency between HMA and FEMA boundaries?

6.14 The discussion recognised that whilst Housing Market Areas were well-established and understood, there was less clarity about Functional Economic Market Areas. Nevertheless, it was agreed that the FEMAs defined needed to provide a framework that would be helpful for local authorities in developing their Plans and it was recognised that consistency between HMAs and FEMAs was being promoted by the Planning Advisory Service.

Stakeholder Feedback about the Emerging Outputs

6.15 A number of comments were received about the information circulated about the emerging outputs:

- The methodology was seen as pragmatic as well as being based on PPG.
- The focus on analysing the HMA in advance of any OAN was also noted as sensible and pragmatic.
- The need for ongoing duty to cooperate liaison with affected local authorities was highlighted.
- The impact of any HMA analysis for neighbouring authorities engaged in separate definition processes was highlighted; the collegiate approach was one way of avoiding potential conflicts.
- Individual feedback with those authorities particularly affected by the HMA study was seen as very helpful; some authorities were keen to do this via telephone or email in the first instance, with face-to-face follow-up if necessary.

6.16 There was also a detailed telephone discussion with officers from the Royal Borough of Windsor and Maidenhead to review the analysis and assumptions taken, with a subsequent meeting with them together with officers from Slough to discuss and agree the final study recommendations. At that meeting, officers from the Royal Borough of Windsor and Maidenhead confirmed that the scale of the proposed geography was good and said that the Berkshire SHMA needed to be complementary. Officers from Slough said that they now recognised the need for a wider geography and believed that they should be working jointly with South Bucks and the Royal Borough of Windsor and Maidenhead. Both authorities are involved in the Berkshire SHMA which will also consider their housing market geography (and in particular whether or not they consider Berkshire to be a single area or if Reading and Slough should form two separate HMAs) and it was agreed that ORS would liaise with their consultants.

6.17 All feedback received and responses made (including any subsequent discussions) were recorded, and responses were agreed with the project steering group. This included any recommendations for changes to the assumptions associated with the emerging outputs and the initial conclusions of the study. A copy of all of the information that was circulated and the feedback received (together with the associated responses) is included in Appendices G, H and I.
Stakeholder Feedback about the Report of Findings Consultation Draft

6.18 A Consultation Draft of the Report of Findings was circulated in January 2015 to all of the stakeholder organisations that had been involved in the study.

6.19 In addition, given that the emerging conclusions had identified that it was appropriate for South Bucks to be considered as part of a wider HMA and FEMA which covers Reading and Slough (extending along the M4 corridor from London), the Consultation Draft was also circulated to Local Plan teams at Basingstoke and Deane, Hart, Rushmoor, Surrey Heath and Vale of White Horse councils to give them opportunity to comment; although no responses were received from these authorities.

6.20 Responses to the Consultation Draft were received from a range of stakeholders. The Royal Borough of Windsor and Maidenhead noted in their response that the study provided:

A clear and comprehensive report covering the evidence from commuting flows, migration flows and market data informing the definition of strategic housing market areas, local housing market areas and functional economic areas, in what is a complex interrelated area.

6.21 Similarly, Bracknell Forest Council agreed that “South Bucks is clearly split with the northern part which contains the main town of Beaconsfield having stronger links with Buckinghamshire and the southern part being more closely connected with Berkshire” and recognised that “the inclusion of South Bucks could go either way”. Both of these authorities are currently involved in the Berkshire SHMA which has recently been commissioned and will be reviewing housing market areas across Berkshire. The Consultation Draft of the Buckinghamshire report was shared with their consultants and ORS has discussed the analysis and findings that has been undertaken. It is expected that their conclusions will provide a consistent position in terms of the most appropriate “best fit” groupings for the local authorities across the wider area.

6.22 A joint response from Runnymede and Spelthorne Borough Councils noted that “The FEMA analysis appears comprehensive; addressing all key points and reaching clear and robust conclusions” however they noted the potential links and influence of Heathrow airport. The Councils had “no substantive comments to make on the HMA analysis” but they asked to be kept informed about the project given that the Runnymede and Spelthorne HMA is adjacent to the proposed Reading and Slough HMA.

6.23 West Northamptonshire Joint Planning Unit confirmed that they were:

Pleased to note that the study reflects the comments that we made on the original methodology and overall we are content with the findings.

6.24 Additional feedback from the Mayor of London related to the functional relationships of Buckinghamshire based logistics serving London and the wider South East.

6.25 Cherwell District Council and Buckinghamshire Thames Valley Local Enterprise Partnership both provided detailed feedback on a range of points, and the final report has taken account of these where it was appropriate to do so. A copy of all responses received is included in Appendix J and a full schedule of the points raised and the changes to the final report is included in Appendix K.
7. Conclusions
Proposed HMAs and FEMAs for Buckinghamshire

Housing Market Areas

7.1 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.

