Glasgow and the Clyde Valley Housing Need and Demand Assessment

Technical Report 02

The Housing Market Area Framework

May 2015

Glasgow and the Clyde Valley
Housing Market Partnership

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1 Introduction

1.1 Scottish Planning Policy (SPP) sets out the need to identify functional housing market areas (HMAs) when planning for housing. Functional HMAs are "…geographical areas where demand for housing is relatively self-contained. These areas may significantly overlap and will rarely coincide with local authority boundaries. They can be dynamic and complex, and can contain different tiers of sub-market area, overlain by mobile demand, particularly in city regions." (SPP, 2014, para 111). Authorities are encouraged to co-operate regionally to define functional housing market area boundaries (SPP, 2014, para 115).

1.2 The authorities of the Glasgow and the Clyde Valley have worked together as a city region since 1996 preparing the 2000 and 2006 Structure Plans and under the new planning system, the 2011 Strategic Development Plan. The Housing Market Area (HMA) system, defined for the 2000 Structure Plan and reconfirmed for the 2006 and 2011 Plans, provides the framework for comparing **private sector supply and demand**, based on an analysis of house-buying moves. This paper presents in Section A the outcome of an updated analysis of Sasines[1] data covering the period 2007-12 to test the validity of the current HMA system and consider whether any changes are required to the HMA system.

1.3 In 2008 the Scottish Government introduced a new approach to planning for housing based on Housing Need and Demand Assessment (HNDA) Guidance. Alongside SPP and Local Housing Strategy (LHS) Guidance, authorities worked together in a Housing Market Partnership producing an HNDA to provide the evidence base for identifying housing requirements by HMAs across all tenures to inform SDPs, LHSs and LDPs.

1.4 In 2013 the Scottish Government, as part of an HNDA refresh, produced the HNDA Tool, an Excel workbook populated with national data, to estimate the amount and likely tenure of additional future housing. The aim was to reduce the time and resources authorities need to spend on this part of the HNDA assessment (HNDA A Manger's Guide, 2014, para 10.2). The HNDA refresh informs the second Glasgow and the Clyde Valley HNDA. A review of the geographical framework for the private sector has been undertaken for HNDA2 to align the social and private sector base geographies (set out in Section 2) as well as a review of the established mechanism for the private sector, set out in Section A.

1.5 With regard to the consideration of **housing need** (i.e. essentially the requirement for social rented housing), the GCV Housing Market Partnership came to the conclusion for HNDA1 that the most appropriate geographical framework remained the 8 Local Authority areas together with 31 LA sub-areas that nest to local authority boundaries. Under the new system this sector also estimates the potential for the Below Market Rent sector. The LA sub-areas have been updated for HNDA 2 (set out in Section 2) and the approach to this sector is set out in Section B.

1.6 This report is set out in two sections structured as follows:

- This paper presents, in Section A the outcome of an updated analysis of Sasines data covering the period 2007-12, it's use to test the validity of the current HMA system and considers whether any changes are required to the HMA system. This involves a two-stage process: the identification of areas to form the building blocks of the system; and the examination of the inter-relationships between the building blocks to identify housing markets operating over a wider area.

[1] Sasines data refers to the Sasine Register held by the Registers of Scotland which has a statutory requirement to record house sales

- Section B of this report considers the geography of the Social Rented and Below Market Rent (SR&BMR)[2] sector.

[2] The HNDA Tool tenures households into four groups which the GCVHMP have grouped into two: Private sector (Owner Occupied and Private Rented) and Social Rented sector (Social Rented and Below Market Rent) (HNDA A Manager's Guide 2014 para 7.3)

2 Building Blocks and Geography

2.1 The authorities of the Glasgow and the Clyde Valley identified for the 2000 Structure Plan a housing market area system which provides a framework for comparing private sector supply and demand, based on an analysis of house-buying moves. This HMA system was reconfirmed for the 2006 Structure Plan and the 2011 Strategic Development Plan. The starting point (building blocks) for the HMA system were the 63 audit areas defined by the eight Councils as geographically contained units to represent communities and settlements.

2.2 As part of the preparatory work for HNDA2 the GCVHMP decided to review this approach to try and align the geographies for the social rented and private sectors. The reasons for the review were two-fold.

1. The Centre for Housing Market Analysis (CHMA) had announced that they would publish an HNDA Tool which would produce results at geographies aggregated from datazones. This meant that the geography used to present results would need to be aggregated from datazones using a 'best-fit'[3] approach. Undertaking this exercise for a smaller number of LA sub-areas would be more straightforward than undertaking the exercise for 63 audit areas because there would be many more intersections with the audit areas and a less accurate 'best-fit' to the actual boundaries. There are 2,199 datazones in the GCV area and as close a link as possible between the 'best-fit' and actual geography is desired.
2. The GCVHMP wanted to simplify the process and a reduction from 63 to 25 areas would help significantly. In addition, data published by the Scottish Government is increasingly available using datazones as the building blocks and Census data is also available for this geography. Reporting on other aspects of the HNDA would, therefore, be more straightforward with a consistent geographical base.

2.3 Firstly, a review of the social rented sector LA sub-areas was undertaken as these would form the new building blocks for the HMA system. The 25 sub-areas, as the building block for both the SR&BMR and Private sectors, reflect housing management areas operated by Local Authorities and Registered Social Landlords (RSLs) and represent areas with distinct local housing market characteristics. Glasgow City Council reduced their LA sub-areas from 10 to 3. There were also some minor changes made to boundaries between Inverclyde East and West. Initial analysis showed that the use of only 3 areas in Glasgow would have had an impact on the structure of relationships in the wider HMA. Accordingly, one of the 3 sub-areas was split in two. The changes between 2009 and 2013 LA sub-areas are shown in Figure 1 and Figure 5 shows the final set of 25 LA sub-areas. The 63 audit areas were 'best-fit'[3] to the 25 LA sub-areas to form the building blocks used in the HNDA2 review of HMAs. Although there are some boundary differences in the nesting of Audit Areas within LA sub-areas (see Figure 2), in population terms they are a very close fit. Figure 3 shows the 25 LA sub-areas and their 'best-fit' approximation to datazones.

2.4 The 'best-fit' has been used to obtain some statistical data for chapters and background reports throughout HNDA2. For the analysis of house-buying moves this 'best-fit' was not required as the input geography was postcode units which is a much lower-level

[3] A 'best-fit' occurs when a statistical building block of data (in this case datazones) is aggregated to a higher-level geography to produce estimated statistics at the higher-level geography but the aggregated boundaries are not an 'exact-fit', they are an approximation of the higher-level geographical boundary. The whole of the building block is maintained and is not split. Where datazones intersect the higher-level geography they are only allocated once and therefore will be excluded from the other area where they intersect. A map of the 'best-fit' to the higher-level geography will show where there are differences with the original higher-level boundary. In this method a count of the Unique Property Reference Number (UPRN) in each datazone is used to allocate the datazones to LA sub-areas.

geography than datazones (43,428 postcode units) and therefore an ‘exact-fit’ is achieved.

2.5 The GCVHMP’s initial intention had been to generate results from the HNDA Tool (see 2.2) for each of the 25 LA sub-areas. When the Tool was published and its data inputs examined, it became clear that it would not be possible to produce robust results at the lower-level geography that the GCVHMP could be confident in. This issue is examined in more detail in *Technical Report 01, HNDA Tool Methodology and Results, 3.1-3.4*. The decision was taken to use the HNDA Tool to produce results at a local authority level which would then be disaggregated to the appropriate geographies for the private, and social rented and below market rent sectors (see *Technical Report 07, Strategic Housing Estimates: Methodology and Results).*

Section A - Private Sector

3 Analysis of Sasines Data

Sasines data

3.1 The 25 LA sub-areas identified in Section 2 provide the building blocks for the HMA system. The review of HMAs is based on an analysis of house-buying moves (new and second hand sales) over a five-year period (2007-12)[4] sourced from the Register of Sasines. This approach to identifying HMAs uses both origin-based and destination-based measures of self-containment, as referenced in the HNDA Practioners Guide paragraph 1.38. As with previous HMA analyses in the GCV area, the starting point was the construction of an origin/destination matrix for the 25 LA sub-areas (see Table 1A).

3.2 Postcode information was used to identify the destination LA-sub area, but the standard Sasines data acquired each year only provides town/settlement for origin of buyer. This is satisfactory for most of the SDPA, but causes particular problems when it comes to the sub-division of Glasgow into its 4 LA sub-areas. The origin address is often given as 'Glasgow' but Glasgow city straddles four housing sub-market areas. Enhanced Sasines data, that provides the post-code of the buyer, was acquired for calendar year 2012. This, together with the previously acquired 2007/08 enhanced dataset was used to 'book-end' the time-series of Sasines data. The two years of enhanced data was used to sub-divide origins within Glasgow for the intervening years and also for Greenock which is split between Inverclyde East and West. The enhanced data also includes house sales information for those parts of East Dunbartonshire that were in Stirling County[5]. For these areas, sales data was interpolated for the intervening years.

3.3 Sasines data is used to analyse the housing market in terms of each area's self containment and the strength of links between them. These have been measured in two ways that can be expressed in terms of the following questions:

- Destination-based analysis – what is the <u>destination</u> of house-buyers originating from a particular area?
- Origin-based analysis – what is the <u>origin</u> of house-buyers in a particular area?

3.4 Sales involving moves from outside the SDPA were excluded to ensure that the origin-based analysis is directly comparable with the destination-based analysis.

3.5 Self-containment can therefore be expressed as either the percentage of all movers buying in Area X whose origin is Area X (origin-based analysis) or the percentage of all movers whose origin is Area X who buy in Area X (destination-based analysis).

3.6 As with the measurement of self-containment, linkages can be measured in relation to both origins and destinations. Four different measures can be obtained by analysing moves in both directions against the total number of origin and destinations for each area.

[4] The Sasines data used is for the financial year for the period 2007/2008 and calendar year for 2009, 2010, 2011 and 2012. The 2007/2008 data was used in HNDA1 and is the starting point for the HNDA2 analysis. Calendar year data has been used for the proceeding years to obtain the most up-to-date home-buying information available when the analysis was started (summer 2013) which was to December 2012.

