LIMERICK

Profile of a Changing City

Prepared for:

LIMERICK CITY DEVELOPMENT BOARD

05

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LIMERICK

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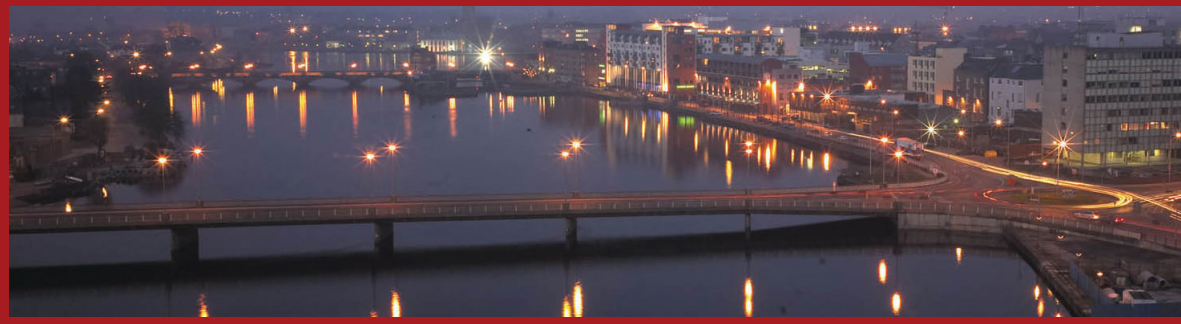

Foreword by the Chairman of Limerick City Development Board,

COUNCILLOR DIARMUD SCULLY

Limerick: Profile of a Changing City

This report "Limerick - Profile of a Changing City" provides much needed information, facts and figures on the current position of Limerick City and environs. As Chairman of the Board who commissioned this work, I am sure it will be a valuable source of information for both research and general information purposes, in particular it will inform the future work and planning of the City.

The need to co-ordinate and draw together statistical information and then interpret this information in a usable format was first identified in 2001 when the City Development Board published the first of these statistical reports. The report is based on the 2002 small area population statistics and is the only report of its kind which provides a comprehensive picture of the City and it's environs and we are sure that this will be a very useful tool to have for organisations and individuals.

I would like to thank the members of the Board for supporting this initiative particularly those organisations who made resources available. In particular, I would like to thank Des Mc Cafferty, Mary Immaculate College, Limerick, who compiled the research and prepared the report on our behalf.

Councillor Diarmuid Scully
Chairman
Limerick City Development Board

PAT DOWLING

Introduction to Socio-Economic Profile

Limerick City Development Board is delighted to launch the Socio-Economic Profile of Limerick City following compilation and interpretation of the data from the 2002 Census. This publication will serve as a valuable reference for all sectors of our community particularly in the creation of new policies to address the ever changing landscape that is Limerick City.

Limerick City has witnessed significant developments in the past decade. We are now the undisputed hub of the Mid West and the centre for high technology manufacturing and internationally traded services. We have seen the development of a strong retail base and there have been huge improvements in the built fabric of our city, particularly in the city centre.

Yet Limerick City still suffers from acute socio-economic polarisation with some of the most disadvantaged areas in the country as a whole. The nature of such social exclusion has changed since 1996 with a range of new "at risk" groups emerging. These are real and pressing challenges of all of us in going forward.

The research and recommendations of this publication will help to inform the nature and delivery of services for the future. Moreover, it will help to focus attention on the need for all stakeholders in the city to work together to reverse such polarisation.

We hope this publication will be of use to all readers. I thank sincerely Des Mc Cafferty, Mary Immaculate College for interpreting the complex data and presenting it in a reader friendly manner. Thanks also to Miriam O'Donoghue who co-ordinated the project with the help of Jason Murphy and Dick Tobin in the Planning Department of Limerick City Council. I also wish to thank

the Mid Western Health Board and Limerick City Council for funding this initiative; this project could not be completed without their financial support.

