

Commuting in and around Wales

Final Report

The National Assembly for Wales

Commuting in and around Wales

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Introduction

In May 2006 the National Assembly for Wales commissioned Experian Business Strategies to look at commuting patterns in and around Wales. The aim of this analysis is to help the Assembly understand the drivers of commuter flows and predict how these may change in the years ahead. The key objective of this work is to analyse current, as well as future, commuting patterns into, out of and within Wales – specifically, the number of commuters travelling to and from Welsh districts, as well as those from English districts bordering Wales.

The key output of this research is the accompanying Excel database. In addition, this report provides an overview of some of the key findings arising from the data analysis. The analysis in this report looks at both the gross commuting flows in and around Wales and also at some of the characteristics of these commuters, more specifically, age, gender and occupation. The analysis utilises Mosaic, Experian's consumer segmentation system, and Mosaic Daytime, to compare changes in the socio-economic profile of areas in Wales that occur daily due to commuting activity. We also highlight some of the policy implications stemming from the findings of this analysis.

1 Gross commuting flows

1.1 COMMUTING FLOWS

The 2001 Census contains origin-destination data which captures the flows between where people work and where they live. Unless stated otherwise, the analysis in this report refers to the 2001 Census only. We have used the 2001 Census data in preference to the Annual Population Survey as the Census data provides information about the demographic characteristics of individuals.

- In 2001, 1,186,000 Welsh residents are in employment, of which 1,117,000 (94 per cent) work in Wales.
- In total 1,153,000 people are in employment in Wales, of which 3 per cent are in-commuters from areas outside of Wales.
- In total, around 69,000 people leave Wales to work while approximately half this number (36,000 people) move in the opposite direction and commute into Wales to work.

1.1.1 Commuting into Wales

- Intuitively, the largest flows of commuters into Wales are from districts and unitary authorities that share their borders with Wales. Figure 1 shows that the districts with the highest number of commuters into Wales are all in close proximity to the border. Chester accounts for the largest share, accounting for 0.5 per cent of the total Welsh workforce, or 17% of all in-commuters.
- Only a small proportion of in-commuters into Wales travel beyond the bordering English districts although there are flows from English cities such as Birmingham, Manchester and Liverpool.

Figure 1: England-based in-commuters to Wales by LAD, 2001

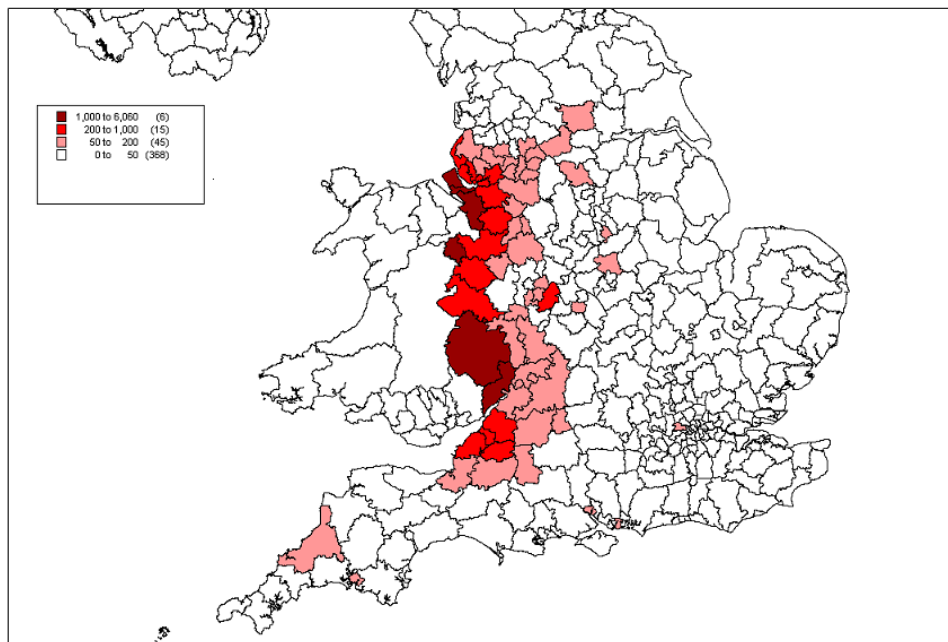


Table 1: Wales in-commuters by residence, 2001

Unitary Authority Districts	Number	Share of commuters
Chester	6,060	17.1%
Ellesmere Port & Neston	3,040	8.6%
Wirral	2,990	8.4%
Forest of Dean	2,420	6.8%
Oswestry	2,010	5.7%
Herefordshire	1,860	5.2%
Bristol, City of	810	2.3%
North Shropshire	770	2.2%
South Gloucestershire	640	1.8%
Vale Royal	630	1.8%
Liverpool	630	1.8%
Shrewsbury & Atcham	540	1.5%
South Shropshire	530	1.5%
Other	12,590	35.4%
Total	35,520	100.0%

Source: Census 2001.

1.1.2 Commuting out of Wales

- Over 68,800 people travel out of Wales to work, of which one-fifth work in Chester.
- Of the commuters that travel to Chester, the majority are from the districts bordering Chester, Flintshire and Wrexham.
- Aside from Chester, Bristol draws the largest number of out-commuters from Wales, followed by destinations outside the UK.
- There is noticeably a wider range of out commuting destinations than witnessed for commuting into Wales with districts in Wiltshire, Oxfordshire and Greater London benefiting.

Table 2: Wales out-commuting by destination

Unitary Authority Districts	Number	Share of commuters
Chester	13,920	20.2%
Bristol, City of	3,970	5.8%
Outside the UK	3,200	4.6%
South Gloucestershire	2,940	4.3%
Ellesmere Port & Neston	2,540	3.7%
Herefordshire	2,160	3.1%
Oswestry	2,100	3.1%
Wirral	1,690	2.5%
Liverpool	1,430	2.1%
Shrewsbury & Atcham	1,320	1.9%
Forest of Dean	1,140	1.7%
Manchester	1,000	1.5%
North Shropshire	950	1.4%
Other	30,460	44.3%
Total	68,820	100.0%

Source: Census 2001

Figure 2: Wales out-commuters to England by LAUA, 2001

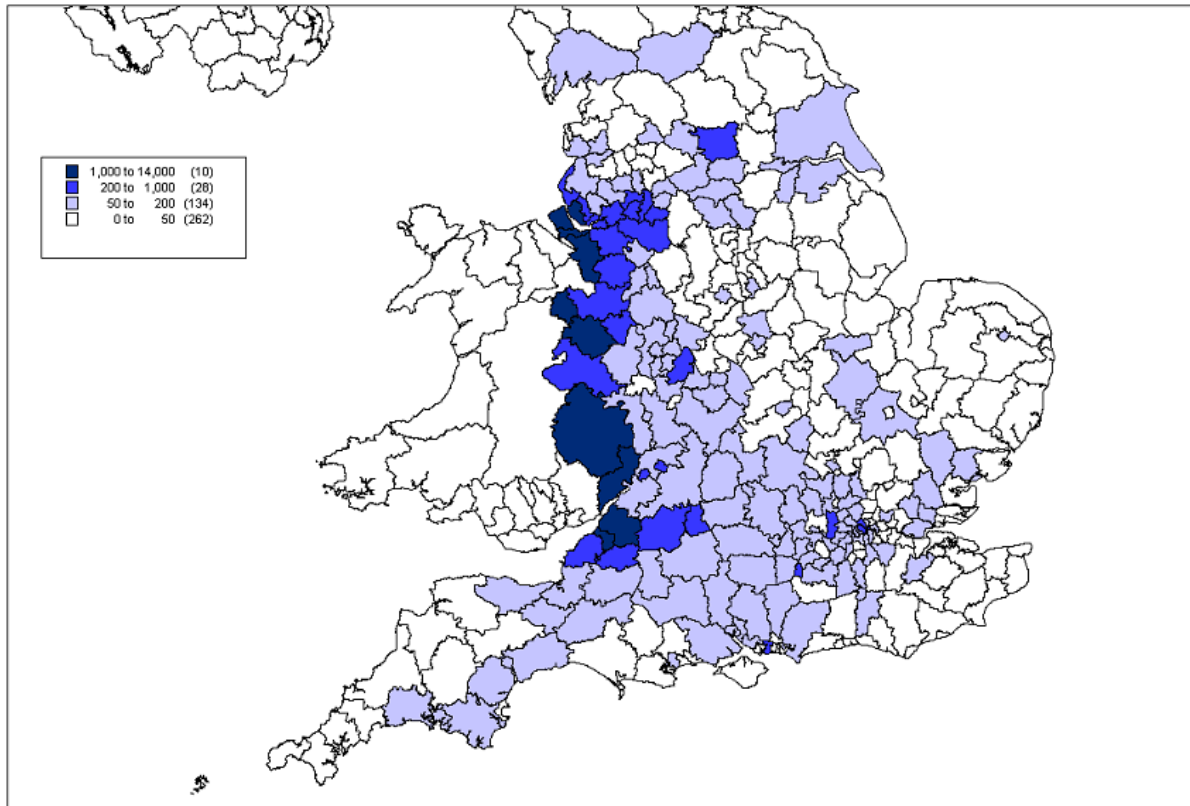
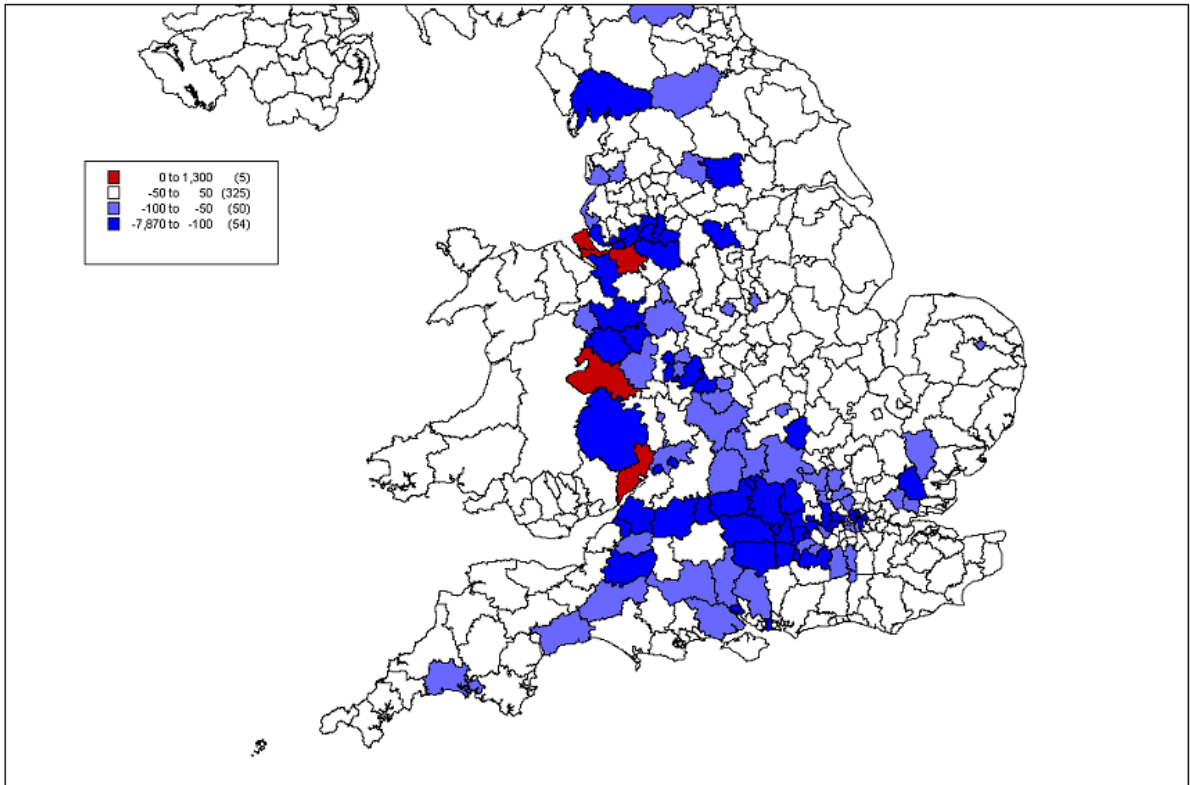


Figure 3: Net commuters (English in-commuters – Wales out-commuters) by LAUA, 2001



In figure 3, the red areas represent districts with more commuters coming from England than moving in the opposite direction (e.g. the Wirral has 2,990 residents working in Wales and 1,690 Welsh residents travelling to work in the Wirral). The blue areas are those with more commuters leaving Wales than coming in the opposite direction (e.g. over 6,000 Chester residents work in Wales but 13,920 Welsh residents work in Chester). There are noticeable dark blue areas in the North West of England and a corridor of dark blue stretching from South East Wales through to London.