7.2 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”.

7.3 The PAS OAN advice note also recommends a “starting point” for understanding housing market areas, based on the 2010 CLG research. This identifies a number of housing markets covering Buckinghamshire: London (which includes Amersham), Milton Keynes (which includes Buckingham), Oxford (which includes Aylesbury) and Reading (which includes High Wycombe and Beaconsfield). Although we have considered this output alongside many other previous analyses of housing markets in and around Buckinghamshire, this study is evidence-led and fundamentally based on the analysis of the latest available data.

Commuting flows

7.4 Analysis of commuting flow data from the 2011 Census identified separate commuting zones for Aylesbury town and High Wycombe/Amersham based on a 67% self-containment threshold. This shows that for both areas, more than 70% of the workplace population live in the area; nevertheless fewer than 65% of the residents work in the area. The definitions used by ONS for Travel To Work Areas require both percentages to be at least 66.7%; i.e. at least two-thirds of workers live in the area and at least two-thirds of residents work in the area. Therefore, neither Aylesbury town nor High Wycombe/Amersham would satisfy the ONS definition as separate TTWAs.

7.5 However, whilst the 2001 Census data suggested that the strongest links from Aylesbury town were to Milton Keynes and the strongest links from High Wycombe were to Maidenhead and Slough, analysis of the 2011 data identifies that commuting links between Aylesbury town and High Wycombe are now stronger than those with either Milton Keynes or Maidenhead and Slough. At 75% self-containment, a single commuting zone is defined based on the Aylesbury town and High Wycombe/Amersham areas combined. This is a notable change, which provides a clear evidence base that the central parts of Buckinghamshire could now be considered within the same travel to work area and consequently form part of a single housing market area. Furthermore, for this combined area, 74.8% of the workplace population live in the area and 67.9% of residents work in the area – so this area would satisfy ONS definitions for official TTWAs.
Migration

7.6 Data about migration flows from the 2011 Census is only published at local authority level, which does not provide the necessary granularity to identify functional relationships between settlements. Given this context, our analysis of migration patterns was based on the fine-grained data from the 2001 Census. This showed the strongest relationships in terms of migration flows from the 2001 Census data mirror exactly the strongest relationships in terms of commuting flows from 2011 Census data for both Aylesbury town and High Wycombe/Amersham.

7.7 On the basis of the analysis for both areas, we have established that when long distance moves (likely to involve a change of job or lifestyle, for example retirement) are excluded, more than 60% of the population living in the area that had moved in the 12 months prior to Census day had moved within the respective areas. When we consider the population that used to live in the area 12 months prior to Census day (and continued to live somewhere in the UK), more than 65% of migrants had moved within the respective areas in both Aylesbury town and High Wycombe/Amersham. These percentages are lower than the 70% target identified in the PPG.

7.8 For the combined area, 70.2% of those that had moved in the 12 months prior to Census day had stayed in the area; and of those that used to live in the area 12 months prior to Census day (and continued to live somewhere in the UK), 72.4% stayed in the area – so this area would also satisfy the PPG threshold for defining housing markets in the context of the NPPF.

7.9 Given that this analysis is based on 2001 Census data, it will be appropriate to review the analysis once detailed migration flow data is published from the 2011 Census.

House Prices

7.10 Land Registry data shows that house prices surrounding Aylesbury town are relatively lower than house prices surrounding High Wycombe. This differential is also reflected in private sector rents given that the
Valuation Office Agency consider these areas to be separate Broad Rental Market Areas (Aylesbury BRMA and Chiltern BRMA).

7.11 It is notable that the BRMAs are almost identical to the commuting zones at 67% self-containment. The only substantive difference is that Princes Risborough and Tring are in the Aylesbury BRMA, whilst neither is in the Aylesbury town commuting zone. Although there are fewer commuting zones at 75% self-containment, the Central Buckinghamshire zone is still very similar to the Aylesbury and Chiltern BRMAs combined.

Functional Housing Market Areas

7.12 Given that commuting flows, migration flows and house prices all suggest broadly the same boundaries for the Aylesbury town and High Wycombe/Amersham areas, it would be reasonable to conclude that these could definitely be considered as distinct housing market areas. Furthermore, both of these areas are comparable to areas identified as official Broad Rental Market Areas (BRMAs). However, neither of the two areas reaches the necessary percentage targets for ONS Travel To Work Areas or the percentage targets for migration identified by PPG for housing market areas.

7.13 Given this context, whilst we would recommend that the Aylesbury town and High Wycombe/Amersham areas could be considered as separate local housing market areas (or housing sub-markets); they are probably not strategic housing market areas in the context of the NPPF.