[5] Sasines data is purchased from Propvals (www.propvals.co.uk). Propvals Sasines data is split into historic counties.

4 Identification of Building Blocks for the Housing Market Area system

4.1 The 25 LA sub-areas used in this analysis vary substantially in terms of both their size and level of self-containment. Table 1A is a matrix of all the house buying moves within and between the 25 areas in the 2007-12 period. It shows that the number of sales varies from 379 in Kilmacolm and Quarriers village to 14,028 in Glasgow South. Table 1B shows that the percentage self-containment ranges from below 40% in Glasgow North East and over 80% in Dumbarton and Vale of Leven.

4.2 Building blocks will either form separate HMAs or the lowest level in a tiered HMA system. In the latter situation, local demand and supply will be compared for each of these areas. This raises the possibility of local shortfalls requiring land release to meet demand specifically at this level. It would only be appropriate that land release decisions are made specifically for areas where levels of self-containment are substantial. For this reason, it was decided to set a minimum level of self-containment for each building block at 65%, consistent with previous analyses[6].

4.3 The first stage was to identify the areas where self-containment is less than 65% (on one or both measures) and to merge them with other areas with which they have a significant link. The simplest measures of the links between areas are:

(a) the absolute numbers moving between them, and

(b) those numbers expressed as a percentage of all sales.

Difficulties arise in assessing the significance of these linkages given the substantial variation in the size of each area. To overcome this problem use has been made of an approach which, rather than measuring linkages directly, measures the increase in self-containment which results when two areas merge.

4.4 Table 1B shows the level of self-containment in each of the 25 LA sub-areas. Significant links are identified by the increase in self-containment that results when two areas merge. The potential merger of each area with all other areas is tested to identify:

(a) whether self-containment is higher in the new area than found in either of the two original areas, and

(b) mergers that produce the biggest increase in self-containment.

Generally, if more than one potential merger is identified, the merger which produces the largest increase in self-containment is made.

4.5 As areas are merged, the matrix of moves is reformulated for the smaller number of areas, and the process is repeated. The mergers made in the first two stages, or iterations, are now set out.

[6] The HNDA Practioners Guidance refers to former Communities Scotland research, Local Housing System Analysis Good Practice Guide. Chapter 4 and Annex 6. make reference to self-containment.
http://www.scotland.gov.uk/Topics/Built-Environment/Housing/supply-demand/chma/guidance/LocalHousingSystemAnalysis

First Iteration

4.6 The first iteration results in the number of areas reducing from 25 to 15. This involves the merger of 14 areas to form 4 new areas. The other 11 areas did not merge at this stage. The areas merged are as follows:

1 Bearsden and Milngavie **with** Glasgow North West
2 Glasgow South **with** Eastwood **and** Rutherglen and Cambuslang
3 Levern Valley **with** Kilmacolm and Quarriers Village **and** Johnstone and Elderslie **and** North Renfrewshire **and** Paisley and Linwood **and** Renfrew **and** West Renfrewshire
4 Inverclyde East **with** Inverclyde West

4.7 In most cases, mergers occur where the increase in self-containment is maximised for both original areas. For example, Bearsden and Milngavie and Glasgow North West see the biggest increase in self-containment when they are merged with each other.

4.8 In some circumstances, mergers involving more than two areas are made. If, for example, the links between three areas are such that the merger of any two increase self-containment, all three areas are merged. One example of this in the first iteration involves Glasgow South with Eastwood and Rutherglen and Cambuslang.

4.9 As in the previous 2002/08 analysis, the only potential linkages for Levern Valley, Kilmacolm and Quarriers Village, Johnstone and Elderslie, North Renfrewshire, Paisley and Linwood, Renfrew and West Renfrewshire are with each other.

4.10 Mergers do not have to be exclusively between two or more areas with self-containment under 65%. Mergers are made where one area is over 65% if that is the strongest link. For example although self-containment in Inverclyde East is over 65% on both measures, in Inverclyde West it is under 65% and the merger of these two areas produces a significant increase in self-containment.

4.11 Self-containment in Airdrie and Coatbridge, Motherwell, Clydesdale, East Kilbride and Dumbarton and Vale of Leven is over 65% on both measures. There is, therefore, no reason to seek out potential mergers for these areas. Hamilton has one measure of self-containment above 65% and the other below, however, it is not a significant difference and is not merged to be consistent with previous analyses.

4.12 A number of areas were identified at this stage which have relatively low self-containment and have linkages with other areas, but where the most appropriate merger is not clear cut. No mergers were made at this stage to allow examination of linkages with larger groupings of area in subsequent iterations. The areas are Glasgow East, Glasgow North East, Strathkelvin and Clydebank.

Second Iteration

4.13 Table 2A shows the reformulated matrix of moves between the new set of 15 areas and Table 2B shows their levels of self-containment. The new set of areas were tested for potential mergers, resulting in a reduction in the number of areas from 15 to 13. This involves the merger of 4 areas to form 2 new areas. The areas merged are as follows:

1 Glasgow North West **with** Clydebank
2 Glasgow North East **with** Strathkelvin

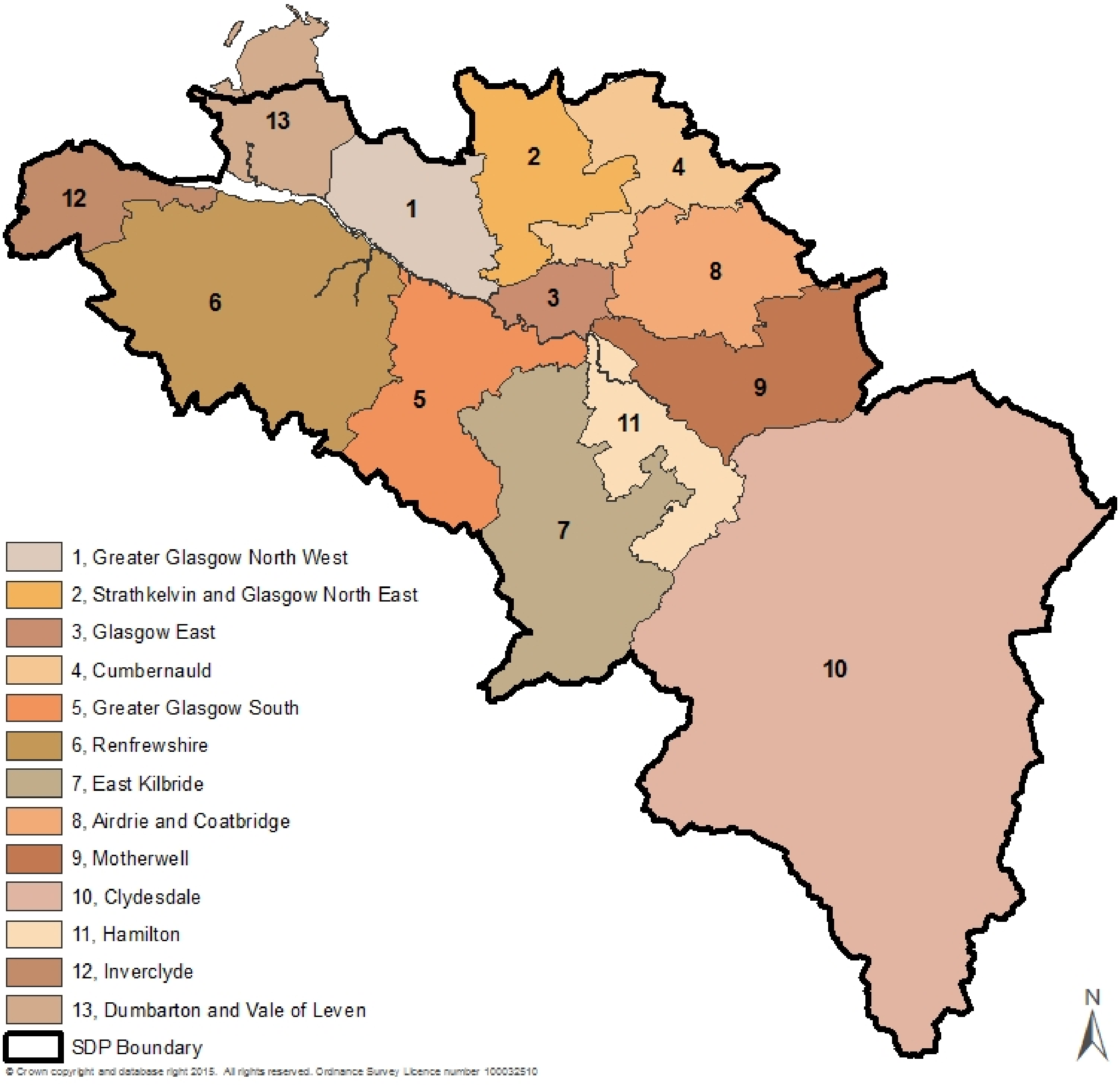
4.14 Glasgow East continues to have a linkage with the enlarged Greater Glasgow South. However, given (a) self-containment in the latter area is nearly 75% and (b) the size of Glasgow East, it is considered that, on balance, Glasgow East should remain a separate entity.

4.15 The strongest link between any two of the remaining areas is between Strathkelvin and Glasgow North East. This link ties in with previous analyses which identified the Strathkelvin and Springburn Housing Sub-Market Area.

4.16 A potential merger for Clydebank with either Glasgow North West or Bearsden and Milngavie was not identified in the previous iteration. However, their merger to form Greater Glasgow North West has produced a situation where a merger with Clydebank would now result in an increase in self-containment, consistent with previous analyses.

4.17 Following the mergers made in the second iteration, Tables 3A and 3B show the reformulated matrix of moves which form the final 13 Building Blocks in terms of (a) the number of moves within and between them, and (b) the percentage self-containment and linkages as shown in Diagram 1.