1.1.3 Commuting within Wales

- There are approximately 260,000 commuters within Wales, defined as someone who lives and works in a different Welsh district.
- Cardiff is the largest single employer in Wales and this is reflected in the flows between districts in the country. Over 59,500 people commute into Cardiff from other parts of Wales, of which 28 per cent live in The Vale of Glamorgan, 24 per cent live in Rhondda, Cynon, Taff.
- Caerphilly has the highest level of net out-commuting, with over 15,500 more people leaving the district to other districts in Wales than flow in the opposite direction.

Table 3: Inflows and outflows of commuters within Wales 2001

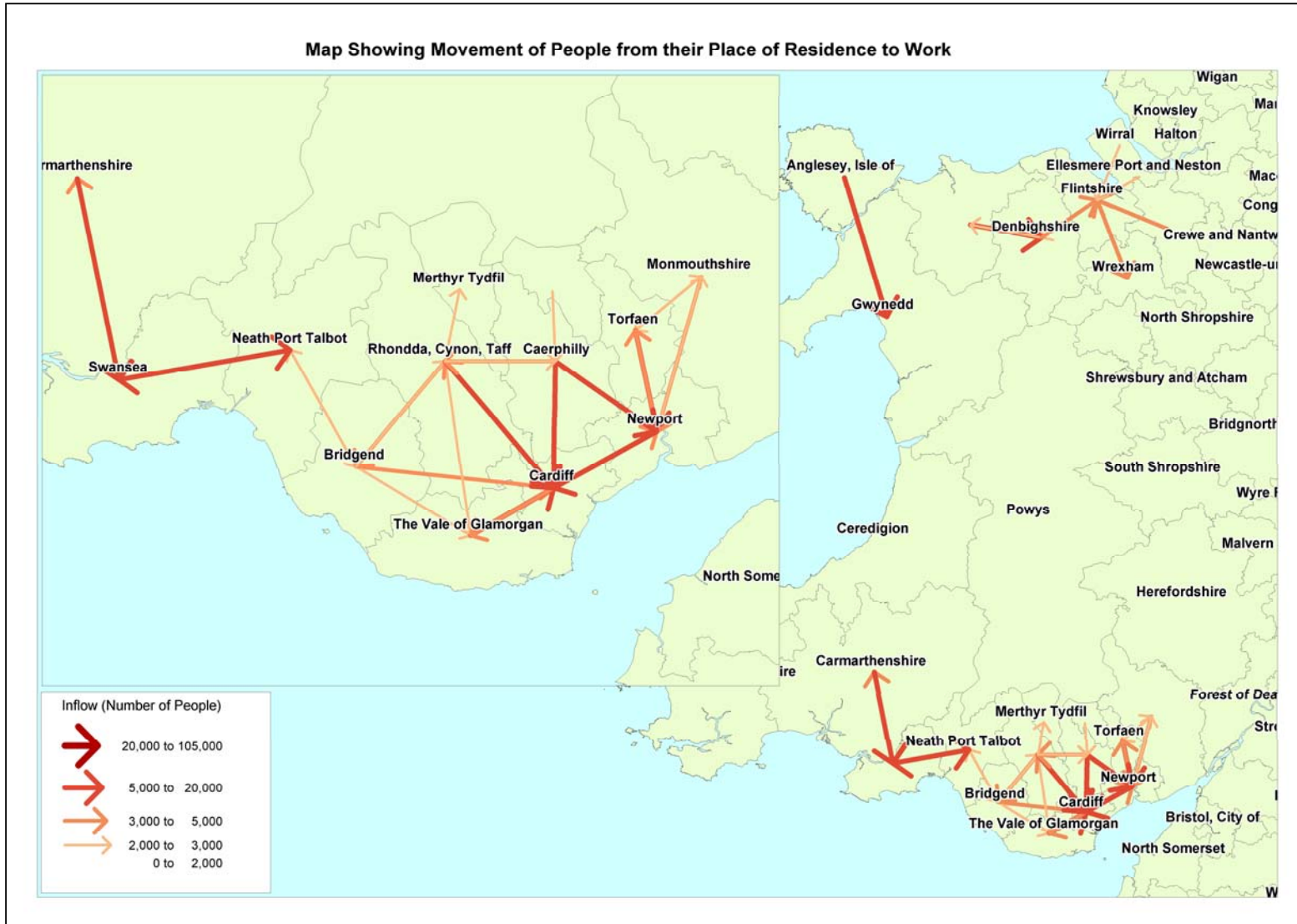
Unitary Authority Districts	Inflow	Outflow	Net In-commuting ¹
Cardiff	59,550	21,210	38,340
Newport	28,070	13,630	14,440
Swansea	21,640	13,970	7,670
Gwynedd	7,870	4,260	3,610
Wrexham	6,590	4,570	2,020
Denbighshire	9,100	7,870	1,220
Flintshire	7,650	7,510	140
Ceredigion	3,180	3,060	120
Merthyr Tydfil	5,830	6,630	-800
Bridgend	12,440	13,560	-1,120
Powys	3,300	4,450	-1,150
Monmouthshire	8,800	10,180	-1,370
Pembrokeshire	1,860	3,310	-1,450
Torfaen	10,020	12,120	-2,100
Conwy	5,220	8,530	-3,310
Anglesey, Isle of	2,200	5,980	-3,780
Blaenau Gwent	4,800	8,590	-3,790
Carmarthenshire	8,560	12,780	-4,220
Neath Port Talbot	12,140	17,540	-5,400
The Vale of Glamorgan	12,330	22,250	-9,920
Rhondda, Cynon, Taff	15,660	29,090	-13,430
Caerphilly	12,570	28,300	-15,730
Wales	259,370	259,370	0

Source: Census 2001.

¹ Figures are for commuting within Wales only and do not include England

The map below shows the movement of people from their place of residence to their place of work for Welsh Unitary Authority Districts. To avoid cluttering the map, only movements greater than 2,000 are shown. There are four major flows identified:

1. Flows into and out of Cardiff and Newport and the surrounding districts.
2. Flows between Carmarthenshire and Swansea and Neath Port Talbot and Swansea.
3. Flows from the Isle of Anglesey to Gwynedd.
4. Flows into and out of the neighbouring districts of Flintshire.

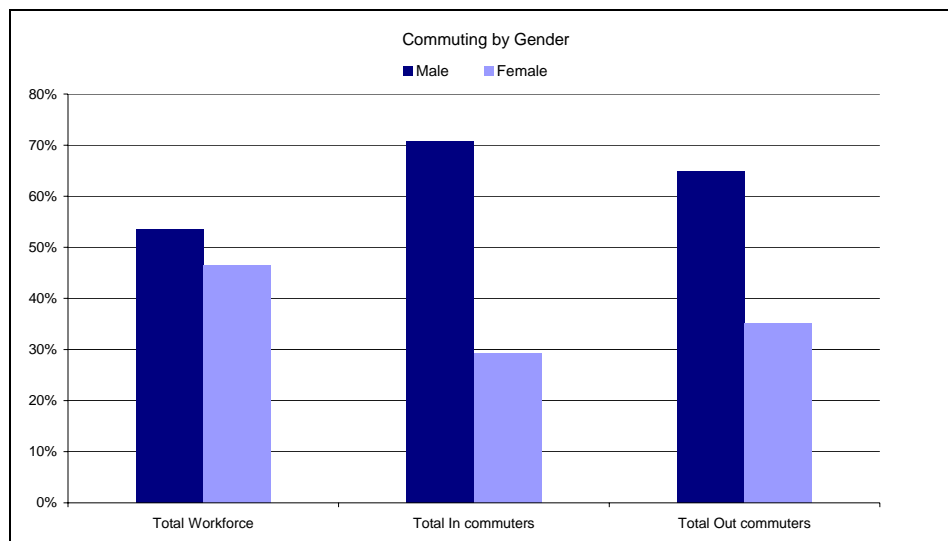


2 Gender, age and occupation patterns

2.1 GENDER

- The gender split of people who work in Wales is evenly split (53% male, 47% female). As the distance of travel increases the split tends to be biased towards males. This is clearly evident when we consider flows out of Wales. Just under 65 per cent of commuters travelling out of Wales are male. This is even more pronounced for commuters travelling into Wales, where 71 per cent are male. Where Welsh resident commuters are working overseas, four in five (79%) are male.

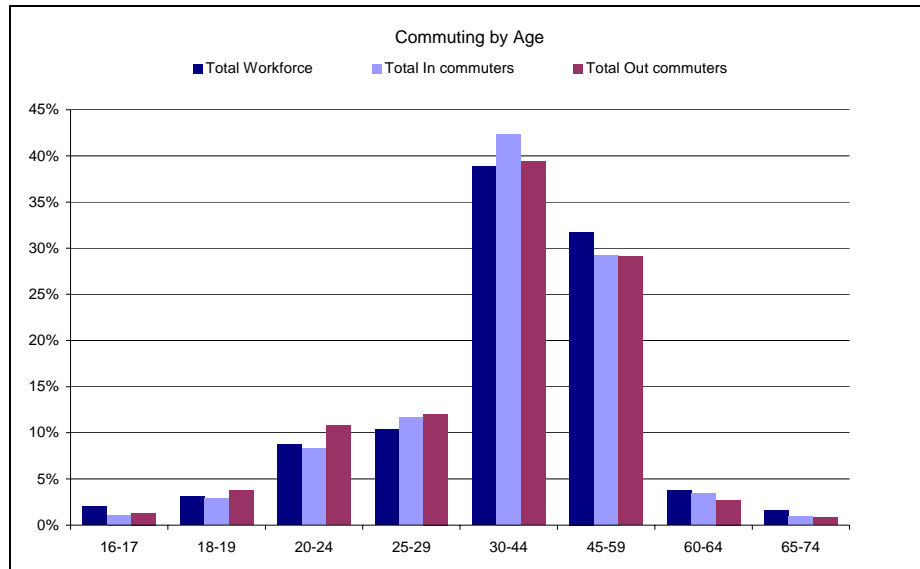
Figure 5



2.2 AGE

- Flows into and out of Wales are dominated by people aged between 30 to 44 (42% of all in commuters and 39% of all out commuters) and 45 to 59 (29% of in and out commuters).
- Commuter flows into and out of Wales have a marginally younger profile than the total workforce but the differences are very small; the average age of in-commuters and out-commuters is 39, for the total workforce it is 40. The 44-59 age group and subsequent older age groups are marginally under represented in both in and out commuting.
- Out commuters are marginally over represented for the younger age groups, noticeably the 20-24s.