7.14 Nevertheless, Central Buckinghamshire as a single combined area exceeds all of the percentage targets for ONS Travel To Work Areas and the percentage targets for migration identified by PPG for housing market areas:

» 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.

7.15 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.

7.16 On this basis, our conclusion is that the proposed commuting zones identified in Chapter 3 also provide the most appropriate basis for identifying Housing Market Areas in and around Buckinghamshire. A substantial majority of Buckinghamshire (80% of the population) falls within a single Housing Market Area, which includes Aylesbury town and High Wycombe, as well as the smaller settlements of Amersham, Beaconsfield and Princes Risborough.

7.17 Figure 64 illustrates the proposed functional area based on MSOA boundaries. This functional area reflects both the commuting zone identified at 75% self-containment and also the separate migration zone that was associated with this. When more fine-grained data is published from the 2011 Census (either at Census Output Area or at Lower-level Super Output Area) it will be possible to establish a more precise boundary for the functional area.

7.18 Figure 64 also shows the local authority administrative boundaries, which have not been used at any stage to constrain the analysis process. The Central Buckinghamshire HMA covers all of Chiltern and Wycombe together with the south of Aylesbury Vale and north of South Bucks districts.
7.19 It is evident that the Reading & Slough functional housing market covers the southern parts of South Bucks district. The north of Aylesbury Vale (including Buckingham) falls within the Milton Keynes functional housing market whilst the western parts of the district appear within the Oxford housing market and a small area to the north east is in the Watford & Luton housing market (although, as previously noted, the precise definition of these HMAs should be treated with caution).

7.20 Figure 65 shows the proportion of local authority residents in each functional housing market area.

Figure 64: Functional Housing Market Areas based on MSOA boundaries, with Local Authority Boundaries
Administrative Boundaries and Housing Market Areas

7.21 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\textsuperscript{25} 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.”

7.22 This “best fit” approximation has also been suggested by the recent PAS OAN advice note, which suggests (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.”

7.23 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 for 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, paragraph 10).

» On the other hand, and 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).

\textsuperscript{25} Identifying sub-regional housing market areas (CLG, March 2007)
In summary, the approach to defining housing market areas needs to balance robust analysis with pragmatic administrative requirements. Therefore, whilst we have established the functional housing markets for Buckinghamshire and the surrounding areas, it is now necessary to consider the most appropriate working arrangements for establishing the evidence base that the NPPF requires.

The analysis has clearly demonstrated that the substantial majority of Buckinghamshire county residents (80%) live in the Central Buckinghamshire functional housing market area. We have already concluded that Chiltern and Wycombe districts fall entirely within the Central Buckinghamshire functional housing market area, but the above analysis confirms that it is also appropriate for Aylesbury Vale to be included within a “best fit” area given that this area covers almost two-thirds of the district population, with the remaining population split across three other separate areas – although the areas of Aylesbury Vale that are covered by the Oxford and Watford & Luton HMAs are predominantly rural, with only the area covered by the Milton Keynes HMA including a significant existing settlement (Buckingham).

When considering the analysis for South Bucks district, it is important to recognise that even when Central London’s growth was constrained, the links from South Bucks to West London were stronger than any others. Nevertheless, 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. Therefore, it is apparent that the South Bucks population is divided with approaching half living in the Central Buckinghamshire functional housing market area and the remainder all living in the Reading & Slough functional area – so in considering a “best fit”, it could be argued that South Bucks should be associated with either Central Buckinghamshire or Reading & Slough.

Beaconsfield is the most significant settlement in South Bucks, which is towards the north of the district in the Central Buckinghamshire functional housing market area. The evidence shows that strong commuting flows exist between Beaconsfield and other parts of Buckinghamshire, with workers commuting into the town from Chiltern and Wycombe districts and South Bucks residents commuting to jobs in these districts. Commuting patterns for the southern parts of the district (in the Reading & Slough area) tend to be outward flows to boroughs such as Slough and Windsor and Maidenhead, with large numbers also commuting to Central and West London.

Figure 66 shows that the inward commuting flows to South Bucks are distributed relatively evenly between the rest of Buckinghamshire, Berkshire and London. However, based on outward commuting, it is evident that 36% of the workforce travel to London (mainly Hillingdon, Westminster, City, Ealing and Hounslow), 25% work in Berkshire (mainly Slough and Windsor & Maidenhead) and only 11% work elsewhere in Buckinghamshire.
Of course, it is also important to consider migration patterns; and whilst fine grained migration flow data is not available from the 2011 Census, data about flows between LAs has been published. Figure 67 shows the migration flows to and from South Bucks from other LAs within the UK. It is evident that there are similarities between inward migration and outbound commuting, with most migrants coming from London (25%), followed by Berkshire (17%) and the rest of Buckinghamshire (11%). Outward migration patterns reflect inbound commuting, with a relatively even distribution between London, Berkshire and the rest of Buckinghamshire.