Diagram 1 HMA Framework - Building Blocks



<u>Housing Market Area Building Blocks Comparison with Previous Analyses</u>

4.18 Table 4 compares self-containment levels derived from the 2007-12 data with the previous exercises based on 2002-08, 1996-02 and 1988-97 data. In the original exercise, all 13 areas had self-containment levels above 65%. However, subsequent updates have identified both Strathkelvin and Glasgow North East and Hamilton falling below 65% on one self-containment measure. Hamilton also rose higher on the other measure and on balance the differences are marginal compared to previous analyses.

5 Identification of Housing Market Areas

5.1 Having established the thirteen building blocks that form the basis of the HMA system, the next stage was to determine whether they are self-contained or form part of a wider market area i.e. to test whether the assumptions on the wider market area system identified in 2000, 2006 and 2011 remain valid. This involved examining the inter-relationships between building blocks in terms of their self-containment and the linkages between them.

Self-containment

5.2 Continuing previous practice first used by Strathclyde Regional Council and subsequently for the GCVSDP, 80% self-containment was used as the limit beyond which areas should be treated as self-contained HMAs[7].

Linkages

5.3 The most significant linkages between building blocks were identified using the methodology used in the previous stage, i.e. where their merger would produce an increase in self-containment. Linkages were also examined in terms of both the percentage of all sales and the absolute volume of sales.

5.4 The matrices in Tables 5A and 5B show, respectively, the destination-based and origin-based analysis of percentage self-containment and links. Table 5C identifies those pairings of building blocks that produce an increase in self-containment if merged.

5.5 Consideration of this information led to the following conclusions:

<u>Individual Housing Market Areas</u>

Dumbarton & Vale of Leven and Inverclyde should continue to be treated as separate self-contained HMAs.
These areas have the highest level of self-containment (over 80% on both measures) and, based on the methodology used to define the building blocks, have no significant linkages with other areas.

<u>Central Conurbation</u>

There is a wider HMA operating in the central part of the conurbation. Greater Glasgow North West, Strathkelvin and Glasgow North East and Greater Glasgow South continue to form the core of this HMA.

Percentage self-containment in Greater Glasgow North and West, Strathkelvin and Glasgow North East and Greater Glasgow South range from 62 to 73% and each area has significant links with one or two other areas. These areas continue to form the core of the wider market operating in the Central Conurbation. Following the merger of these core areas, the position of Glasgow East, Cumbernauld, East Kilbride and Renfrewshire can be considered.

- Glasgow East has a significant link with Greater Glasgow South. Of the 13 building blocks it has the lowest level of self-containment and could not reasonably be considered as a separate market area. It is included with the rest of Glasgow to form the core of the Central Conurbation Housing Market.
- Cumbernauld not only has significant links with the neighbouring Strathkelvin and Glasgow North East, but also with the core areas of the Central Conurbation and is included in this HMA.

[7] The HNDA Practioners Guidance refers to former Communities Scotland research Local Housing System Analysis Good Practice Guide. Chapter 4 and Annex 6 make reference to self-containment.
http://www.scotland.gov.uk/Topics/Built-Environment/Housing/supply-demand/chma/guidance/LocalHousingSystemAnalysis

- East Kilbride’s strongest links are with Greater Glasgow South and Hamilton. These linkages with both the Central and Eastern Conurbation are re-tested once the core areas are merged.
- Renfrewshire continues to have a relatively high level of self-containment (nearly 80%), but continues to have a significant link with Greater Glasgow South. This is re-tested following the merger of the core areas.

Eastern Conurbation

There is a wider HMA operating in the eastern part of the conurbation of which Hamilton and Motherwell continue to form the core.
Percentage self-containment in Hamilton and Motherwell range from 60 to 75%, and there is a significant linkage between them. Following the merger of these core areas the position of Airdrie and Coatbridge and Clydesdale can be considered.

- Airdrie and Coatbridge has a relatively high level of self-containment (just over 80% on one of the measures), albeit slightly lower than in the previous analyses. It does, however, have a significant link with Motherwell. As with Clydesdale, this relationship should be re-tested following the merger of Hamilton and Motherwell.
- Unlike the previous analyses, in which Clydesdale had a significant link with both Motherwell and Hamilton, it now only shows a significant link with the former. This relationship needs to be re-tested following the merger of Hamilton and Motherwell.

5.6 At this stage the four building blocks in the Central Conurbation and the two building blocks in the Eastern Conurbation, as identified above, are merged to allow testing for links between them and the four areas in question – Renfrewshire, East Kilbride, Airdrie and Coatbridge and Clydesdale. Matrices (a) to (c) in Table 6 show the number of sales, the destination-based analysis and the origin-based analysis of percentage self-containment and percentage links. Matrix (d) in Table 6 identifies those pairings that would produce an increase in self-containment if merged.

5.7 Once the core areas of the Central and Eastern Conurbation have been merged a slightly clearer picture emerges. Matrix (d) in Table 6 shows that both Airdrie and Coatbridge and Clydesdale have significant links with the Eastern Conurbation, thus confirming their continued inclusion in the Eastern Conurbation HMA.

5.8 Previous analyses concluded that Renfrewshire should be added to the Central Conurbation HMA and this updated analysis of Sasines data does not provide a basis for altering that conclusion. Although East Kilbride continues to show increasing links with the Eastern Conurbation, the marginally stronger links remain with the Central Conurbation (see Table 7 - matrices (a) to (d)) and, consequently, there is no justification for altering the existing HMA geography.

Conurbation

5.9 The final consideration concerns the relationship between the Central and Eastern Conurbation HMAs. Self-containment in these areas is very high, nearly 95% and over 85% respectively. However, over 14% of all sales in the Eastern Conurbation involve moves from the Central Conurbation, and a similar percentage of buyers from the Eastern Conurbation buy in the Central Conurbation. Not surprisingly, the strongest links between these areas are concentrated near the boundary.

5.10 As has been concluded in previous analyses, it would be difficult to ignore the wider HMA operating across the divide between the Central and Eastern Conurbations. However, the limits to mobility between the two areas should continue to be recognised by ensuring that most of the estimated mobile demand is met at the second tier, and only a small proportion at the Conurbation level.

6 Conclusions

6.1 Despite starting this analysis with a much reduced number of areas (from 63 Audit Areas to 25 LA Sub-Areas), a pattern of linkages has emerged that matches previous analyses. This has resulted in the identification of two discrete market areas (Inverclyde and Dumbarton and Vale of Leven) and, for the remainder, a three tier HMA framework:

- 1st Tier Conurbation and 2 Discrete Housing Market Areas
- 2nd Tier Eastern Conurbation and Central Conurbation and 2 Discrete Housing Market Areas
- 3rd Tier 11 Housing Sub-Market areas and 2 Discrete Housing Market Areas

Housing Market Areas			
1st Tier HMA	2nd Tier HMA	3rd Tier Housing Sub-Market Areas	
Conurbation	Central Conurbation	1	Greater Glasgow North West
		2	Strathkelvin and Glasgow North East
		3	Glasgow East
		4	Cumbernauld
		5	Greater Glasgow South
		6	Renfrewshire
		7	East Kilbride
	Eastern Conurbation	8	Airdrie and Coatbridge
		9	Motherwell
		10	Clydesdale
		11	Hamilton
Discrete (self-contained) Housing Market Areas			
Dumbarton and Vale of Leven			
Inverclyde			

6.2 This outcome provides a degree of confidence in the consistency of the linkages within the housing market area system over time. In addition, the linkages identified do not seem to have been affected by the significantly lower levels of activity in the housing market that is reflected in the most recent data.

6.3 Figure 4 shows the structure of the GCV HMA system. The way in which the comparison of supply and demand is managed in the new system is explained in *Technical Report 07, Strategic Housing Estimates: Methodology and Results*.

<u>Section B of this report considers the geography of the Social Rent and Below Market Rent Sector.</u>

Section B – Social Rent and Below Market Rent Sector

7 Social Rent and Below Market Rent Sector

7.1 It was outlined in the introduction to this paper (para 1.5) that following the outputs of the HNDA Tool the GCVHMP separates the housing market into the Private (including the owner occupied and private rented sectors) and Social Rented and Below Market Rent (SR&BMR) sectors and these sectors each have their own functional housing market areas. Demand for private sector housing and need for social rented or below market rent housing are complementary components of the GCV housing system, but with quite different dynamics.

7.2 The most appropriate framework for comparing supply and demand in the private sector is the three tier housing market area system set out in Section A of this report. For the **Social Rent and Below Market Rent sector**, the most appropriate strategic geographical framework is the individual local authority with nested sub areas below for more local analysis. It is considered that in regard to housing need this sector is restricted by the operation of housing policy within administrative boundaries. This reflects the practical reality of the way in which application and allocation systems for most social rented housing are currently operated by local authorities. For many in housing need, their housing choices are constrained by low incomes, but also by allocation policies. Consequently, mobility and search patterns within this sector can be constrained to much smaller geographies, even in some cases at a lower level than local authority boundaries.

7.3 Although there is some cross-boundary movement of tenants, unlike the private sector there is insufficient data currently available on which to base a housing market area framework operating beyond local authority boundaries.

7.4 Figure 5 shows the SR&BMR sector market areas (i.e. local authority boundaries) and the 25 local authority sub-areas for more local analysis in the LHS. Section 2 of the report outlines the review of LA sub-areas undertaken for HNDA2. The use of Local Authority areas and LA sub-areas is consistent with the approach commonly adopted in the past for local Housing Needs Assessments. For some authorities, these conveniently coincide with the Housing Sub-Market Area boundaries used in the private sector.

7.5 The CHMA has advised that subsidised low cost housing for sale (discounted, shared ownership or shared equity) is not included in the SR&BMR sector and therefore is a component of the private sector. The HNDA Tool does not identify the potential for intermediate housing products. The GCVHMP recognises that due to the way the affordability assessment is applied in the HNDA Tool it is possible that there are households in the SR&BMR sector that could potentially afford subsidised low cost home ownership or other ‘intermediate products’ if the product was available to them. In HNDA1 a potential ‘intermediate sector’ was identified, however, it was acknowledged that this was a relatively new sector in the housing market and there was limited information available, particularly its role in the future as this is restricted by the availability of public funding. Due to its reliance on public funding it was considered appropriate to consider this sector within local authority boundaries. For HNDA2, as the HNDA Tool does not separately identify this sector it has not been considered further.