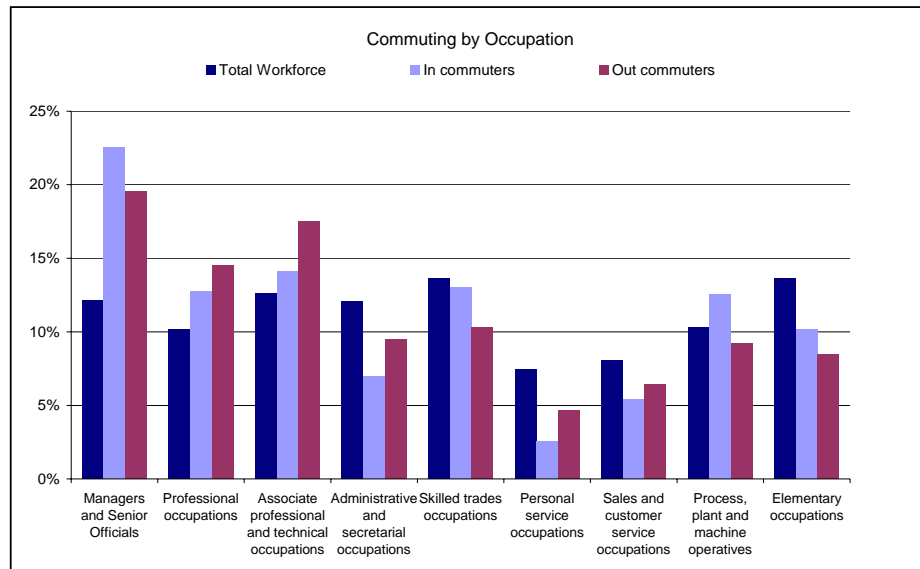
Figure 6



2.3 OCCUPATION

- A disproportionately high number of Managers and Senior Officials, Professional occupations and Associate professional and technical occupations are commuting into and out of Wales. These three occupational groups combined are responsible for 49 per cent of all in commuting, 52 per cent of all out commuting but only 35 per cent of the total workforce.

Figure 7

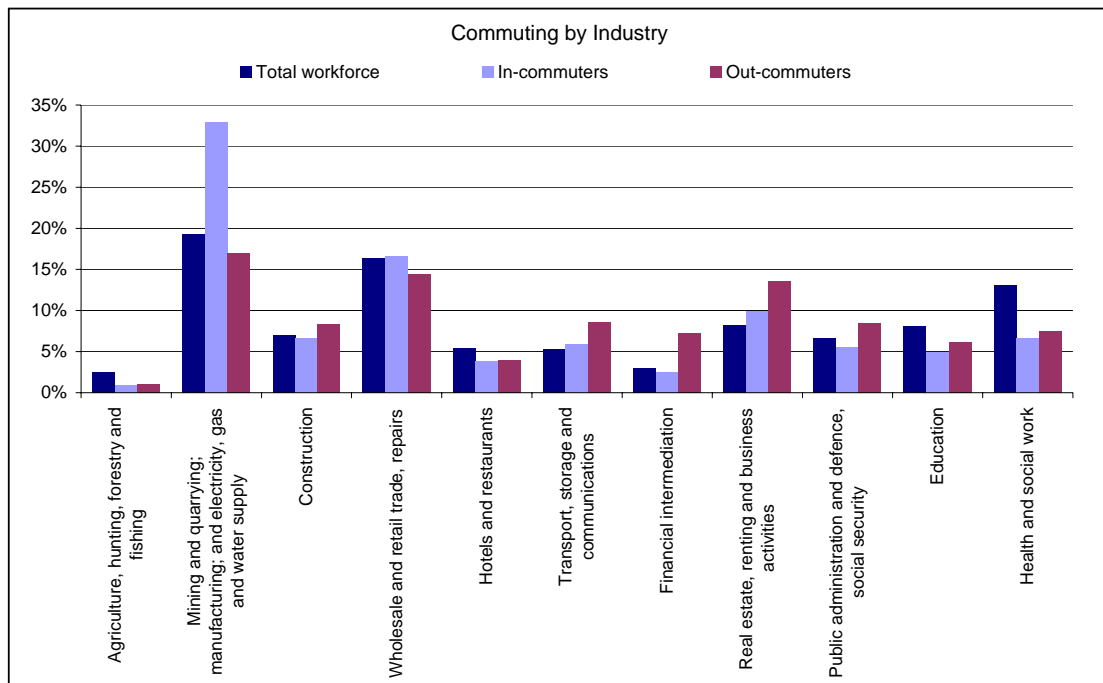


- Managers and Senior Officials is the occupational group with the biggest differences. The occupational group comprises only 12 per cent of the total workforce in Wales but is responsible for 20 per cent of out-commuters and 23 per cent of in-commuters.

3 Commuting by Industry

- A third of all in-commuters work in the ‘Mining and quarrying; manufacturing; and electricity, gas and water supply’ industrial sector compared to this sector representing only 19 per cent of the whole Wales economy. Flintshire (6,200 in-commuters) and Wrexham districts (2,100) experience the biggest flows of workers from neighbouring districts such as Chester, the Wirral and Ellesmere Port & Neston.

Figure 8



- In-commuters are also over represented in Real estate, renting and business activities and under represented in Health and social work. The Health and social work sector is notable for being under represented in by both in-commuters and out-commuters.
- Wales out-commuters are over represented in the Financial intermediation and Real estate, renting and business activities sectors. The Financial out commuters working in Chester (2,900 out-commuters) and Bristol (500) and the Real estate out-commuters travelling to Chester (1,700), Bristol (900) and South Gloucestershire (600).

4 Mode of transport

Over 70 per cent of the total Wales workforce travel to work by car, 10 per cent work from home, 10 per cent get to work on foot with the remaining 10 per cent using various modes of public transport. There is a higher car usage in Wales than the UK as a whole and consequently, public transport modes are not as widely used in Wales compared to the UK.

Three commuting modal patterns are shown in table 4. Out-commuters (defined as Welsh residents working outside of Wales), in-commuters (non-Welsh residents working in Wales) and commuters within Wales (Welsh residents with different residential and work based Welsh districts) by nature are unable to work from home and are unlikely to travel to work by foot. Generally it is the car that replaces these options for commuters with much higher car usage found for out-commuters, in-commuters and commuters within Wales. Just under nine in ten commuters within Wales travel by car, there is also increased train travel amongst commuters, especially those leaving Wales to work in England.

There are some notable differences in transport modes by district:

- Rural Areas such as Powys and Ceredigion have double the number of residents working from home.
- Urban areas have higher bus usage, Cardiff (11%) and Newport (10%) have double the number of residents using the bus to get to work.
- Train usage is concentrated in Cardiff's neighbouring districts. The Vale of Glamorgan, Rhondda, Cynon, Taff and Caerphilly have the highest proportion of residents using the train.

Table 4: Mode of Transport

	Works mainly at or from home	Train	Bus	Car	On foot	Other
Wales Workplace	10%	1%	5%	70%	10%	3%
Out-commuters	0%	4%	4%	81%	5%	6%
In-commuters	0%	2%	2%	88%	4%	4%
Commuters within Wales	0%	3%	4%	89%	2%	2%
UK	9%	4%	7%	62%	10%	8%

Source: Census 2001

- A full set of district level tables for Mode of Transport can be found in Annex A.

5 Mosaic UK and Daytime Mosaic

Mosaic UK classifies all UK consumers into 61 distinct lifestyle types and 11 groups which comprehensively describe their socio-economic and socio-cultural behaviour.

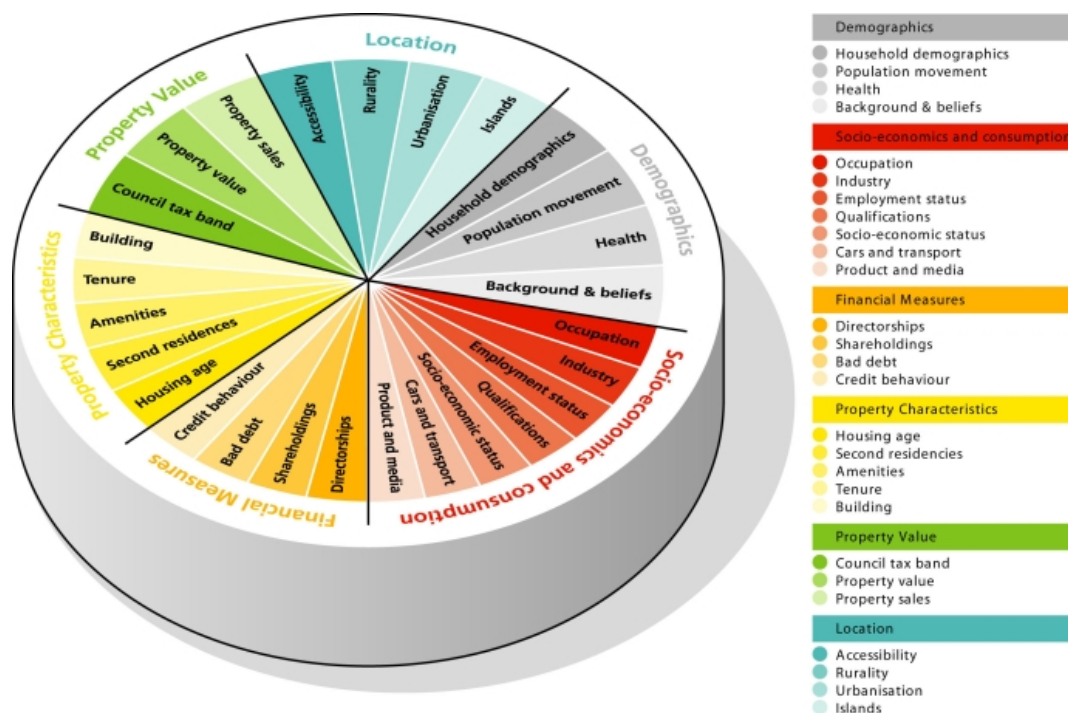
Mosaic UK is designed to identify groupings of consumer behaviour for households and postcodes. The methodology used is unique to Experian and has been refined during many years of creating classifications using data from different sources and different levels of geography.

The first step is to gather data for all residents and households in the country. This data is then combined with information from other higher levels of geography including postcode and Census Output Areas. All the input variables go through a selection process where they are tested for discrimination, robustness and their correlation to other variables.

Once the final list of variables is selected, a set of input weights is applied as part of the clustering process. The result is a list of variables that have differing importance to the clustering methodology, depending on how well they discriminate at differing levels of geography. This ‘bottom-up’ approach enables us to maximise the effectiveness of each input variable depending on its relative importance to the classification, and its ability to discriminate.

The chart below shows the input variables that help make up Mosaic.

Figure 9: Mosaic UK classifies all UK consumers into 61 distinct lifestyle types and 11 groups

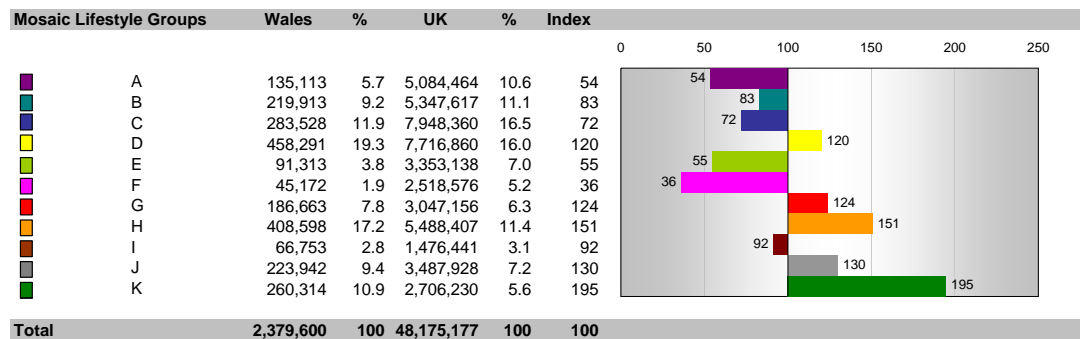


We have used Mosaic to get a richer picture of Wales, in terms of its residents and in-commuters. Rather than being judgmental of the local population, the names that are applied to the Mosaic groups and types are a summary of their common characteristics and are used for analysis purposes only.

5.1 WALES COMPARED TO THE UK

The Mosaic working age profile of Wales compared with the UK is skewed towards the Mosaic groups that are typically less affluent. Close-knit, inner city and manufacturing town communities is the largest Mosaic group in Wales – the group is 20 per cent more prevalent in Wales than in the UK as a whole. Wales is also over represented in the ‘People living in rural areas far from urbanisation’, ‘Upwardly mobile families living in homes bought from social landlords’, ‘Independent older people with relatively active lifestyles’ and ‘Low income families living in estate based social housing’ lifestyle groups.