Figure 66: Local authority commuting flows to and from South Bucks (Source: 2011 Census. Note: Individual LAs identified where number of commuters to/from South Bucks was 500 or more)

Figure 67: Local authority migration flows to and from South Bucks (Source: 2011 Census. Note: Individual LAs identified where number of migrants to/from South Bucks was 100 or more)
7.30 Given this context, whilst accepting that South Bucks district is divided and that the final conclusion is inevitably based on a judgement, it is possible to determine a hierarchy for the best fit – with the first preference being London, the second being Berkshire and the third being with the rest of Buckinghamshire. This conclusion is supported by the data on both commuting and migration flows. As previously discussed, we would not recommend that South Bucks is included within the London HMA given the particular issues relating to way housing is planned in the London region. The most appropriate alternative “best fit” for South Bucks would be for the district to be considered as part of the Reading & Slough HMA, given the stronger relationships in terms of both commuting and migration as well as the functional HMA covering the largest proportion of the district’s population.

7.31 Based on a detailed analysis of the evidence, we would therefore recommend to the Buckinghamshire councils that the most pragmatically appropriate “best fit” for the Central Buckinghamshire housing market area comprises Aylesbury Vale, Chiltern and Wycombe districts; and that South Bucks district should be considered within the “best fit” for Reading & Slough HMA. On the basis of the detailed analysis undertaken, the evidence identifies that the “best fit” for the whole Reading & Slough HMA comprises the local authorities of Bracknell, Reading, Slough, West Berkshire, Windsor & Maidenhead and Wokingham, as well as South Bucks. Whilst the Reading & Slough functional HMA covers parts of South Oxfordshire and Basingstoke local authority areas, neither of these would be within the “best fit” (instead being part of the Oxford and Basingstoke HMAs respectively). Hart and Rushmoor look towards Farnham and Farnborough (although these settlements may need to cluster with others to form a self-contained HMA) whilst the neighbouring Surrey authorities have strong links to London, and settlements such as Staines-upon-Thames and Guildford provide a more appropriate “best fit” for them.

7.32 These “best fit” groupings do not change the actual geography of the functional housing market areas that have been identified – they simply provides 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.

7.33 Whilst we believe that the proposed groupings for Central Buckinghamshire and Reading & Slough HMAs 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. 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; for Chiltern and Wycombe to maintain dialogue with Reading, Slough and Windsor and Maidenhead; and for South Bucks to maintain dialogue with the other Buckinghamshire districts. Furthermore, all four districts will need to maintain dialogue with each other and the boroughs to the West of London, as well as with the Mayor of London through the Greater London Authority.
Functional Economic Market Areas

7.34 This section summarises the key findings of the analysis in Chapter 5 and presents our recommendations on the extent of FEMAs in the study area.

7.35 The outcome when defining FEMA boundaries depends as much on the method used as the specific types of flows that are analysed. There is an argument for analysing commuting data as the most complete and reliable flow data, and then supplementing this with data from other key economic markets. This supplementary analysis should analyse the transport network, clusters of specific sectors, local property markets, supply chains, service catchments and networks of cultural facilities.

7.36 HMAs and FEMAs should be geographically similar, because in broad terms both are largely determined by the reach of a daily return trip. For this reason, and also for convenience, it is useful to combine the HMA and the FEMA into a single boundary, which is the approach taken by this study.

Transport Network

7.37 The strategic transport network in Buckinghamshire provides excellent connections to London, as well as other parts of the South East and West Midlands via the M25, M4 and M40. Whilst there are number of key routes that link the key settlements of Wycombe, Aylesbury, Beaconsfield and Amersham, many of these routes suffer from congestion. Road links running east-west are somewhat poorer and routes between much of the south of the county and the north of Aylesbury Vale, particularly Buckingham, are also poor.

7.38 Unsurprisingly, the commuting patterns shown in Chapter 3 are consistent with the strategic transport network. The northern sections of Aylesbury Vale have much greater linkages with Milton Keynes, simply because it is quicker to travel to work there than other parts of Buckinghamshire, but also because of the scale and range of jobs located there. Travel times to London by rail are particularly quick, resulting in very high numbers of commuters across much of Buckinghamshire. Wycombe, Chiltern and South Bucks all have strong links with each other, as well as their respective neighbouring authorities, where transport links are good.