8 Conclusions

8.1 The most appropriate framework for the Social Rent and Below Market Rent sector at the strategic level is the 8 local authority boundaries and at the local level within 25 local authority sub-areas.

Tables

TABLE 1A Matrix of House-Buying Moves (2007-12) - Initial 25 LA Sub-Areas

LA	Destination Area	Origin Area	Dumbarton and Vale of Leven	Clydebank	Bearsden and Milngavie	Glasgow - North West	Strathkelvin	Glasgow - North East	Glasgow - East	Glasgow - South	Eastwood	Rutherglen and Cambuslang	Levern Valley	Johnstone and Elderslie	North Renfrewshire	Paisley and Linwood	Renfrew	West Renfrewshire	Kilmacolm and Quarriers Village	Inverclyde East	Inverclyde West	Airdrie and Coatbridge	Cumbernauld	Motherwell	East Kilbride	Hamilton	Clydesdale	TOTAL
		LA	WD	WD	ED	GC	ED	GC	GC	GC	ER	SL	ER	RF	RF	RF	RF	RF	IC	IC	IC	NL	NL	NL	SL	SL	SL	
WD	Dumbarton and Vale of Leven		2,042	138	31	90	18	7	8	50	2	7	2	2	11	20	3	8	1	8	8	3	14	9	8	6	2	2,498
WD	Clydebank		81	1,236	104	254	14	2	14	40	6	4	3	2	22	9	4	3	0	3	0	3	13	4	5	8	2	1,836
ED	Bearsden and Milngavie		24	75	1,373	797	100	8	52	95	22	10	1	3	9	10	9	15	1	3	3	10	47	6	4	7	13	2,697
GC	Glasgow - North West		148	254	967	7,741	422	157	305	895	320	117	42	24	68	149	54	166	51	36	59	100	264	104	183	235	177	13,038
ED	Strathkelvin		15	14	152	343	2,477	217	120	134	23	21	9	1	5	16	6	7	1	0	7	28	261	13	18	28	14	3,930
GC	Glasgow - North East		7	6	19	234	358	583	164	93	22	17	2	0	1	8	7	5	2	2	3	21	81	17	14	22	5	1,693
GC	Glasgow - East		35	29	73	613	185	175	3,426	471	97	173	19	7	14	45	15	39	5	4	33	157	258	143	76	346	106	6,544
GC	Glasgow - South		54	50	141	1,435	154	78	424	8,137	1,481	408	153	36	69	340	70	70	14	19	47	53	149	95	315	151	85	14,028
ER	Eastwood		5	6	28	275	16	12	66	1,328	2,370	85	44	4	14	80	14	24	8	5	9	7	24	12	166	44	19	4,665
SL	Rutherglen and Cambuslang		10	11	33	175	32	32	299	858	95	2,040	7	4	9	21	13	13	0	3	8	28	46	61	153	184	30	4,165
ER	Levern Valley		2	3	7	49	2	5	0	182	66	8	629	13	7	110	16	13	0	2	5	3	5	1	15	5	0	1,148
RF	Johnstone and Elderslie		4	8	9	29	8	4	9	68	20	2	14	496	23	258	18	193	13	9	3	3	6	2	4	4	3	1,210
RF	North Renfrewshire		8	23	9	38	8	3	5	49	10	4	9	16	660	72	68	37	6	21	21	0	6	1	6	7	1	1,088
RF	Paisley and Linwood		27	26	33	161	22	15	26	481	89	30	154	201	159	3,029	161	217	16	23	18	13	23	19	23	31	16	5,013
RF	Renfrew		7	16	18	109	20	8	16	217	34	13	23	20	129	220	810	51	6	11	6	6	14	11	10	13	2	1,790
RF	West Renfrewshire		4	5	10	64	5	0	19	91	17	7	12	77	48	104	31	690	68	11	4	0	5	5	2	5	3	1,287
IC	Kilmacolm and Quarriers Village		2	0	1	31	1	0	4	10	4	4	0	4	5	20	3	82	174	11	14	1	5	1	1	0	1	379
IC	Inverclyde East		6	3	4	38	6	4	2	29	11	1	3	6	24	25	11	15	76	1,483	465	0	0	2	1	6	6	2,227
IC	Inverclyde West		8	3	8	36	1	0	0	29	12	3	3	2	19	13	4	25	13	444	1,072	1	5	3	5	2	6	1,717
NL	Airdrie and Coatbridge		7	13	15	106	37	22	213	78	11	28	5	0	6	16	5	7	1	1	5	4,259	219	268	36	225	48	5,631
NL	Cumbernauld		9	17	23	174	370	170	214	111	29	29	3	5	10	25	7	8	0	5	0	124	3,473	47	46	38	7	4,944
NL	Motherwell		8	9	11	94	23	30	157	87	34	58	5	3	8	25	4	8	1	7	0	283	69	4,736	81	817	245	6,803
SL	East Kilbride		6	7	20	121	21	6	58	361	355	216	18	3	8	33	12	6	1	5	5	20	28	53	4,052	321	55	5,791
SL	Hamilton		10	11	18	136	28	6	165	156	59	183	13	4	5	35	4	10	1	2	9	120	64	460	388	4,510	202	6,599
SL	Clydesdale		2	2	11	40	19	8	56	68	28	34	4	1	5	15	1	4	1	6	0	57	32	271	64	265	2,270	3,264
	TOTAL		2,531	1,965	3,118	13,183	4,347	1,552	5,822	14,118	5,217	3,502	1,177	934	1,338	4,698	1,350	1,716	460	2,124	1,804	5,300	5,111	6,344	5,676	7,280	3,318	103,985

TABLE 1B House-Buying Moves (2007-12) - Percentage Self-containment - Initial 25 LA Sub-Areas

	LA	LA Sub-Area	Origin-based Self-containment	Destination-based Self-containment
1	WD	Dumbarton and Vale of Leven	81.7	80.7
2	WD	Clydebank	67.3	62.9
3	ED	Bearsden and Milngavie	50.9	44.0
4	GC	Glasgow - North West	59.4	58.7
5	ED	Strathkelvin	63.0	57.0
6	GC	Glasgow - North East	34.4	37.6
7	GC	Glasgow - East	52.4	58.8
8	GC	Glasgow - South	58.0	57.6
9	ER	Eastwood	50.8	45.4
10	SL	Rutherglen and Cambuslang	49.0	58.3
11	ER	Levern Valley	54.8	53.4
12	RF	Johnstone and Elderslie	41.0	53.1
13	RF	North Renfrewshire	60.7	49.3
14	RF	Paisley and Linwood	60.4	64.5
15	RF	Renfrew	45.3	60.0
16	RF	West Renfrewshire	53.6	40.2
17	IC	Kilmacolm and Quarriers Village	45.9	37.8
18	IC	Inverclyde East	66.6	69.8
19	IC	Inverclyde West	62.4	59.4
20	NL	Airdrie and Coatbridge	75.6	80.4
21	NL	Cumbernauld	70.2	68.0
22	NL	Motherwell	69.6	74.7
23	SL	East Kilbride	70.0	71.4
24	SL	Hamilton	68.3	62.0
25	SL	Clydesdale	69.5	68.4

TABLE 2A Matrix of House-Buying Moves (2007-12) - Iteration 1 - 15 Areas

	Origin Area	Dumbarton and Vale of Leven	Clydebank	Glasgow NW + Bearsden&Milngavie	Strathkelvin	Glasgow North East	Glasgow East	Glasgow South + Eastwood + Rutherglen/Cambuslang	Renfrewshire	Inverclyde	Airdrie and Coatbridge	Cumbernauld	Motherwell	East Kilbride	Hamilton	Clydesdale	TOTAL
Destination Area																	
Dumbarton and Vale of Leven		2,042	138	121	18	7	8	59	47	16	3	14	9	8	6	2	2,498
Clydebank		81	1,236	358	14	2	14	50	43	3	3	13	4	5	8	2	1,836
Glasgow NW + Bearsden&Milngavie		172	329	10,878	522	165	357	1,459	602	101	110	311	110	187	242	190	15,735
Strathkelvin		15	14	495	2,477	217	120	178	45	7	28	261	13	18	28	14	3,930
Glasgow North East		7	6	253	358	583	164	132	25	5	21	81	17	14	22	5	1,693
Glasgow East		35	29	686	185	175	3,426	741	144	37	157	258	143	76	346	106	6,544
Glasgow South + Eastwood + Rutherglen/Cambuslang		69	67	2,087	202	122	789	16,802	1,007	91	88	219	168	634	379	134	22,858
Renfrewshire		54	81	568	66	35	79	1,406	9,185	159	26	64	40	61	65	26	11,915
Inverclyde		14	6	86	7	4	2	85	239	3,464	1	5	5	6	8	12	3,944
Airdrie and Coatbridge		7	13	121	37	22	213	117	40	6	4,259	219	268	36	225	48	5,631
Cumbernauld		9	17	197	370	170	214	169	58	5	124	3,473	47	46	38	7	4,944
Motherwell		8	9	105	23	30	157	179	54	7	283	69	4,736	81	817	245	6,803
East Kilbride		6	7	141	21	6	58	932	81	10	20	28	53	4,052	321	55	5,791
Hamilton		10	11	154	28	6	165	398	72	11	120	64	460	388	4,510	202	6,599
Clydesdale		2	2	51	19	8	56	130	31	6	57	32	271	64	265	2,270	3,264
TOTAL		2,531	1,965	16,301	4,347	1,552	5,822	22,837	11,673	3,928	5,300	5,111	6,344	5,676	7,280	3,318	103,985

TABLE 2B House-Buying Moves (2007-12) - Percentage Self-containment - Iteration 1 - 15 Areas