Figure 10: Mosaic profiles: Wales, UK



Group Description

- A *Career professionals living in sought after locations*
- B *Younger families living in newer homes*
- C *Older families living in suburbia*
- D *Close-knit, inner city and manufacturing town communities*
- E *Educated, young, single people living in areas of transient populations*
- F *People living in social housing with uncertain employment in deprived areas*
- G *Low income families living in estate based social housing*
- H *Upwardly mobile families living in homes bought from social landlords*
- I *Older people living in social housing with high care needs*
- J *Independent older people with relatively active lifestyles*
- K *People living in rural areas far from urbanisation*

The 11 Mosaic UK groups can be summarised as follows:

Career professionals living in sought after locations contains people whose lives are ‘successful’ by whatever yardsticks society commonly uses to measure success. These are people who have rewarding careers rather than jobs, who live in sought after locations, who drive the more modern and expensive cars and who indulge in the most exotic leisure pursuits. Most, though not all, appear to enjoy stable household arrangements.

Younger families living in newer homes contains people whose focus is on career, home and family. These are mostly younger age groups who are married, or at least in a permanent relationship, and are now raising children in post war family houses, often in areas of the country with rapidly growing populations. The focus of expenditure is on

equipment for the home and garden, and the immediate family unit is the principal focus of leisure activities.

Older families living in suburbia comprises people who have successfully established themselves and their families in comfortable homes in mature suburbs. Children are becoming more independent, work is becoming less of a challenge and interest payments on homes and other loans are becoming less burdensome. With more time and money on their hands, people can relax and focus on activities that they find intrinsically rewarding.

Close-knit, inner city and manufacturing town communities is comprised of people whose lives are mostly played out within the confines of close knit communities. Living mostly in older houses in inner city neighbourhoods or in small industrial towns, most of these people own their homes, drive their own cars and hold down responsible jobs. Community norms rather than individual material ambitions shape the pattern of most residents' consumption.

Educated, young, single people living in areas of transient populations mostly contains young and well educated people who are open to new ideas and influences. Young and single, and few encumbered with children, these people tend to be avid explorers of new ideas and fashions, cosmopolitan in their tastes and liberal in their social attitudes. Whilst eager consumers of the media and with a sophisticated understanding of brand values, they like to be treated as individuals, and value authenticity over veneer.

People living in social housing with uncertain employment in deprived areas is comprised of many people who are struggling to achieve the material and personal rewards that are assumed to be open to all in an affluent society. Few hold down rewarding or well paying jobs and, as a result, most rely on the council for their accommodation, on public transport to get around and on state benefits to fund even the bare essentials. The lack of stability in many family formations undermines social networks and leads to high levels of anti social behaviour among local children.

Low income families living in estate based social housing mostly contains families on lower incomes who live on large municipal council estates where few of the tenants have exercised their right to buy. Often isolated in the outer suburbs of large provincial cities, *Municipal Dependency* is characterised as much by low aspirations as by low incomes. Here people watch a lot of television and buy trusted mainstream brands from shops that focus on price rather than range or service.

Upwardly mobile families living in homes bought from social landlords comprises people who, though not necessarily very well educated, are practical and enterprising in their orientation. Many of these people live in what were once council estates but where tenants have exercised their right to buy. They own their cars, provide a reliable source of labour to local employers and are streetwise consumers. Tastes are mass market rather than individualistic and focus on providing comfort and value to family members.

Older people living in social housing with high care needs consists of elderly people who are mostly reliant on state benefits, and live in housing designed by local authorities and housing associations. Some live in old people's homes or sheltered accommodation, while others live in small bungalows, set in small enclaves within larger council estates. Most of these people spend money only on the basic necessities of life.

Independent older people with relatively active lifestyles consists mostly of pensioners who own their homes and who have some source of income beyond the basic state pension. Many of these people have, on retirement, moved to the seaside or the countryside to live among people similar to themselves. Today many of these people have quite active lifestyles and are considered in their purchasing decisions.

People living in rural areas far from urbanisation contains people whose pattern of living is distinctively rural. They live not just outside major population centres but also deep in

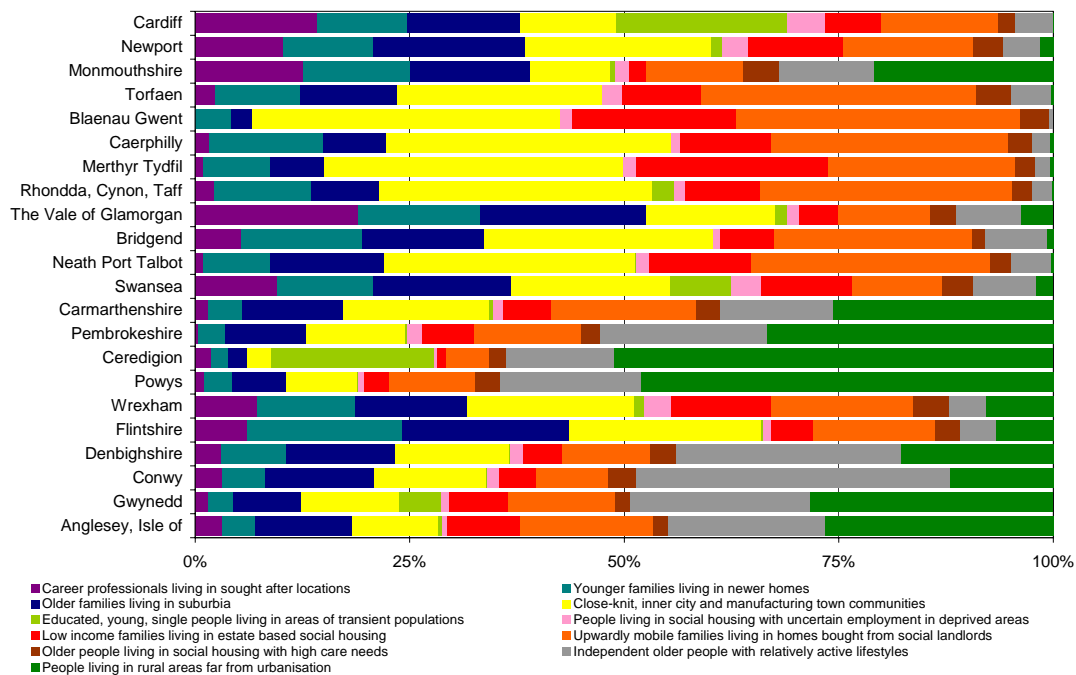
the countryside, in small communities which have been little influenced by the influx of urban commuters. These are places where people with different levels of income share attachments to local communities, and where engagement with the community and with the natural environment are more important to most residents than material consumption.

5.2 MOSAIC PROFILES BY DISTRICT

Mosaic profiles vary across Wales by district:

- The affluent *Career professionals living in sought after locations* group is concentrated in The Vale of Glamorgan, Cardiff and Monmouthshire.
- Powys, Ceredigion and Pembrokeshire have high proportions of the *People living in rural areas far from urbanisation* group compared with the rest of Wales. This group is typified by people living in rural areas where country life has not been influenced by urban consumption patterns.
- Merthyr Tydfil, Caerphilly and Blaenau Gwent have over a third of their population in the *Close-knit, inner city and manufacturing town communities* group.
- The *Educated, young, single people living in areas of transient populations* group is concentrated in Cardiff and Ceredigion.

Figure 11: Mosaic profiles: Welsh districts



5.3 MOSAIC DAYTIME

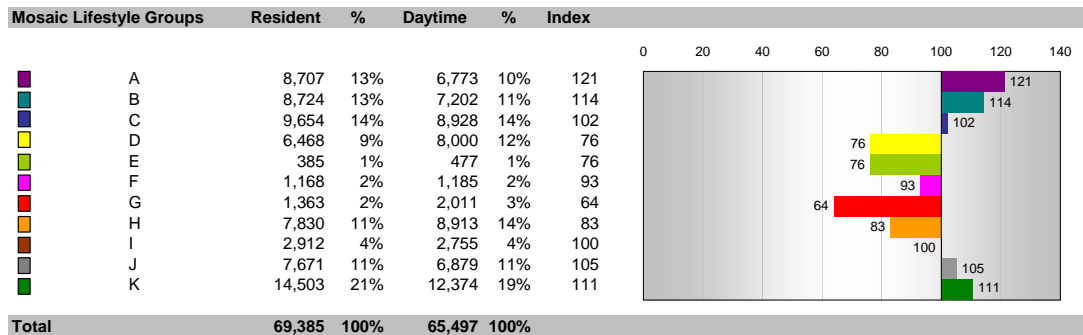
Mosaic Daytime supplies small area estimates of the daytime population. This provides valuable information about the socio-economic profile of small areas during the daytime and by comparing this to Mosaic UK (which is based on residents rather than the daytime population)

we can determine how the profile of an area changes due to the effects of commuting. Estimates are provided split down by the (residential) Mosaic UK groups and types.

Across Wales as a whole, the residential and daytime Mosaic profiles are very close. This is to be expected as the commuting flows in and out of Wales account for only a small proportion of the Welsh working population. By district, there are however some noticeable differences between residential and daytime Mosaic:

- The Vale of Glamorgan has a higher proportion of the *Career professionals living in sought after locations* group as residents than during the day
- Cardiff has a higher *Educated, young, single people living in areas of transient populations* proportion as residents than during the day but has a higher daytime proportion of *Close-knit, inner city and manufacturing town communities* group compared to its residential proportion
- Monmouthshire is shown in the chart below as it is the district that experiences the biggest changes between residential and daytime Mosaic. *Career professionals living in sought after locations* and *Younger families living in newer homes* groups commute out of Monmouthshire whereas the daytime share of *Low income families living in estate based social housing* and *Close-knit, inner city and manufacturing town communities* increases.

Figure 12: Monmouthshire Resident and Daytime Mosaic



- A full set of district level Mosaic tables and charts can be found in Annex C.

6 1991 commuting patterns

- The 1991 Census also contained commuting flows data. However, this data was based on a 10 per cent sample and as a result care should be taken when comparisons between the two Census points are made.
- Taking this into consideration, out-commuting has increased by over 70 per cent in the ten years to 2001, equivalent to 15,600 commuters. An additional 1.7 per cent of residents were working outside Wales in 1991 compared to those commuting into Wales from England. This rate increased to 2.8 per cent in 2001.
- Rhondda, Cynon, Taff, Neath Port Talbot, Torfaen and Carmarthenshire have experienced the largest change in net out-commuting in the decade.
- Bridgend, Swansea and Newport have all benefited from an increase in net in commuting in the period.

Table 5: Net out-commuting Wales 1991, 2001

Unitary Authority	Net out-commuters		
	1991	2001	1991 to 2001 change
Rhondda, Cynon, Taff	10,130	15,280	5,150
Neath Port Talbot	1,690	6,470	4,780
Torfaen	-470	2,900	3,370
Carmarthenshire	2,230	5,580	3,350
Powys	1,400	3,550	2,150
Conwy	3,430	5,200	1,770
Caerphilly	15,300	16,740	1,440
Merthyr Tydfil	100	1,250	1,150
Denbighshire	70	910	840
Anglesey, Isle of	3,670	4,470	800
Ceredigion	30	680	650
Gwynedd	-3,010	-2,380	630
Cardiff	-36,990	-36,540	450
Blaenau Gwent	3,770	4,200	430
Flintshire	3,540	3,920	380
Pembrokeshire	1,940	2,270	330
The Vale of Glamorgan	11,090	10,970	-120
Wrexham	1,890	1,540	-350
Monmouthshire	4,090	3,650	-440
Bridgend	4,880	2,190	-2,690
Swansea	-1,660	-5,700	-4,040
Newport	-9,040	-13,470	-4,430
Wales	18,080	33,670	15,590

Source: Census 1991, 2001.

7 Forecast commuting patterns

7.1 COMMUTING METHODOLOGY

- In order to assess the future changes in net commuting patterns in Wales and its constituent districts, we have forecast series for workplace based employment, residence based employment and the number of people with two jobs by district. The difference between the sum of total residence based employment and the number of jobs available is the implied net commuting.