7.39 A number of transport improvements are planned which will support growth. The investment with the most potential to alter current patterns of economic geography is East West Rail. However, although travel times are expected to be significantly reduced from current levels, transport modelling undertaken for East West Rail suggests that there will be a net growth in commuting from Aylesbury to Milton Keynes and Bletchley of about 130 additional journeys as a result of the link. Although this will strengthen the functional relationship between Aylesbury Vale and Milton Keynes, it is unlikely to do so by enough to change the labour market areas defined in Chapter 3.

Implications for the definition of the FEMA

7.40 Travel times from Buckingham to Milton Keynes are much quicker than to other towns in Buckinghamshire, which suggests Buckingham and other northern parts of the Aylesbury Vale District would fit better within a Milton Keynes FEMA.

7.41 Travel times between most of the towns in the central and south of the county are generally within acceptable commuting times, which suggests that most towns within High Wycombe, Chiltern and the northern part of South Bucks, particularly Beaconsfield, could be within a single FEMA.

7.42 Aylesbury town has acceptable commuting times by public transport to many other towns in south and central Buckinghamshire, but most settlements are outside the average commuting time by car. Travel
times to Milton Keynes are also relatively lengthy. This suggests that Aylesbury town could be the centre of its own FEMA, although it certainly looks more towards High Wycombe and other Buckinghamshire settlements than to Milton Keynes.

7.43 Much of the southern and central parts of South Bucks, including Burnham, have quicker travel times to Slough and other parts of the Thames Valley, reinforcing the commuting analysis in Chapter 3.

Commercial Property Markets

7.44 Whilst the South Bucks market is relatively self contained, providing space for small, local businesses, it does also form part of the wider M25 market area for office and industrial floorspace, including sites at Iver for larger industrial and distribution units. In some respects, the District’s sites also form part of the wider Thames Valley market area, which runs along the M4 corridor, although it does not have the critical mass to attract the type and scale of occupiers that other parts of the Thames Valley does, despite being very well located.

7.45 Chiltern’s market is very self contained, catering very much to local demand. Chiltern also does not have the sites or the critical mass to compete with other parts of the Thames Valley, or other parts of Buckinghamshire, such as Wycombe.

7.46 Wycombe’s market is different in that its occupier demand is broadly of two kinds. Local demand is generated mostly by small and medium occupiers who sell goods and services to the area’s residents and businesses. Regional, national and global demand is partly generated by large corporate occupiers, who in the south of the district especially may be part of the Thames Valley technology cluster. In this wider market, Wycombe is in close competition with core locations such as Reading and Maidenhead. However, rents for these locations are generally well above even the highest rents in Wycombe district, which does make its market somewhat differentiated from the core Thames Valley area.

7.47 Aylesbury town centre has a relatively self contained market serving local demand. However, the north of the District is distinct in that it has a much larger proportion of industrial and distribution, focused on the M1. Both office and industrial rental values are much cheaper than the rest of Buckinghamshire, and are closer to levels seen in Milton Keynes.

Implications for the definition of the FEMA

7.48 The fact that the northern part of Aylesbury Vale is clearly part of a very different property market that has a much greater concentration of warehousing space, suggests that the northern part of Aylesbury Vale is within its own FEMA. Aylesbury Vale town centre also appears to be a distinct property market, with rental levels and occupier types that are distinct to other settlements in the county. This suggests Aylesbury Vale could be within its own FEMA (or sub FEMA), at least in property market terms.

7.49 There is clearly a distinct property market centred on Wycombe, which is distinct from other parts of the Thames Valley, and is therefore part of a FEMA which is separate to that in the core Thames Valley area.

7.50 Although both South Bucks and Chiltern both have very localised property markets, neither of them are part of property markets that are significant enough to be part of their own FEMA. At a strategic level, Chiltern and the northern part of South Bucks, including Beaconsfield and Gerrards Cross, are probably part of a wider M40 property market which includes High Wycombe, whilst southern and eastern parts of South Bucks are part of an M4/M25 property market area.
7.51 There are some similarities between the South Bucks and Chiltern economies in that they have the largest proportions of employment in higher value business and professional services. However, neither of the authorities is particularly distinct from Wycombe, whose share of employment in business and professional services is only squeezed by the larger amount of employment it supports overall, across a wider range of sectors.

7.52 Aylesbury Vale is somewhat distinct from the other three authorities with a lower proportion of employment in business and professional services, and higher levels of employment in the public sector and business administration. This is consistent with the property market analysis that found Aylesbury Vale was a less desirable location for office-based occupiers than more southern locations in the county.

7.53 There are a number of key sectors for the BTV LEP which have strong concentrations of employment across the county. In particular, South Bucks and Chiltern have the highest concentrations of employment in the ‘motion picture and production’ sector. This sector does not feature strongly in Wycombe and Aylesbury Vale. Both Wycombe and Chiltern have high concentrations of employment in the manufacture of computer, electronic and optical products whilst Chiltern has a very high concentration of pharmaceutical manufacturing.