	LA Sub-Area	Revised name of merged areas	Origin-based Self-containment	Destination-based Self-containment
1	Dumbarton and Vale of Leven		81.7	80.7
2	Clydebank		67.3	62.9
3	Bearsden and Milngavie	Greater Glasgow North West	69.1	66.7
	Glasgow North West			
4	Strathkelvin		63.0	57.0
5	Glasgow - North East		34.4	37.6
6	Glasgow - East		52.4	58.8
7	Glasgow - South	Greater Glasgow South	73.5	73.6
	Eastwood			
	Rutherglen and Cambuslang			
8	Levern Valley	Renfrewshire	77.1	78.7
	Johnstone and Elderslie			
	North Renfrewshire			
	Paisley and Linwood			
	Renfrew			
	West Renfrewshire			
	Kilmacolm and Quarriers Village			
9	Inverclyde East	Inverclyde	87.8	88.2
	Inverclyde West			
10	Airdrie and Coatbridge		75.6	80.4
11	Cumbernauld		70.2	68.0
12	Motherwell		69.6	74.7
13	East Kilbride		70.0	71.4
14	Hamilton		68.3	62.0
15	Clydesdale		69.5	68.4

TABLE 3A Matrix of House-Buying Moves (2007-12) - Iteration 2 - Finalised Building Blocks - 13 Areas

	Origin Area	Dumbarton and Vale of Leven	Greater Glasgow North West + Clydebank	Glasgow North East + Strathkelvin	Glasgow East	Greater Glasgow South	Renfrewshire	Inverclyde	Airdrie and Coatbridge	Cumbernauld	Motherwell	East Kilbride	Hamilton	Clydesdale	TOTAL
Destination Area															
Dumbarton and Vale of Leven		2,042	259	25	8	59	47	16	3	14	9	8	6	2	2,498
Greater Glasgow North West + Clydebank		253	12,801	703	371	1,509	645	104	113	324	114	192	250	192	17,571
Glasgow North East & Strathkelvin		22	768	3,635	284	310	70	12	49	342	30	32	50	19	5,623
Glasgow East		35	715	360	3,426	741	144	37	157	258	143	76	346	106	6,544
Greater Glasgow South		69	2,154	324	789	16,802	1,007	91	88	219	168	634	379	134	22,858
Renfrewshire		54	649	101	79	1,406	9,185	159	26	64	40	61	65	26	11,915
Inverclyde		14	92	11	2	85	239	3,464	1	5	5	6	8	12	3,944
Airdrie and Coatbridge		7	134	59	213	117	40	6	4,259	219	268	36	225	48	5,631
Cumbernauld		9	214	540	214	169	58	5	124	3,473	47	46	38	7	4,944
Motherwell		8	114	53	157	179	54	7	283	69	4,736	81	817	245	6,803
East Kilbride		6	148	27	58	932	81	10	20	28	53	4,052	321	55	5,791
Hamilton		10	165	34	165	398	72	11	120	64	460	388	4,510	202	6,599
Clydesdale		2	53	27	56	130	31	6	57	32	271	64	265	2,270	3,264
TOTAL		2,531	18,266	5,899	5,822	22,837	11,673	3,928	5,300	5,111	6,344	5,676	7,280	3,318	103,985

TABLE 3B House-Buying Moves (2007-12) - Percentage Self-containment - Iteration 2 - Finalised Building Blocks - 13 Areas

	LA Sub-Area	Revised name of merged areas	Origin-based Self-containment	Destination-based Self-containment
1	Dumbarton and Vale of Leven		81.7	80.7
2	Clydebank	Greater Glasgow North West	72.9	70.1
	Bearsden & Milngavie			
	Glasgow - North West			
3	Strathkelvin	Strathkelvin and Glasgow North East	64.6	61.6
	Glasgow - North East			
4	Glasgow - East		52.4	58.8
5	Glasgow - South	Greater Glasgow South	73.5	73.6
	Eastwood			
	Rutherglen & Cambuslang			
6	Levern Valley	Renfrewshire	77.1	78.7
	Johnstone and Elderslie			
	North Renfrewshire			
	Paisley and Linwood			
	Renfrew			
	West Renfrewshire			
	Kilmacolm and Quarriers Village			
7	Inverclyde East	Inverclyde	87.8	88.2
	Inverclyde West			
8	Airdrie and Coatbridge		75.6	80.4
9	Cumbernauld		70.2	68.0
10	Motherwell		69.6	74.7
11	East Kilbride		70.0	71.4
12	Hamilton		68.3	62.0
13	Clydesdale		69.5	68.4

TABLE 4 Percentage Self-Containment in the 13 HMA Building Blocks - Comparison with previous analyses

		2007-12 Data		**2002-08 Data**		**1996-2002 Data**		**1988-97 Data**	
	Housing Market Area Building Blocks	Origin-based self-containment	Destination-based self-containment	Origin-based self-containment	Destination-based self-containment	Origin-based self-containment	Destination-based self-containment	Origin-based self-containment	Destination-based self-containment
1	Inverclyde	87.8	88.2	87.7	90.0	91.8	90.1	92.1	90.4
2	Dumbarton and Vale of Leven	81.7	80.7	81.6	85.9	83.9	86.4	85.2	86.2
3	Airdrie and Coatbridge	75.6	80.4	74.2	80.6	80.4	83.1	84.4	77.7
4	Renfrewshire	77.1	78.7	76.7	81.4	78.6	85.0	79.7	86.2
5	Greater Glasgow South	73.5	73.6	74.7	72.4	74.6	76.4	78.9	77.4
6	Motherwell	69.6	74.7	69.4	75.2	74.7	76.1	73.6	75.5
7	Greater Glasgow North West	72.9	70.1	75.1	68.2	81.0	69.2	80.3	72.7
8	East Kilbride	70.0	71.4	73.2	71.7	72.7	79.3	71.1	79.2
9	Cumbernauld	70.2	68.0	68.2	72.5	65.6	80.6	67.7	80.1
10	Clydesdale	69.5	68.4	68.9	70.7	72.3	75.1	69.5	77.5
11	Hamilton	68.3	62.0	64.6	67.8	69.3	71.3	70.4	73.5
12	Strathkelvin and Glasgow North East	64.6	61.6	66.7	60.0	66.4	64.8	68.5	67.1
13	Glasgow East	52.4	58.8	55.5	59.5	66.6	61.7	70.2	68.1

TABLE 5A 2007-2012 SASINES Percentage self-containment and linkages - Destination-based

Destination \ Origin	Dumbarton and Vale of Leven	Greater Glasgow North West	Strathkelvin and Glasgow North East	Glasgow East	Greater Glasgow South	Renfrewshire	Inverclyde	Airdrie and Coatbridge	Cumbernauld	Motherwell	Clydesdale	East Kilbride	Hamilton
Dumbarton and Vale of Leven	80.7	1.4	0.4	0.1	0.3	0.4	0.4	0.1	0.3	0.1	0.1	0.1	0.1
Greater Glasgow North West	10.0	70.1	11.9	6.4	6.6	5.5	2.6	2.1	6.3	1.8	5.8	3.4	3.4
Strathkelvin and Glasgow North East	0.9	4.2	61.6	4.9	1.4	0.6	0.3	0.9	6.7	0.5	0.6	0.6	0.7
Glasgow East	1.4	3.9	6.1	58.8	3.2	1.2	0.9	3.0	5.0	2.3	3.2	1.3	4.8
Greater Glasgow South	2.7	11.8	5.5	13.6	73.6	8.6	2.3	1.7	4.3	2.6	4.0	11.2	5.2
Renfrewshire	2.1	3.6	1.7	1.4	6.2	78.7	4.0	0.5	1.3	0.6	0.8	1.1	0.9
Inverclyde	0.6	0.5	0.2	0.0	0.4	2.0	88.2	0.0	0.1	0.1	0.4	0.1	0.1
Airdrie and Coatbridge	0.3	0.7	1.0	3.7	0.5	0.3	0.2	80.4	4.3	4.2	1.4	0.6	3.1
Cumbernauld	0.4	1.2	9.2	3.7	0.7	0.5	0.1	2.3	68.0	0.7	0.2	0.8	0.5
Motherwell	0.3	0.6	0.9	2.7	0.8	0.5	0.2	5.3	1.4	74.7	7.4	1.4	11.2
Clydesdale	0.1	0.3	0.5	1.0	0.6	0.3	0.2	1.1	0.6	4.3	68.4	1.1	3.6
East Kilbride	0.2	0.8	0.5	1.0	4.1	0.7	0.3	0.4	0.5	0.8	1.7	71.4	4.4
Hamilton	0.4	0.9	0.6	2.8	1.7	0.6	0.3	2.3	1.3	7.3	6.1	6.8	62.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 5B 2007-2012 SASINES Percentage self-containment and linkages - Origin-based

	Origin	Dumbarton and Vale of Leven	Greater Glasgow North West	Strathkelvin and Glasgow North East	Glasgow East	Greater Glasgow South	Renfrewshire	Inverclyde	Airdrie and Coatbridge	Cumbernauld	Motherwell	Clydesdale	East Kilbride	Hamilton	Total
Destination															
Dumbarton and Vale of Leven		81.7	10.4	1.0	0.3	2.4	1.9	0.6	0.1	0.6	0.4	0.1	0.3	0.2	100.0
Greater Glasgow North West		1.4	72.9	4.0	2.1	8.6	3.7	0.6	0.6	1.8	0.6	1.1	1.1	1.4	100.0
Strathkelvin and Glasgow North East		0.4	13.7	64.6	5.1	5.5	1.2	0.2	0.9	6.1	0.5	0.3	0.6	0.9	100.0
Glasgow East		0.5	10.9	5.5	52.4	11.3	2.2	0.6	2.4	3.9	2.2	1.6	1.2	5.3	100.0
Greater Glasgow South		0.3	9.4	1.4	3.5	73.5	4.4	0.4	0.4	1.0	0.7	0.6	2.8	1.7	100.0
Renfrewshire		0.5	5.4	0.8	0.7	11.8	77.1	1.3	0.2	0.5	0.3	0.2	0.5	0.5	100.0
Inverclyde		0.4	2.3	0.3	0.1	2.2	6.1	87.8	0.0	0.1	0.1	0.3	0.2	0.2	100.0
Airdrie and Coatbridge		0.1	2.4	1.0	3.8	2.1	0.7	0.1	75.6	3.9	4.8	0.9	0.6	4.0	100.0
Cumbernauld		0.2	4.3	10.9	4.3	3.4	1.2	0.1	2.5	70.2	1.0	0.1	0.9	0.8	100.0
Motherwell		0.1	1.7	0.8	2.3	2.6	0.8	0.1	4.2	1.0	69.6	3.6	1.2	12.0	100.0
Clydesdale		0.1	1.6	0.8	1.7	4.0	0.9	0.2	1.7	1.0	8.3	69.5	2.0	8.1	100.0
East Kilbride		0.1	2.6	0.5	1.0	16.1	1.4	0.2	0.3	0.5	0.9	0.9	70.0	5.5	100.0
Hamilton		0.2	2.5	0.5	2.5	6.0	1.1	0.2	1.8	1.0	7.0	3.1	5.9	68.3	100.0