7.2 NET OUT COMMUTING 2001 - 2016

- Wales is forecast to experience a considerable increase in net out commuting in the period. By 2011, net out-commuting is expected to have risen by 68,800. Driving this is the growth in residential based employment outstripping workplace based employment. This is a continuation of the trend observed over the last 20 years.
- Despite this growth, net out-commuting will only account for 7 per cent of residents based employment by 2011.
- Generally those districts that have net out commuters in 2001 will see a further increase in net out-commuters by 2016. Bridgend and Merthyr Tydfil are exceptions and are forecast to experience a reduction in net out-commuters by 2011 to the extent that they are expected to experience net in-commuting.
- Swansea and Newport are districts forecast to see an increase of in-commuting by 2011. Cardiff is expected to see a reduction of in-commuting although it will remain the largest importer of workers of any district in Wales at the end of the forecast period.

Table 6: Forecast net out-commuting

Unitary Authority	2001	2006	2011	2016
Isle of Anglesey	4,500	9,700	10,800	11,300
Blaenau Gwent	4,200	9,300	10,200	10,800
Bridgend	2,200	-4,300	-4,000	-4,300
Caerphilly	16,700	21,900	24,700	26,300
Cardiff	-36,500	-33,200	-30,700	-31,000
Carmarthenshire	5,600	3,900	4,700	4,700
Ceredigion	700	6,600	7,800	8,500
Conwy	5,200	4,800	6,600	7,300
Denbighshire	900	2,700	4,400	5,100
Flintshire	3,900	3,400	5,000	6,100
Gwynedd	-2,400	-4,700	-3,300	-2,700
Merthyr Tydfil	1,300	-1,800	-1,000	-800
Monmouthshire	3,600	4,100	5,300	5,600
Neath Port Talbot	6,500	6,200	7,400	8,200
Newport	-13,500	-16,100	-15,200	-16,200
Pembrokeshire	2,300	3,600	5,300	6,300
Powys	3,500	4,600	6,800	7,800
Rhondda,Cynon,Taff	15,300	19,900	24,000	26,100
Swansea	-5,700	-14,700	-11,800	-11,100
Torfaen	2,900	10,100	12,500	14,200
Vale of Glamorgan	11,000	20,600	21,700	21,600
Wrexham	1,500	8,700	11,300	12,500
Wales	33,700	65,300	102,500	116,300

Source: Experian, Census 2001.

8 Policy implications

Here, we highlight some of the key policy areas related to this research, and any implications for policymakers.

- **Cross-border concentrations:**
 - Although 2001 commuting patterns show 260,000 movements within Wales, there are still 105,000 cross-border movements. Working with Wales' immediate neighbours, a collaborative action point highlighted in the *Wales Spatial Plan*, is clearly an important component of policy around commuting.
- **Out-commuting is double in-commuting:**
 - Cross-border in-commuting into Wales comprises largely short-distance movements to its north-east and to its south-east. The north-east of Wales shows particularly high levels of movements.
 - 2001 commuting patterns show that 69,000 people commute out of Wales compared to 36,000 who commute in. Out-commuting movements are longer-distance than in-commuting, with Wales-based commuters journeying to large English cities including Manchester, Liverpool, Bristol and employment centres along the M4 corridor.
 - The quality of life offered by Wales' border-districts clearly makes them attractive places for commuters to locate, willing to commute long distances in order to be able to reside in Wales. Strong employment growth forecast for English cities bordering Wales is likely to continue to put pressure on the housing markets of Wales' border-districts.
 - However, attracting these commuters (who tend to be in the higher-earnings bracket – see below) is also likely to have beneficial impacts, boosting local spending in the retail, leisure and service-sectors.
- **Urban-centre focused internal commuting:**
 - As expected, commuting patterns within Wales are focused around the key employment centres of Cardiff/Newport (and links with the Valleys and Vale of Glamorgan) and Swansea. There are also considerable flows from Anglesey to Gwynedd, and Flintshire acts as a commuting hub in the north-east of Wales. As expected, there is no evidence of any significant commuting flows between the north and south of Wales.
 - These clear concentrations of commuting flows provide policymakers with an opportunity to focus transport interventions in order to ease congestion and/or increase public transport use.
 - In particular, the high concentrations of movements between Cardiff and Newport reflect policymaker aspirations to build a new 'user-pays' M4 motorway section around Newport. Considerable movements along the A55 corridor, particularly around and through Flintshire, reflect plans to increase capacity there. Significant levels of commuting between the South Valleys themselves and the South Valleys and Cardiff demonstrate the importance of public transport investment programmes in South East Wales. *Wales: A Vibrant Economy* rightly points out the potential agglomeration benefits of such investments in transport infrastructure.

- **The middle-aged, male, higher-earning commuter:**
 - Commuting flows, particularly longer-distance movements, are concentrated in a particular demographic group – the middle-aged, male, higher-earner. Enhancing the activity/employment rates in other demographic groups may therefore require investment not only in skills but in encouraging (and enabling) these same groups to be more mobile in taking advantage of employment opportunities.
 - Tellingly, an exception to this rule is the high-level of out-commuting from Wales seen in the 20-24 age-group, suggesting that career-starters look outside Wales for employment, potentially leading to out-migration later on. This implies that Wales needs to boost its offer (or the awareness in its career-starters and indeed other resident out-commuters of what is already on offer) of higher-value employment opportunities.

- **Commuting for higher-value jobs:**
 - Workers in higher-value industries (e.g. financial intermediation and real estate/renting/business activities) are more likely to commute out of Wales than workers in lower-value industries (e.g. health and social work). Workers in the real estate, renting and business services industries are generally highly mobile. Financial intermediaries, particularly, are more likely to reside in Wales but commute outside for employment. Interventions to improve commuting times are, therefore, likely to have greater effects on higher-value commuters, though may also have knock-on economic inclusion effects in encouraging more inactive/unemployed and lower-waged/lower-skilled to commute further for employment purposes.
 - There are clear patterns of more affluent commuter-base districts (the Vale of Glamorgan and Monmouthshire, for instance) experiencing out-commuting of higher-earners and in-commuting of lower-earners during the day.

- **High use of cars, low use of public transport:**
 - Wales has higher levels of car usage and lower levels of public transport usage than the UK average: 9 in 10 people in Wales use a car to commute. However, commuting patterns are clearly concentrated around urban areas with a number of identifiable hub-and-spoke models. This provides policymakers with the opportunity to focus transport interventions on employment centres and their catchment areas, an objective of the *Wales Spatial Plan*.
 - Forecasts suggest these concentrations of commuting around urban areas in Wales will increase significantly, with particular growth in net in-commuting into Swansea and Newport.
 - The stronger growth in residence-based employment compared to workplace-based employment that is forecast for Wales is also likely to significantly increase cross-border commuting flows.
 - Cardiff is forecast to remain the focal point of the greatest concentrations of commuting flows, and should therefore remain a focal point for policymakers in reducing congestion and increasing public transport usage in order to improve the ‘commuter experience’.

Annex A - Mode of Transport by District

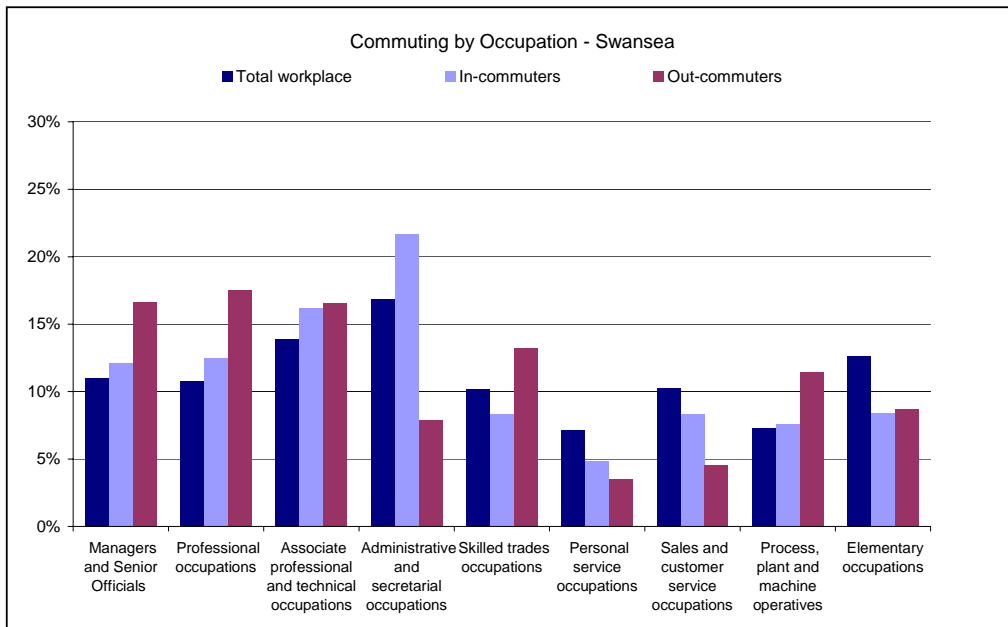
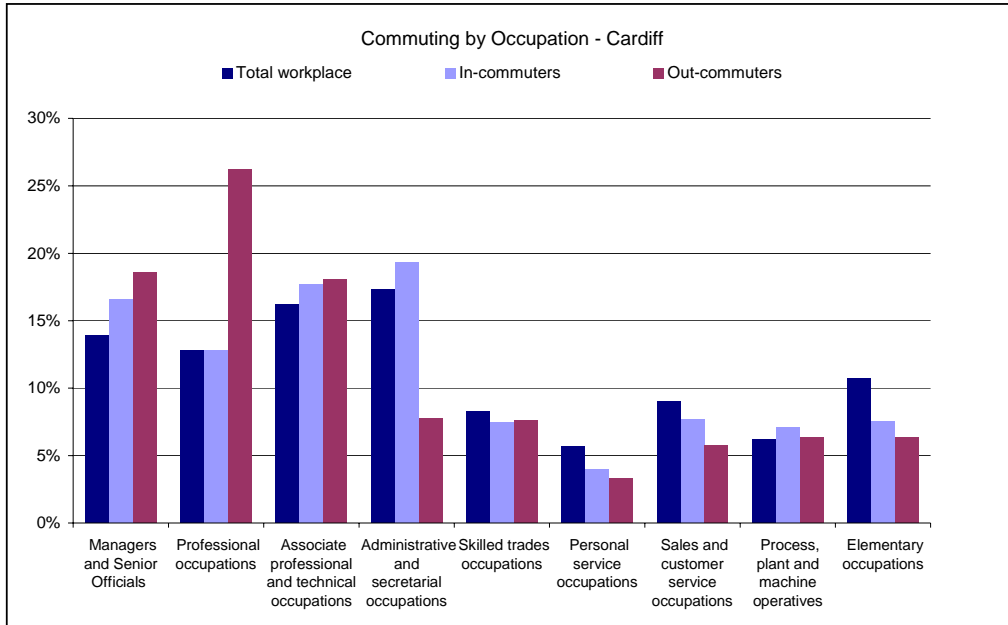
		Works mainly at or from					
		home	Train	Bus	Car	On foot	Other
Cardiff	Total workplace	5%	5%	10%	66%	10%	3%
	In-commuters	0%	10%	6%	81%	1%	2%
	Out-commuters	0%	4%	4%	86%	3%	2%
Swansea	Total workplace	7%	1%	7%	73%	9%	3%
	In-commuters	0%	2%	5%	89%	2%	2%
	Out-commuters	0%	3%	3%	88%	3%	4%
Rhondda, Cynon, Taff	Total workplace	8%	1%	5%	73%	11%	2%
	In-commuters	0%	2%	3%	92%	2%	2%
	Out-commuters	0%	6%	5%	85%	2%	2%
Newport	Total workplace	5%	1%	9%	74%	7%	3%
	In-commuters	0%	1%	5%	91%	1%	2%
	Out-commuters	0%	4%	5%	86%	2%	3%
Carmarthenshire	Total workplace	16%	0%	2%	69%	10%	3%
	In-commuters	0%	1%	2%	91%	3%	2%
	Out-commuters	0%	3%	3%	89%	3%	2%
Flintshire	Total workplace	8%	0%	3%	77%	8%	4%
	In-commuters	0%	1%	2%	92%	2%	3%
	Out-commuters	0%	2%	5%	89%	1%	3%
Powys	Total workplace	21%	0%	1%	60%	14%	3%
	In-commuters	0%	1%	2%	88%	6%	3%
	Out-commuters	0%	2%	2%	90%	4%	3%
Bridgend	Total workplace	7%	1%	4%	75%	10%	3%
	In-commuters	0%	1%	3%	93%	1%	2%
	Out-commuters	0%	3%	3%	90%	2%	3%
Wrexham	Total workplace	9%	0%	5%	74%	9%	4%
	In-commuters	0%	1%	2%	93%	2%	2%
	Out-commuters	0%	1%	5%	89%	2%	3%
Caerphilly	Total workplace	9%	1%	5%	72%	12%	2%
	In-commuters	0%	1%	3%	92%	2%	1%
	Out-commuters	0%	5%	5%	86%	1%	2%
Gwynedd	Total workplace	14%	0%	4%	65%	13%	3%
	In-commuters	0%	1%	4%	89%	4%	2%
	Out-commuters	0%	2%	4%	84%	7%	4%
Neath Port Talbot	Total workplace	8%	0%	4%	74%	11%	4%
	In-commuters	0%	1%	3%	93%	1%	2%
	Out-commuters	0%	2%	5%	89%	2%	2%
Pembrokeshire	Total workplace	17%	0%	3%	65%	12%	3%
	In-commuters	0%	2%	3%	84%	8%	4%
	Out-commuters	0%	3%	3%	82%	7%	6%
The Vale of Glamorgan	Total workplace	11%	1%	3%	70%	10%	4%
	In-commuters	0%	1%	3%	91%	3%	2%
	Out-commuters	0%	8%	6%	82%	2%	3%
Conwy	Total workplace	15%	1%	4%	65%	12%	4%
	In-commuters	0%	2%	2%	90%	3%	3%
	Out-commuters	0%	2%	3%	89%	2%	3%
Denbighshire	Total workplace	12%	1%	3%	69%	12%	4%
	In-commuters	0%	1%	4%	90%	2%	2%