7.54 Aylesbury Vale, by contrast, features more strongly in terms of high tech manufacturing, particularly related to Motorsport. It is part of a cluster which extends from Oxford to Northampton across the northern section of the District.

7.55 This analysis suggests that the northern part of Aylesbury Vale looks somewhat distinct, in terms of its sectoral make up, from other parts of the county. Aylesbury town is also somewhat different to many of the more southern locations. Both Chiltern and South Bucks have similarities to each other, to Wycombe and to other authorities further south and east.

Implications for the definition of the FEMA

7.56 The fact that the composition of Aylesbury Vale’s economy is quite different to that of the South Bucks, Wycombe and Chiltern economies suggest it is part of its own FEMA (or at least sub FEMA). This is also supported by the property market information set out in the previous section. However, it is evident that the northern part of Aylesbury Vale District has a different sectoral make up to the south, with employment in the south, centred on Aylesbury itself, having a much greater share in ICT and health, and the north having a much greater share in advanced engineering. This would support the idea that Aylesbury Vale is made up of at least two FEMA’s, with one centred on Aylesbury town and one looking towards Milton Keynes.

7.57 Chiltern’s and South Bucks’ economies have a very similar sectoral composition. They feature strengths in many similar sectors, including sectors which are a priority for the BTV LEP. The composition of the South Bucks economy is much closer to that of Chiltern and Wycombe than it is to neighbouring Slough (see Appendix B). The South Bucks economy is also closer in its sectoral make up to that of Chiltern and Wycombe than it is to the wider Thames Valley, with less strengths in ICT, and a greater focus on retail and wholesale.
Supply Chain Linkages

7.58 41% of all purchases by Buckinghamshire businesses are from suppliers that are located outside of the county, with 18% of all purchases to ‘neighbouring counties and towns’.

7.59 Half of all sales of Buckinghamshire businesses are to customers that are located outside of the county, with 19% of all sales to ‘neighbouring counties and towns’.

7.60 Whilst this information is useful to identifying the overall importance of sub-regional business linkages, it is not possible to be any more specific about the geographical extent of these linkages.

Implications for the definition of the FEMA

7.61 Although this information suggests that, based on supply chain linkages, there is a strong local and sub-regional FEMA centred on Buckinghamshire, it is not possible to use this information to define the extent of that FEMA.

Service Area Catchments

7.62 Aylesbury town centre has a clear catchment that extends across much of the south of Aylesbury Vale District and into northern parts of Wycombe District.

7.63 Northern parts of the Aylesbury Vale District are part of separate retail catchment areas, with a distinct zone for Buckingham, and fringe catchments for Milton Keynes and Leighton Buzzard.

7.64 High Wycombe has its own retail catchment which extends across much of the Wycombe District and into parts of Oxfordshire and Chiltern/South Bucks.

7.65 There is a much smaller network of retail catchments across Chiltern and South Bucks which reflects the smaller size and offer of the retail centres in these authorities.

Implications for the definition of the FEMA

7.66 Retail catchment areas are better for defining sub-markets within the sub-regional FEMA, than for defining the FEMA itself.

7.67 The retail catchments suggest that the northern part of Aylesbury Vale looks towards Milton Keynes, and therefore supports the analysis that this area is part of a wider Milton Keynes FEMA. Eastern sections of Aylesbury Vale are part of a retail catchment centred on Leighton Buzzard, which suggests this area might be part of a separate FEMA that takes in part of Hertfordshire.

7.68 Aylesbury town has a relatively well defined retail catchment, being the only key retail centre in this part of Buckinghamshire, and suggests it is part of its own FEMA.

7.69 Wycombe is the key retail centre in the south of the county and there is certainly a FEMA which includes the town and much of the rest of the southern sections of the county. This would include much of the northern part of South Bucks, particularly Beaconsfield and Gerrards Cross, as well as much of Chiltern. Southern parts of South Bucks however are part of a retail catchment that looks towards Slough and Windsor.
Cultural and Administrative Geography

7.70 Chiltern and South Bucks have a higher proportion of residents that access museums than Wycombe and Aylesbury Vale, which may reflect the good connections to central London, as well as the socio-economic mix of each authority.

7.71 Chiltern and South Bucks have a higher proportion of ‘highly engaged’ culture consumers than Wycombe and Aylesbury Vale, particularly within the ‘traditional culture vultures’ sub category. This places Chiltern and South Bucks amongst Oxfordshire (11.2%) and Surrey (10.9%) in the areas outside of London with a high proportion of highly engaged consumers.