TABLE 5C Identification of pairings where both measures of self-containment increase when areas are merged - expressed as the sum of the increases in self-containment

		1	2	3	5	4	6	7	8	9	10	11	12	13
		Dumbarton and Vale of Leven	Greater Glasgow North West	Strathkelvin and Glasgow North East	Glasgow East	Greater Glasgow South	Renfrewshire	Inverclyde	Airdrie and Coatbridge	Cumbernauld	Motherwell	Clydesdale	East Kilbride	Hamilton
1	Dumbarton and Vale of Leven													
2	Greater Glasgow North West			8.4		16.1				3.7		1.5	1.2	
3	Strathkelvin and Glasgow North East									10.0				
4	Glasgow East					2.8								
5	Greater Glasgow South						8.2			1.2	0.6	0.9	9.8	
6	Renfrewshire													
7	Inverclyde													
8	Airdrie and Coatbridge										2.8			
9	Cumbernauld											0.4		
10	Motherwell											8.3		11.5
11	Clydesdale												1.4	
12	East Kilbride													5.0
13	Hamilton													

TABLE 6 Testing of linkages for Renfrewshire, East Kilbride, Airdrie and Coatbridge and Clydesdale

Matrix (a) : House-Buying Moves 2007-12

Destination Area	Origin Area: Dumbarton and Vale of Leven	Inverclyde	Central Conurbation HMA	Renfrewshire	East Kilbride	Eastern Conurbation HMA	Airdrie and Coatbridge	Clydesdale	Total
Dumbarton and Vale of Leven	2042	16	365	47	8	15	3	2	2,498
Inverclyde	14	3464	195	239	6	13	1	12	3,944
Central Conurbation HMA	388	249	51445	1924	980	1565	531	458	57,540
Renfrew shire	54	159	2299	9185	61	105	26	26	11,915
East Kilbride	6	10	1193	81	4052	374	20	55	5,791
Eastern Conurbation HMA	18	18	1398	126	469	10523	403	447	13,402
Airdrie and Coatbridge	7	6	742	40	36	493	4259	48	5,631
Clydesdale	2	6	298	31	64	536	57	2270	3,264
	2,531	3,928	57,935	11,673	5,676	13,624	5,300	3,318	103,985

Matrix (b) : Origin-Based Analysis of Self-Containment and Linkages (%

Destination Area	Origin Area: Dumbarton and Vale of Leven	Inverclyde	Central Conurbation HMA	Renfrewshire	East Kilbride	Eastern Conurbation HMA	Airdrie and Coatbridge	Clydesdale	Total
Dumbarton and Vale of Leven	81.7	0.6	14.6	1.9	0.3	0.6	0.1	0.1	100.00
Inverclyde	0.4	87.8	4.9	6.1	0.2	0.3	0.0	0.3	100.00
Central Conurbation HMA	0.7	0.4	89.4	3.3	1.7	2.7	0.9	0.8	100.00
Renfrew shire	0.5	1.3	19.3	77.1	0.5	0.9	0.2	0.2	100.00
East Kilbride	0.1	0.2	20.6	1.4	70.0	6.5	0.3	0.9	100.00
Eastern Conurbation HMA	0.1	0.1	10.4	0.9	3.5	78.5	3.0	3.3	100.00
Airdrie and Coatbridge	0.1	0.1	13.2	0.7	0.6	8.8	75.6	0.9	100.00
Clydesdale	0.1	0.2	9.1	0.9	2.0	16.4	1.7	69.5	100.00

Matrix (c) : Destination-Based Analysis of Self-Containment and Linkages (%)

Destination Area	Origin Area: Dumbarton and Vale of Leven	Inverclyde	Central Conurbation HMA	Renfrewshire	East Kilbride	Eastern Conurbation HMA	Airdrie and Coatbridge	Clydesdale
Dumbarton and Vale of Leven	80.7	0.4	0.6	0.4	0.1	0.1	0.1	0.1
Inverclyde	0.6	88.2	0.3	2.0	0.1	0.1	0.0	0.4
Central Conurbation HMA	15.3	6.3	88.8	16.5	17.3	11.5	10.0	13.8
Renfrew shire	2.1	4.0	4.0	78.7	1.1	0.8	0.5	0.8
East Kilbride	0.2	0.3	2.1	0.7	71.4	2.7	0.4	1.7
Eastern Conurbation HMA	0.7	0.5	2.4	1.1	8.3	77.2	7.6	13.5
Airdrie and Coatbridge	0.3	0.2	1.3	0.3	0.6	3.6	80.4	1.4
Clydesdale	0.1	0.2	0.5	0.3	1.1	3.9	1.1	68.4
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Matrix (d) : Testing for Significant Linkages

	Dumbarton and Vale of Leven	Inverclyde	Central Conurbation HMA	Renfrewshire	East Kilbride	Eastern Conurbation HMA	Airdrie and Coatbridge	Clydesdale
Dumbarton and Vale of Leven			1.8					
Inverclyde			1.3					
Central Conurbation HMA				8.3	3.5	4.1	2.1	0.3
Renfrew shire						0.4		
East Kilbride						4.5		1.4
Eastern Conurbation HMA							6.3	8.2
Airdrie and Coatbridge								
Clydesdale								

TABLE 7 Further testing of linkages for East Kilbride

Matrix (a) : House-Buying Moves 2007-12

Destination Area	Origin Area: Dumbarton and Vale of Leven	Inverclyde	Central Conurbation HMA	East Kilbride	Eastern Conurbation HMA	Total
Dumbarton and Vale of Leven	2042	16	412	8	20	2,498
Inverclyde	14	3464	434	6	26	3,944
Central Conurbation HMA	442	408	64853	1041	2711	69,455
East Kilbride	6	10	1274	4052	449	5,791
Eastern Conurbation HMA	27	30	2635	569	19036	22,297
	2,531	3,928	69,608	5,676	22,242	103,985

Matrix (b) : Origin-Based Analysis of Self-Containment and Linkages (%)

Destination Area	Origin Area: Dumbarton and Vale of Leven	Inverclyde	Central Conurbation HMA	East Kilbride	Eastern Conurbation HMA	Total
Dumbarton and Vale of Leven	81.7	0.6	16.5	0.3	0.8	100.00
Inverclyde	0.4	87.8	11.0	0.2	0.7	100.00
Central Conurbation HMA	0.6	0.6	93.4	1.5	3.9	100.00
East Kilbride	0.1	0.2	22.0	70.0	7.8	100.00
Eastern Conurbation HMA	0.1	0.1	11.8	2.6	85.4	100.00

Matrix (c) : Destination-Based Analysis of Self-Containment and Linkages (%)

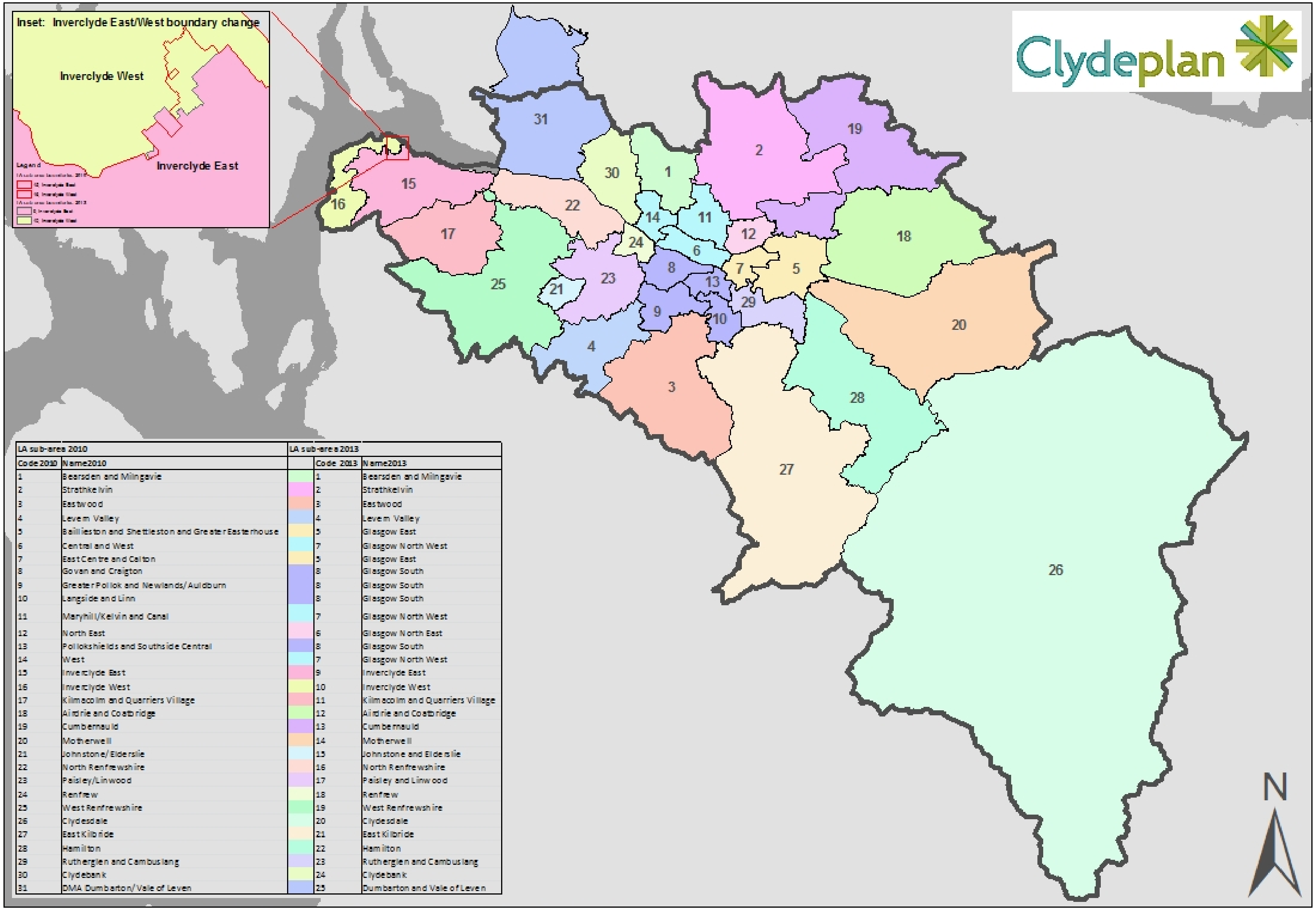
Destination Area	Origin Area: Dumbarton and Vale of Leven	Inverclyde	Central Conurbation HMA	East Kilbride	Eastern Conurbation HMA
Dumbarton and Vale of Leven	80.7	0.4	0.6	0.1	0.1
Inverclyde	0.6	88.2	0.6	0.1	0.1
Central Conurbation HMA	17.5	10.4	93.2	18.3	12.2
East Kilbride	0.2	0.3	1.8	71.4	2.0
Eastern Conurbation HMA	1.1	0.8	3.8	10.0	85.6
	100.00	100.00	100.00	100.00	100.00