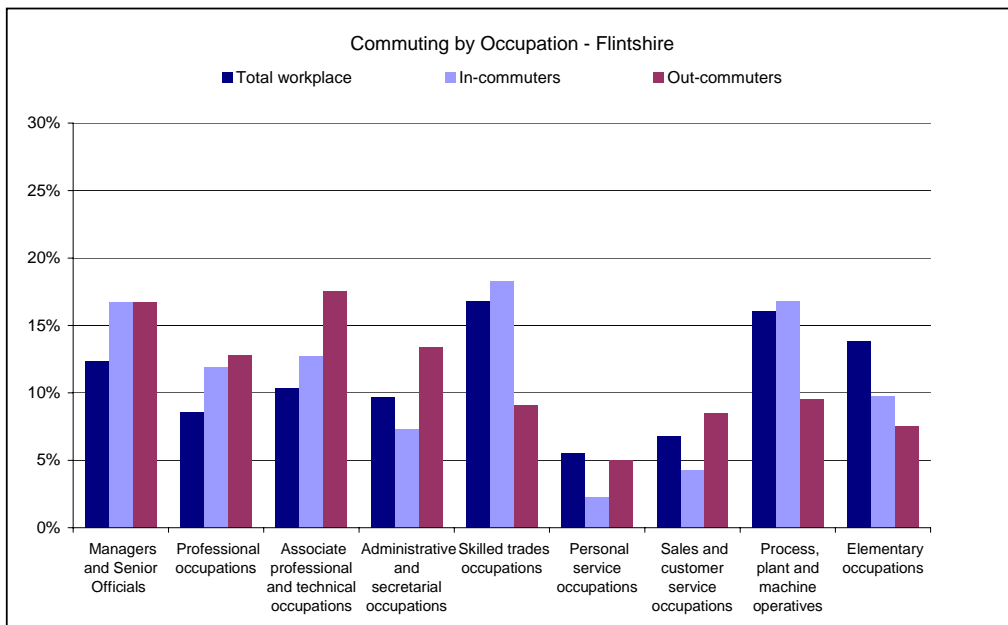
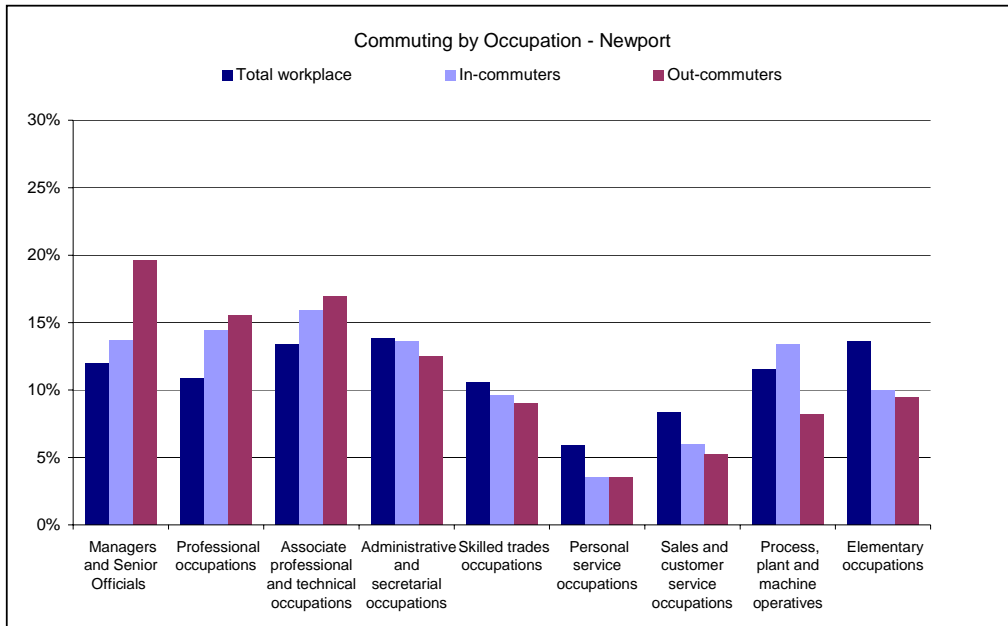
Commuting in and around Wales

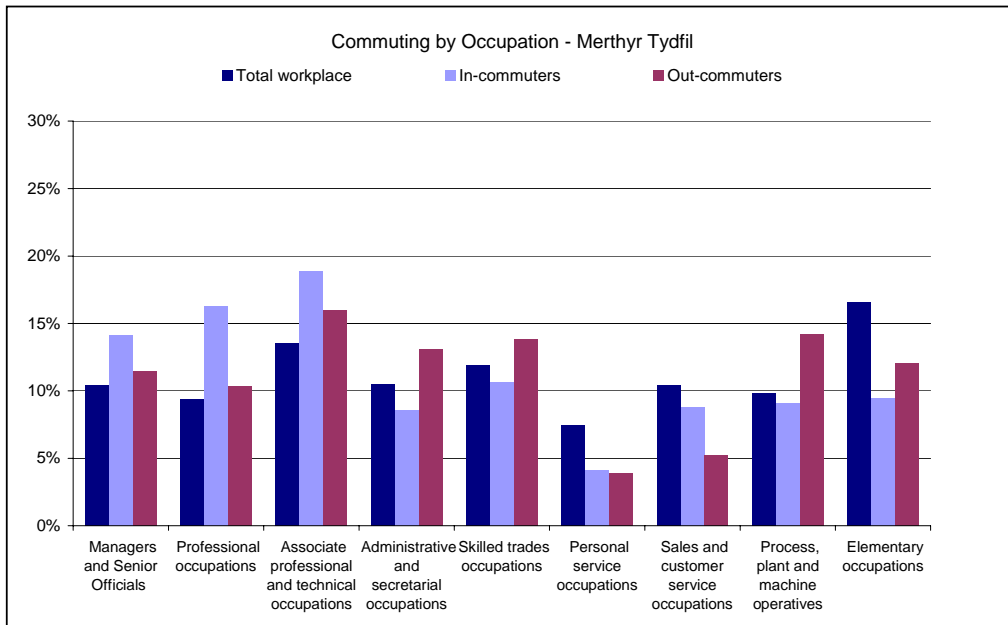
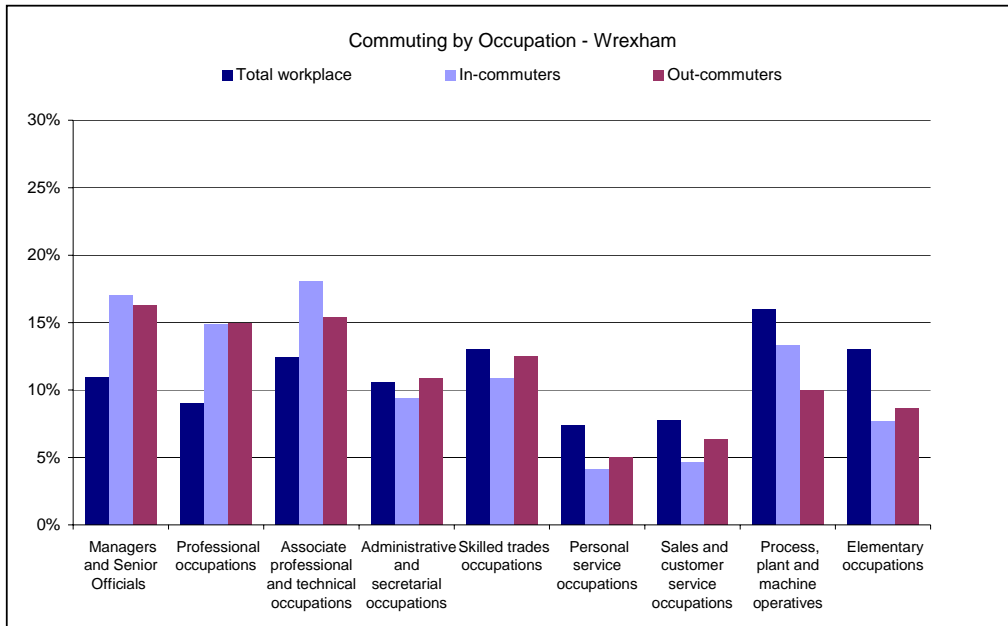
	Out-commuters	0%	2%	2%	90%	2%	3%
Torfaen	Total workplace	7%	0%	4%	75%	10%	3%
	In-commuters	0%	0%	3%	93%	2%	2%
	Out-commuters	0%	2%	4%	91%	1%	2%
Monmouthshire	Total workplace	14%	0%	2%	70%	11%	3%
	In-commuters	0%	0%	3%	93%	2%	2%
	Out-commuters	0%	3%	2%	90%	2%	3%
Ceredigion	Total workplace	20%	0%	3%	62%	12%	2%
	In-commuters	0%	2%	6%	85%	5%	2%
	Out-commuters	0%	2%	3%	81%	10%	4%
Anglesey, Isle of	Total workplace	15%	0%	2%	67%	12%	4%
	In-commuters	0%	2%	3%	87%	6%	3%
	Out-commuters	0%	2%	3%	88%	3%	3%
Blaenau Gwent	Total workplace	7%	0%	3%	73%	15%	2%
	In-commuters	0%	0%	3%	93%	2%	2%
	Out-commuters	0%	1%	5%	91%	2%	1%
Merthyr Tydfil	Total workplace	7%	0%	8%	72%	11%	2%
	In-commuters	0%	1%	5%	91%	2%	1%
	Out-commuters	0%	3%	5%	88%	3%	2%