7.72 The vast majority of administrative bodies cover the whole county or a much larger sub-region. However, the county is largely split into two Clinical Commissioning Groups (which are NHS organisations which organise the delivery of NHS services). These two CCGs largely conform to local authority boundaries, with the Aylesbury Vale CCG covering much of the Aylesbury Vale District and Chiltern CCG covering the Districts of Chiltern, Wycombe, and South Bucks.

Implications for the definition of the FEMA

7.73 There are strong similarities, in terms of cultural participation, between South Bucks and Chiltern, which suggest they might be part of a single FEMA. These indicators also suggest that Aylesbury Vale is part of a separate FEMA, with Wycombe somewhere between the two. However, the analysis is not strong enough to provide a robust input into the definition of FEMAs.

Recommendations for the definition of FEMAs

7.74 In order to define the most appropriate FEMAs that the four Buckinghamshire authorities sit within, we have been guided by the following principles, as identified from best practice guidance and consultation with neighbouring authorities:

» Although there is no single correct way to identify a FEMA, there is an argument for analysing commuting data as the most complete and reliable flow data, and then supplementing this with data from other key economic markets.

» The definition of FEMAs should generally be consistent with the definition of HMAs.

7.75 This suggests that the definition of Travel to Work Areas (Chapter 4) should form a key component of the definition of the FEMAs in the study area. Additional analysis of the transport network, local property markets, sectoral composition, supply chains, retail catchment areas and administrative geography (Chapter 5) form additional layers of detail on which to refine and verify the definition of FEMAs.

7.76 With this in mind, the starting point for the definition of the FEMAs in the study area are the labour market areas identified in Figure 64:

» Milton Keynes: which includes much of the northern part of Aylesbury Vale District, including the town of Buckingham;

» Central Buckinghamshire: which includes Aylesbury town and its immediate hinterland, all of the Districts of Wycombe and Chiltern, as well as northern parts of South Bucks, including Beaconsfield;

» Berkshire: which includes the southern part of South Bucks;

» Oxfordshire: which includes the western, mostly rural, parts of Aylesbury Vale District; and
7.77 The impact of the further components of analysis on these labour-market defined FEMAs is set out below.

**Milton Keynes FEMA**

7.78 The definition of a labour-market defined FEMA centred on Milton Keynes, which takes in the northern part of Aylesbury Vale District, is supported by the identification of a distinct property market and distinct sectoral strengths in this part of the District, as well as a retail catchment area that is centred on Milton Keynes. The available evidence suggests no reason to change the definition of the FEMA from that identified by the labour market analysis.

**Central Buckinghamshire FEMA**

7.79 The analysis suggests that there is a single labour market that meets the tests of self-containment which includes Aylesbury town and its immediate hinterland, all of the Districts of Wycombe and Chiltern, as well as northern parts of South Bucks. However, it is also important to recognise that there are also differences between the local economies: Aylesbury town has a distinct property market, with values typically lower than southern parts of the county; Chiltern has a small economy which is broadly similar to South Bucks, and these are very much centred on serving local demand; whereas Wycombe district plays a much larger sub-regional role, with a higher concentration of manufacturing businesses.

7.80 High Wycombe is the largest retail and employment centre in the south of the county and has a retail catchment which extends into most of Wycombe and Chiltern Districts and also covers the town of Beaconsfield (in South Bucks). These areas share a number of concentrations of key sectors identified by the BTV LEP including higher value manufacturing (particularly manufacture of computers), ICT (particularly software) and media (particularly programming and broadcast activities). Aylesbury has its own distinct retail catchment to the north of the county, and its sectoral strengths are focused more towards business administration and the public sector, rather than the higher value business services firms found towards the south of the county.

7.81 Given this context, it is possible to identify two sub-FEMAs within the Central Buckinghamshire FEMA: Aylesbury Town sub-FEMA to the north, and Wycombe, Chiltern and Beaconsfield Sub FEMA to the south as illustrated by Figure 63. These two distinct sub-markets by themselves are just short of meeting the tests of self-containment (both having fewer than 67% of workers in the resident population working in the same area, as detailed in Figure 24). This division is at least partly due to the existing transport infrastructure in the county: whilst Buckinghamshire is relatively well connected (as previously noted), many routes currently suffer from congestion and north/south connectivity would particularly benefit from improvement.