Matrix (d) : Testing for Significant Linkages

	Dumbarton and Vale of Leven	Inverclyde	Central Conurbation HMA	East Kilbride	Eastern Conurbation HMA
Dumbarton and Vale of Leven			1.5		
Inverclyde			1.7		
Central Conurbation HMA				2.7	7.9
East Kilbride					1.2
Eastern Conurbation HMA					

Figures

Figure 1 Local Authority Sub-Areas 2009 and 2013



LA sub-area 2010			LA sub-area 2013	
Code 2010	Name2010		Code 2013	Name2013
1	Bearsden and Milngavie		1	Bearsden and Milngavie
2	Strathkelvin		2	Strathkelvin
3	Eastwood		3	Eastwood
4	Levem Valley		4	Levem Valley
5	Baillieston and Shettleston and Greater Easterhouse		5	Glasgow East
6	Central and West		7	Glasgow North West
7	East Centre and Calton		5	Glasgow East
8	Govan and Craigton		8	Glasgow South
9	Greater Pollok and Newlands/Auldburn		8	Glasgow South
10	Langside and Linn		8	Glasgow South
11	Maryhill/Kelvin and Canal		7	Glasgow North West
12	North East		6	Glasgow North East
13	Pollokshields and Southside Central		8	Glasgow South
14	West		7	Glasgow North West
15	Inverclyde East		9	Inverclyde East
16	Inverclyde West		10	Inverclyde West
17	Kilmacolm and Quarriers Village		11	Kilmacolm and Quarriers Village
18	Airdrie and Coatbridge		12	Airdrie and Coatbridge
19	Cumbernauld		13	Cumbernauld
20	Motherwell		14	Motherwell
21	Johnstone/Elderslie		15	Johnstone and Elderslie
22	North Renfrewshire		16	North Renfrewshire
23	Paisley/Linwood		17	Paisley and Linwood
24	Renfrew		18	Renfrew
25	West Renfrewshire		19	West Renfrewshire
26	Clydesdale		20	Clydesdale
27	East Kilbride		21	East Kilbride
28	Hamilton		22	Hamilton
29	Rutherglen and Cambuslang		23	Rutherglen and Cambuslang
30	Clydebank		24	Clydebank
31	DMA Dumbarton/Vale of Leven		25	Dumbarton and Vale of Leven