Source: Census 2001

Annex B - Occupation by District

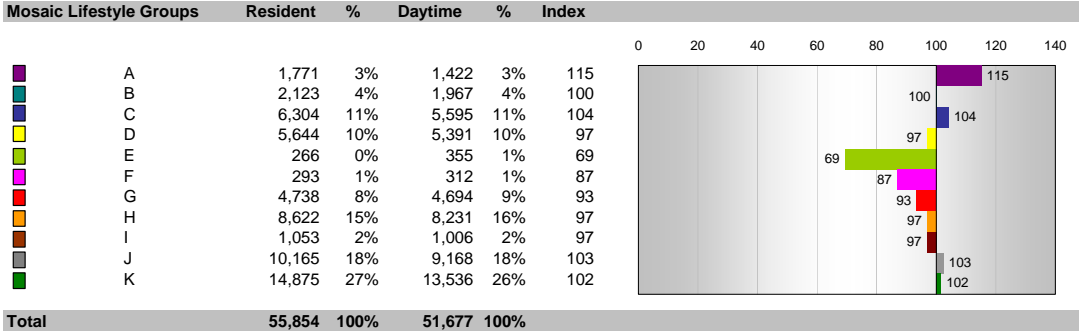




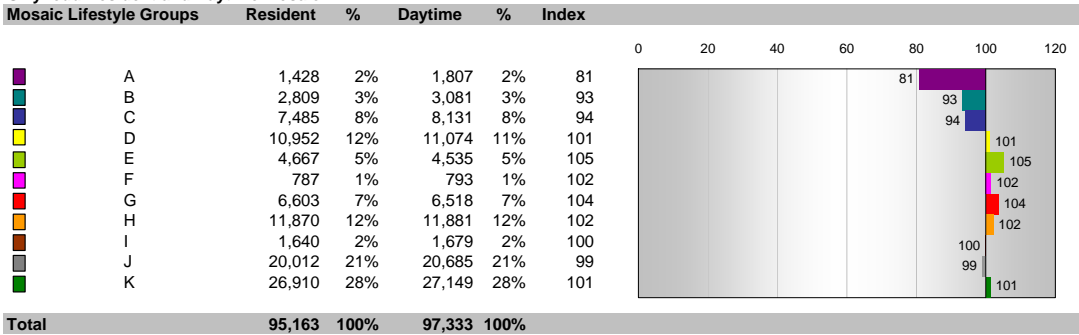


Annex C - Mosaic by District

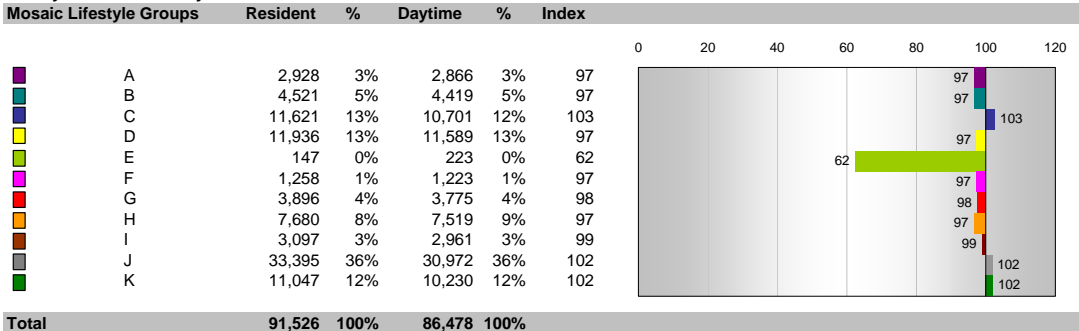
Anglesey Resident and Daytime Mosaic



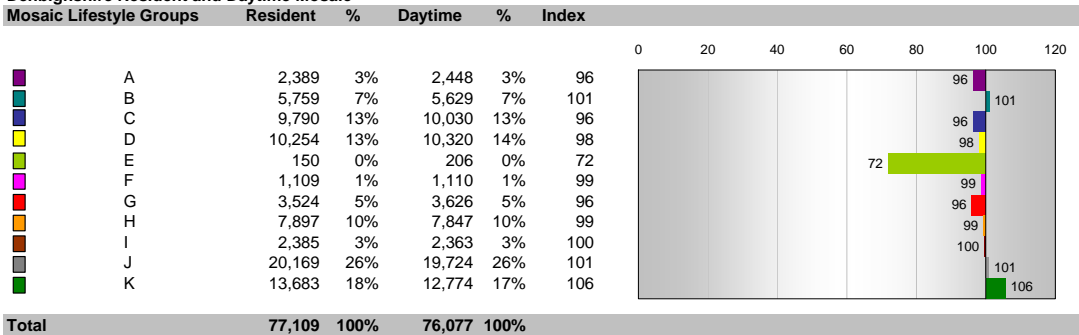
Gwynedd Resident and Daytime Mosaic



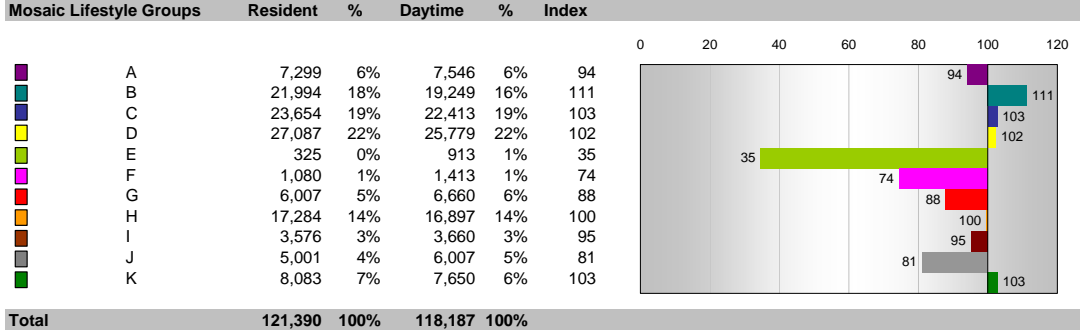
Conwy Resident and Daytime Mosaic



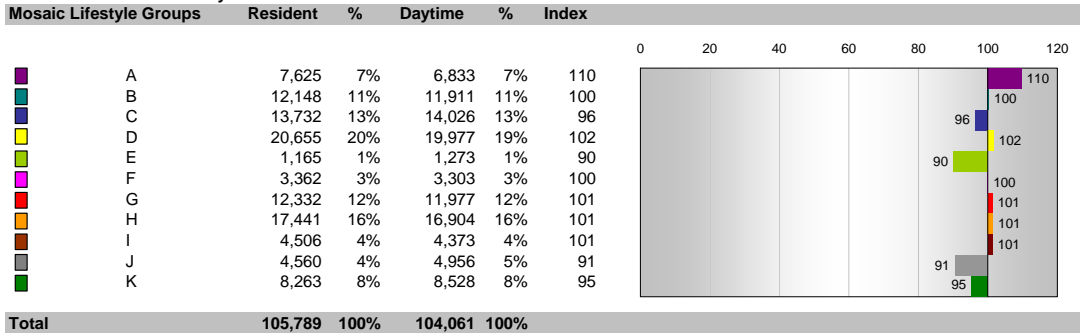
Denbighshire Resident and Daytime Mosaic



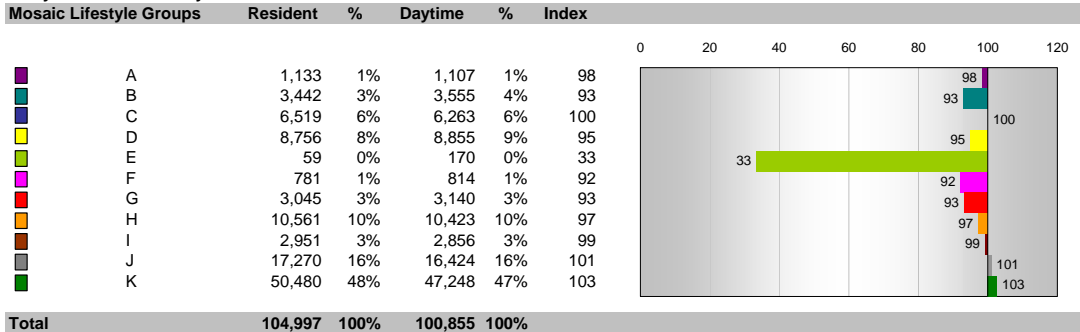
Flintshire Resident and Daytime Mosaic



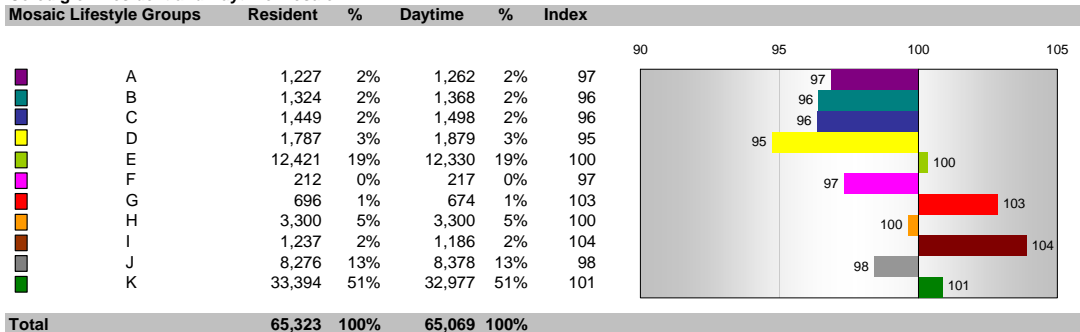
Wrexham Resident and Daytime Mosaic



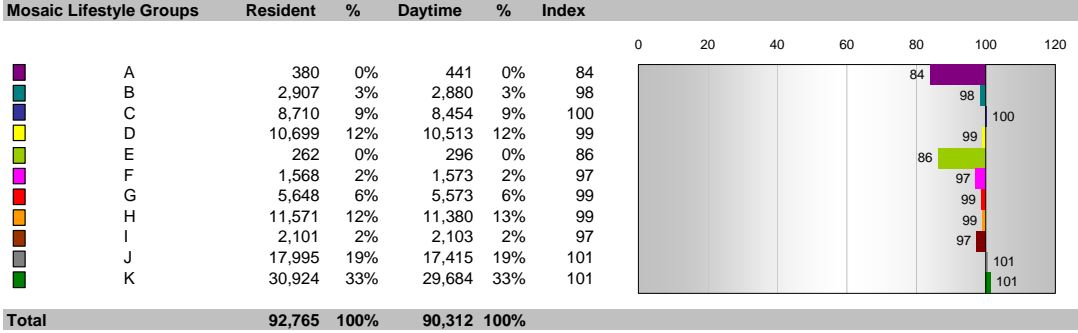
Powys Resident and Daytime Mosaic



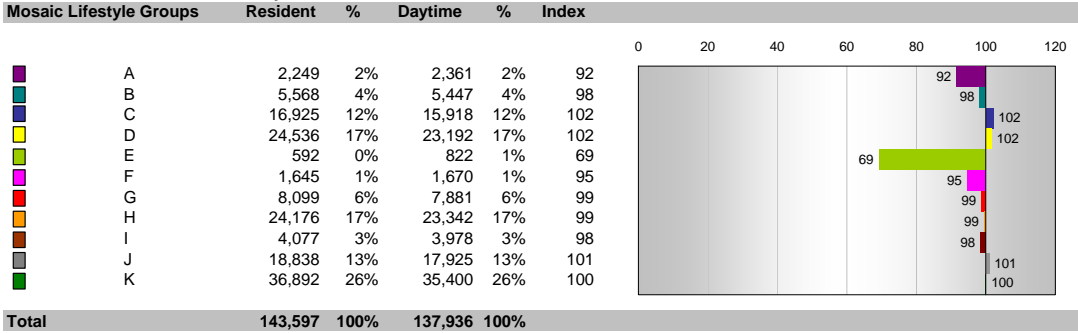
Ceredigion Resident and Daytime Mosaic



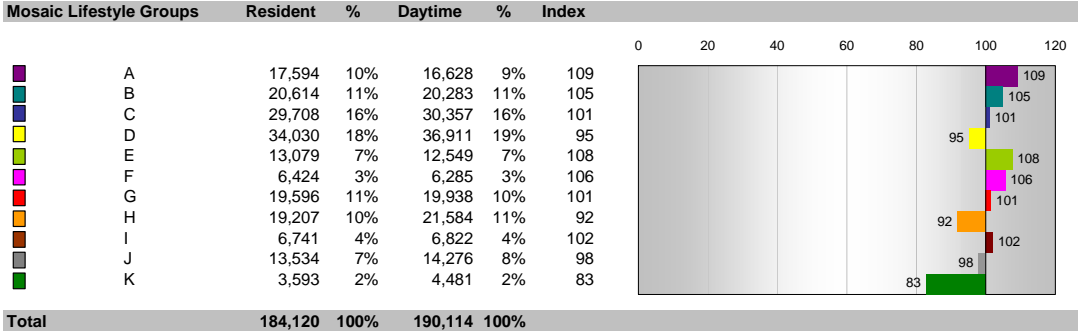
Pembrokeshire Resident and Daytime Mosaic