**Berkshire FEMA**

7.82 Whilst the sectoral composition for South Bucks is closer to Chiltern’s than much of the rest of Berkshire and the Thames Valley (and is very different to that of neighbouring Slough), the labour market analysis points strongly to southern parts of South Bucks being within the Berkshire FEMA given particularly strong commuting links with Slough and Windsor & Maidenhead. On balance, we give greater weight to the labour market analysis, so the southern parts of South Bucks are included within the Berkshire FEMA and are therefore not included within the Central Buckinghamshire FEMA. This is also consistent with the definition of the functional HMA.
Oxfordshire FEMA

7.83 The Oxfordshire labour market area covers part of the western section of Aylesbury Vale District. However, there is very little economic activity located here and so there is no evidence to suggest an amendment to the definition of a FEMA based on the labour market area.

Hertfordshire FEMA

7.84 The Hertfordshire labour market area covers a small part of the eastern section of Aylesbury Vale District. However, there is very little economic activity located here and so there is no evidence to suggest an amendment to the definition of a FEMA based on the labour market area.

7.85 Figure 68 defines the extent of the FEMAs and sub-FEMAs based on the conclusions set out above.

Figure 68: Definition of FEMAs and Sub-FEMAs
Implications of FEMAs on planning for employment growth

7.86 The PPG identifies that local planning authorities should (paragraph 018):

"Make an assessment of the likely change in job numbers based on past trends and/or economic forecasts as appropriate and also having regard to the growth of the working age population in the housing market area ... Where the supply of working age population that is economically active is less than the projected job growth, this could result in unsustainable commuting patterns and could reduce the resilience of local businesses."

7.87 Given this context, the PAS technical advice note suggests (paragraph 4.16):

"It is useful to combine the HMA and functional economic area into a single boundary. This makes both analysis and policy-making manageable: the alternative of working with two larger-than-local areas, one for housing and one for economic land uses, adds layers of complexity. It also makes it possible to plan for alignment of jobs and workers – something which is very difficult to do at the level of individual authorities, precisely because labour markets are larger than local."

7.88 Having identified functional housing market areas, the analysis also considered the most appropriate working arrangements for establishing the evidence base. This concluded that the “best fit” for the Central Buckinghamshire housing market area included Aylesbury Vale, Chiltern and Wycombe districts; and that South Bucks district should be considered within the best fit for Reading & Slough HMA.

7.89 The FEMA analysis has considered a range of data in order to define the most appropriate functional areas. Given that the Travel to Work Areas defined in Chapter 4 provide a key component in the analysis of both HMAs and FEMAs, it is perhaps not surprising that the identified FEMAs largely reflect the functional housing market areas. Furthermore, as with the functional housing markets, these FEMAs do not sit neatly within administrative boundaries and therefore once again it is appropriate to consider a “best fit”.

7.90 It is evident that Wycombe and Chiltern districts are both entirely within the Central Buckinghamshire FEMA, together with most of Aylesbury Vale’s population. Given this context, it is reasonable to conclude that Aylesbury Vale, Chiltern and Wycombe districts should all be considered within the “best fit” for Central Buckinghamshire FEMA.

7.91 South Bucks district is once again divided, with Beaconsfield and the northern parts of the district in the Central Buckinghamshire FEMA and the southern parts of the district in the Berkshire FEMA. Given the similarities between the economies of South Bucks and Chiltern in particular, there is some argument that the “best fit” for South Bucks is with the Central Buckinghamshire FEMA. Nevertheless, given the principle of giving greater weight to the more complete data about commuting flows, the evidence would suggest that a more appropriate “best fit” for South Bucks is with the Berkshire FEMA.

7.92 Therefore, on the basis of the evidence, we would recommend to the Buckinghamshire councils that the “best fit” for the Central Buckinghamshire FEMA comprises Aylesbury Vale, Chiltern and Wycombe districts; and that South Bucks district should be considered within the best fit for the Berkshire FEMA (comprised of Bracknell, Reading, Slough, West Berkshire, Windsor & Maidenhead and Wokingham, together with South Bucks). Whilst this conclusion is fundamentally based on the evidence about the functional economic markets, it is also consistent with the conclusion about the “best fit” for housing market areas.
7.93 This conclusion does not change the actual geography of the complex functional economic market areas that have been identified – it simply provides a pragmatic arrangement for the purposes of establishing the evidence required about the future number of jobs and developing local policies that are consistent with planned housing, as suggested by the PAS technical advice note. Nevertheless, whilst we believe that this grouping provides the overall “best fit” for joint working on the basis of the available evidence, this is not the only arrangement possible.

7.94 Regardless of the final grouping, Aylesbury Vale also need to work closely with Milton Keynes Council on employment land issues in the Milton Keynes FEMA in the north of the district. There will also be a more limited need for the Council to work with the Oxfordshire and Hertfordshire local authorities. Chiltern and Wycombe District Councils should work together with South Bucks to plan for employment growth across the Central Buckinghamshire FEMA, given the strong functional relationships with the north of South Bucks district.
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