Figure 2 Local Authority Sub-Areas 2013 and Audit Areas 2009

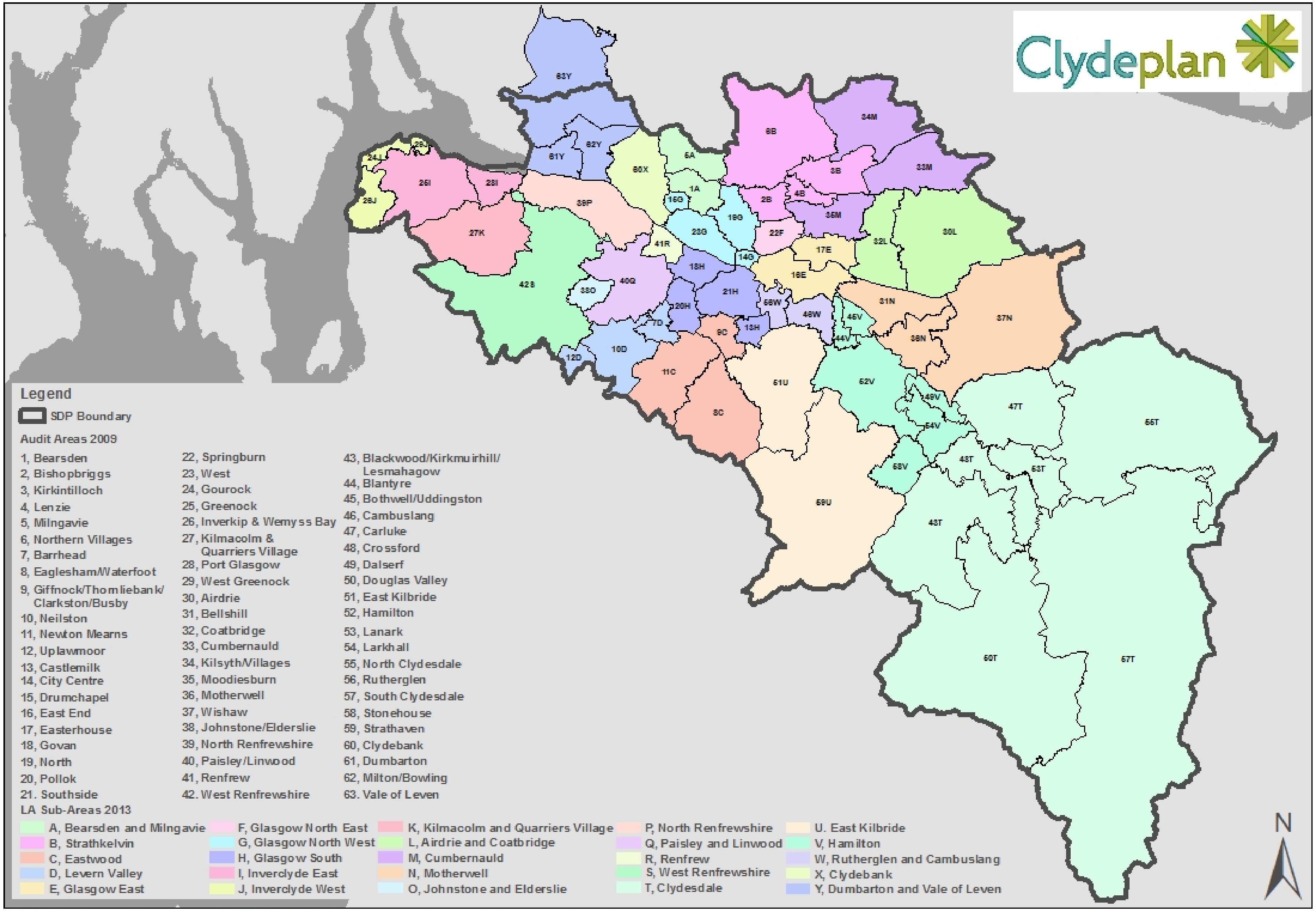


Figure 3 Local Authority Sub-Areas 2013 - Datazone Best-Fit

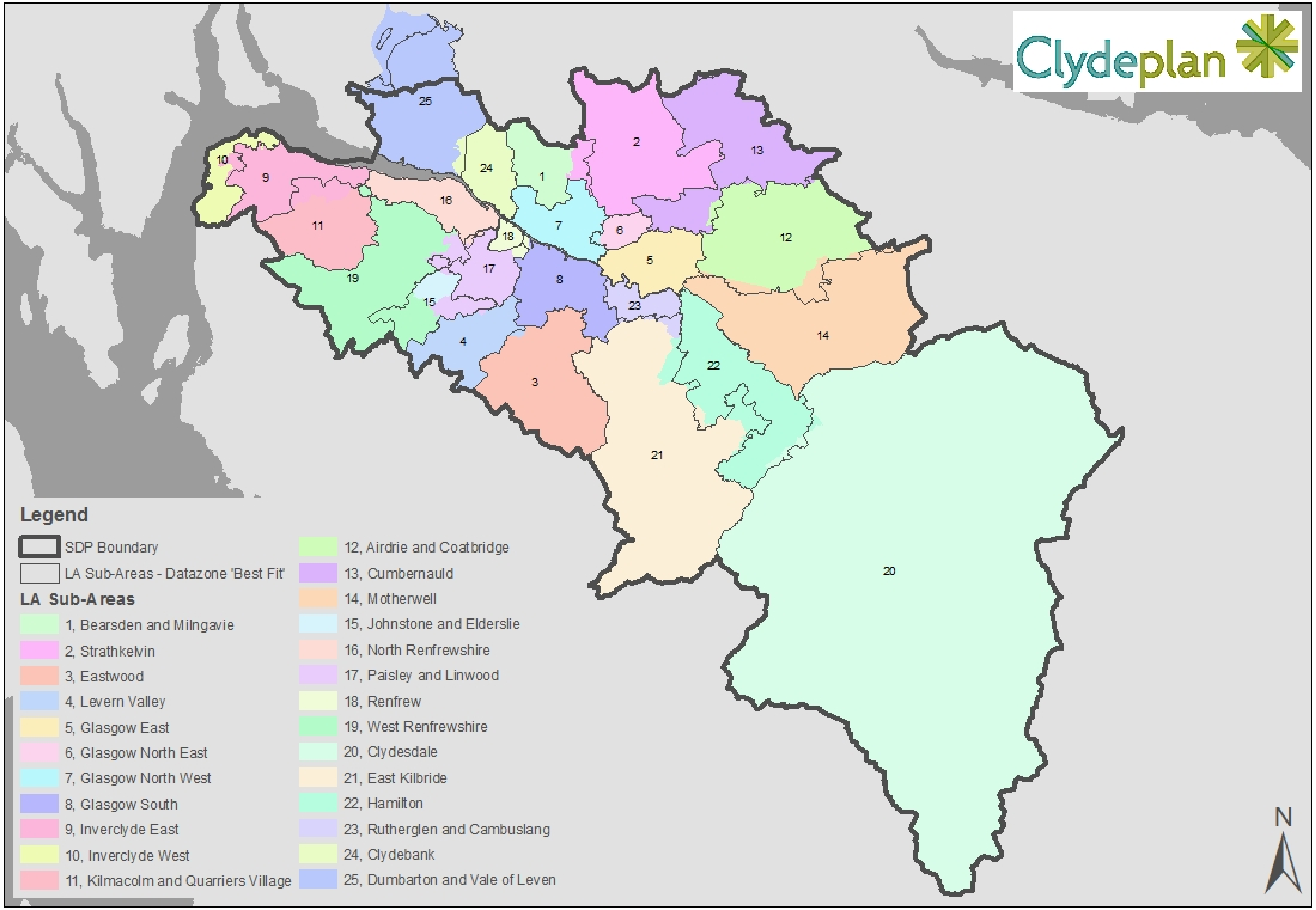


Figure 4 Private Sector Housing Market Area Framework 2013

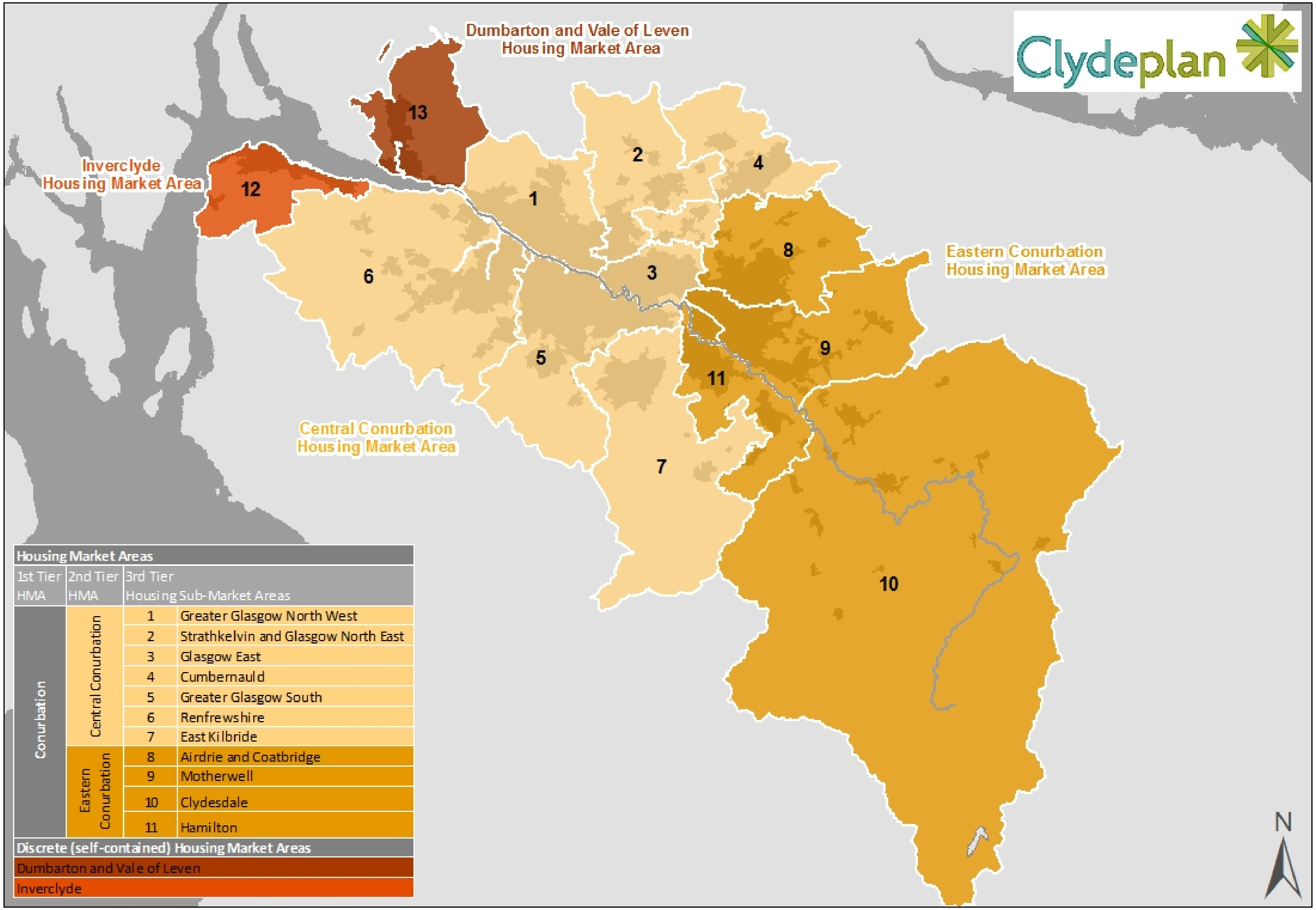
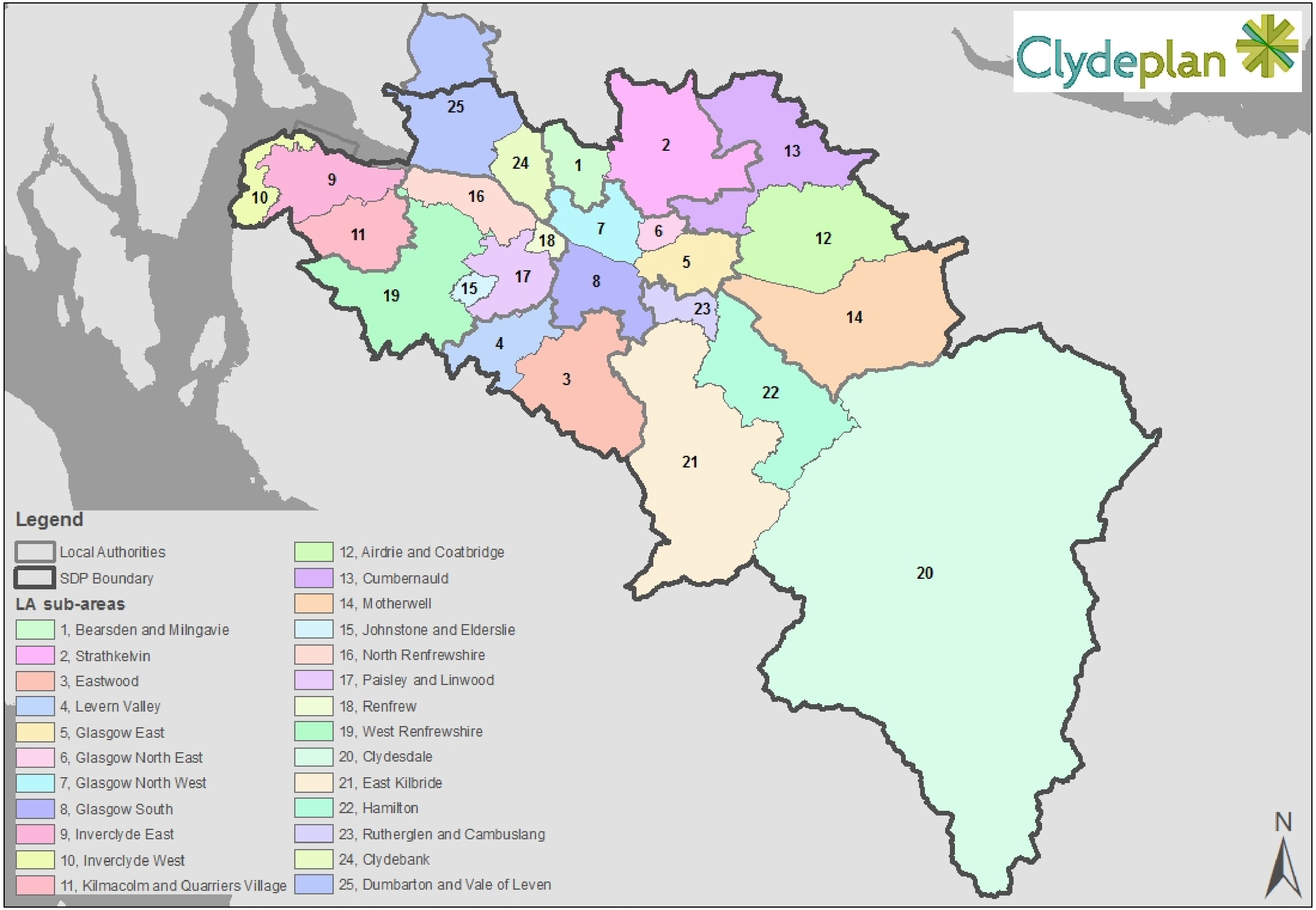


Figure 5 SR&BMR Sector - Local Authority Sub-Areas 2013 and LA boundaries



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