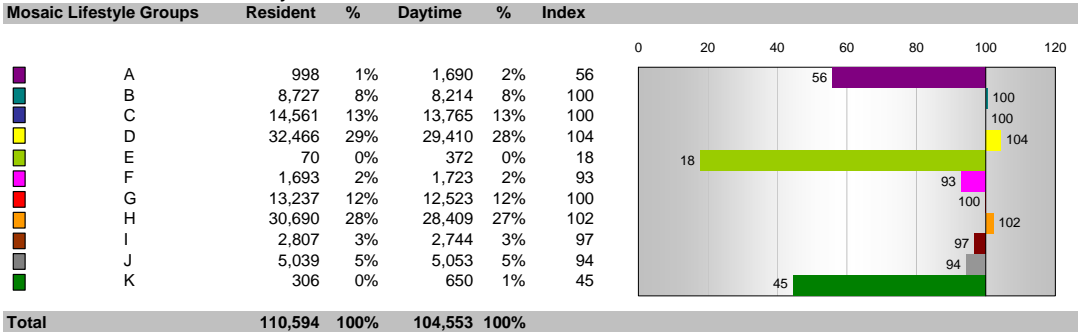
Cardiganshire Resident and Daytime Mosaic



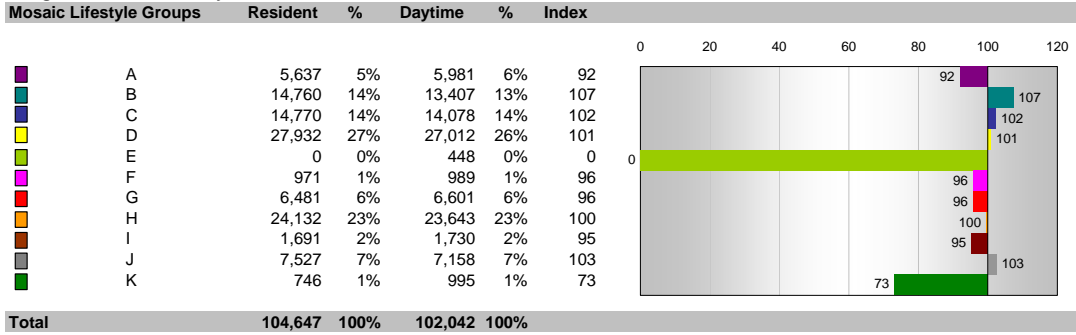
Swansea Resident and Daytime Mosaic



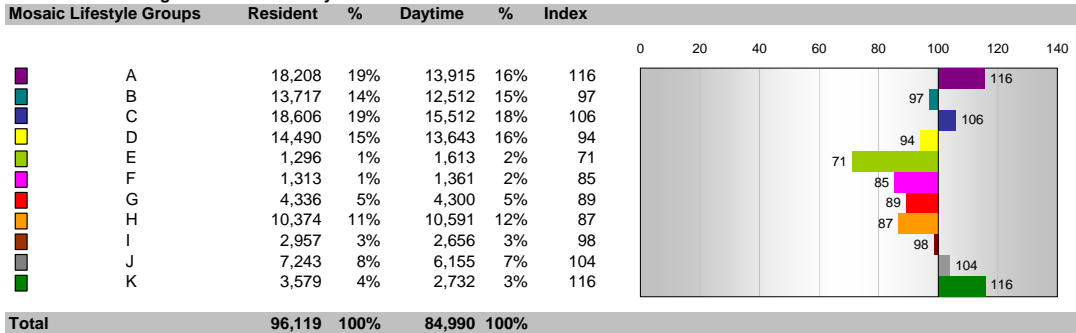
Neath Port Talbot Resident and Daytime Mosaic



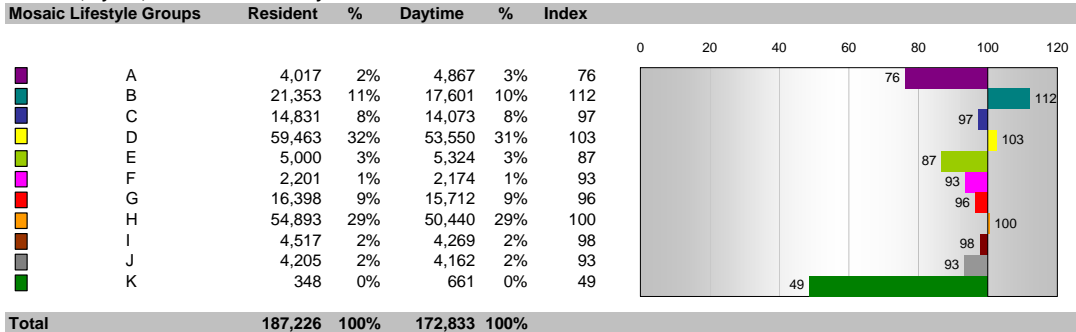
Bridgend Resident and Daytime Mosaic



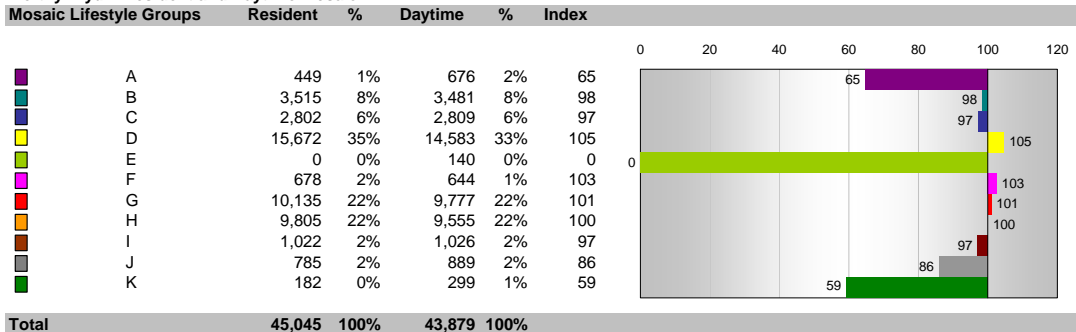
The Vale of Glamorgan Resident and Daytime Mosaic



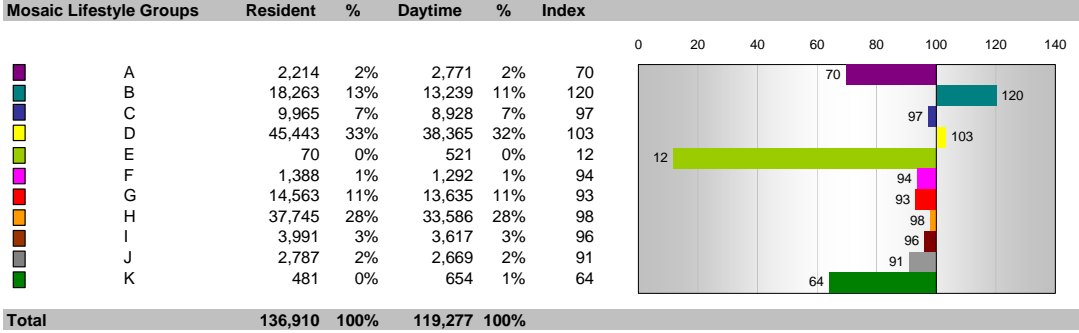
Rhondda, Cynon, Taff Resident and Daytime Mosaic



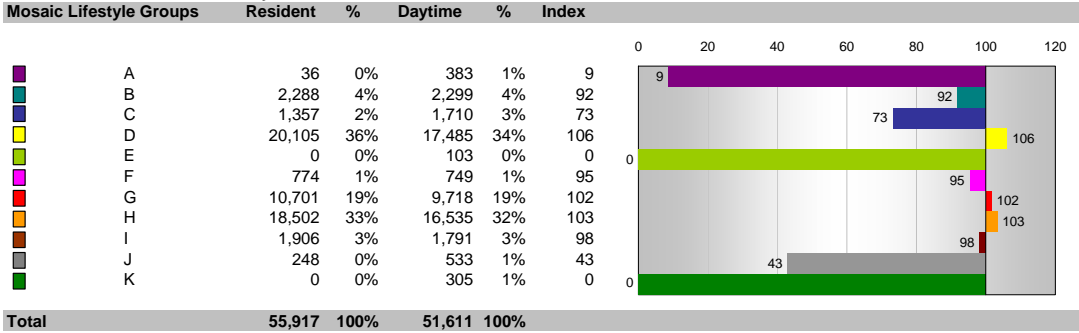
Merthyr Tydfil Resident and Daytime Mosaic



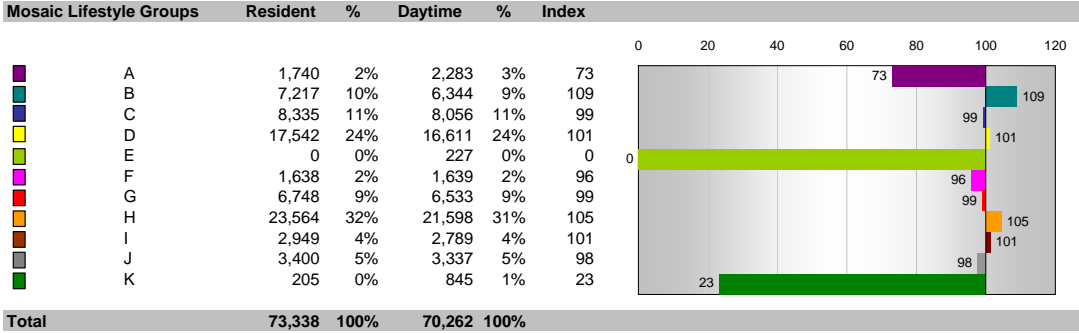
Caerphilly Resident and Daytime Mosaic



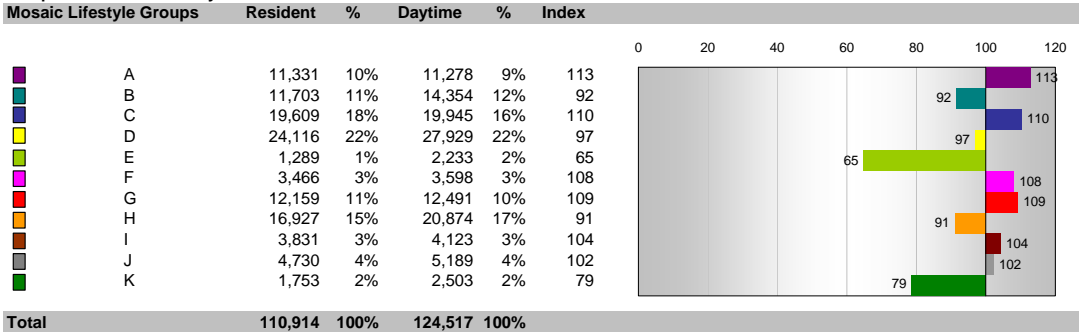
Blaenau Gwent Resident and Daytime Mosaic



Torfaen Resident and Daytime Mosaic



Newport Resident and Daytime Mosaic



Cardiff Resident and Daytime Mosaic