PAT DOWLING
DIRECTOR OF SERVICE

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executive summary

Limerick, the third largest urban area in the State, and the capital of the Mid-West Region, has undergone extensive and profound change in recent years. This change is most readily discerned in the built environment, but accompanying the physical transformation there have been significant economic, social and cultural changes. While some of these changes have local, endogenous causes, others have been driven by external processes operating at the national and international scales. The purpose of this profile is to chart the outcomes of recent change by providing a comprehensive account of the present day social and economic geography of the Limerick urban area,[1] drawing on information from the census of population and other sources. The profile looks first at the city in its regional and national context before going on to examine the detailed internal geography of the modern city.

The Local and Regional Economy

In line with the growth of the national economy, both the Limerick urban area and the Mid-West region performed strongly in the late 1990s. Employment in the urban area increased by 25 per cent between 1996 and 2002, and per capita disposable income in the wider Limerick City and County area was up by close to two-thirds between 1996 and 2001. Economic growth has been accompanied by considerable restructuring, one aspect of which is greater reliance on foreign-owned firms that have been attracted to the area in recent years. In 2003, the foreign sector accounted for two-thirds of all jobs in the City and County, in companies assisted by the industrial promotion agencies. However, despite the greater orientation of newer firms towards the high technology sectors, the overall level of productivity (output per worker) in the City and County is comparatively low, at just 66 per cent of the national level.

Population Distribution and Change

The population of Limerick City and its suburbs stood at 86,998 in 2002, having grown by almost 10 per cent in the preceding six years. This rate of growth exceeded both the national average and the average for the country's five largest urban centres. Population growth varied considerably throughout the urban area, but one of the most significant contrasts is that between the administrative City and the suburban Electoral Districts (EDs), with the latter showing a rate of increase that was almost five times higher. This differential has been established for some time, and the result is that the suburbs now contain over two-fifths of the population. As a consequence, Limerick is a significantly under-bounded city, in which the administrative boundaries come nowhere close to encompassing all of the city's population, built-up area or economic activity. Within the City itself there were huge variations in population change. At one end of the spectrum the city centre showed exceptionally high rates of increase, while at the other end, population levels declined quite precipitately in part of the Southill area. In general however, decline was widespread in the City, with two-thirds of City EDs losing population in this period.

Age Profile

The differential pattern of population change is both cause and effect of significant contrasts in age profile between areas. Several of the public housing estates, including those experiencing decline, have quite young age profiles with relatively high proportions of population aged less than 15 years of age. The association of population decline with youthful populations is somewhat unusual: where it occurs it is usually due to the out-migration from the area of older householders, often those aged in their 40s and 50s. The city centre is the domain of the young adult age groups, while the older residential areas in the City have comparatively high proportions of middle and older age groups. In general, with the exception of the city centre and some public housing estates, the age profile of EDs within the City is significantly older than that of the suburban EDs, and this is reflected in higher elderly dependency ratios.

Household and Family Structures

Associated with these differences in age structure are variations in household and family structures. Here again the main axis of differentiation is between city centre and suburbs. Whereas the majority of households in the suburbs are family based, households in the city centre are much more likely to be non-family households, many of them consisting of a single person. Family based households can be further differentiated with respect to the stage in the family cycle that they have reached, and it is evident that the various stages are more or less common in different parts of the city. Almost half of all pre-school families reside outside the City boundary, but within the City adult families (those where offspring are adults but still living at home with their parents) are more numerous. Particularly high rates of adult families prevail in the areas of public housing, and may well reflect problems that young people in these areas experience in accessing housing.

Labour Force and Employment

The labour force of Limerick urban area grew from 35,026 to 41,082 between 1996 and 2002, a rate of growth of 17 per cent. Much of this growth is the result of the 'demographic dividend' brought about by the maturing of the 'baby-boomers' of the late 1970s. However, it also reflects the economic expansion of the Celtic Tiger era, when jobs growth induced more people to enter the labour market. Altogether the number at work increased by 7,323, so after allowing for the extra 6,056 jobs needed to accommodate labour force expansion, there was a net increase in employment (i.e. a net decrease in unemployment) of almost 1,300. Significantly, the employment rate increased most in those parts of the urban area where unemployment has traditionally been highest. In this respect there was a degree of catching up of areas that had been lagging behind in employment terms.

Education and Social Class

Industrial restructuring and, particularly, the shift towards high technology sectors with greater requirements for skilled workers, means that educational attainment has emerged as perhaps the most important determinant of the individual's labour market prospects. The census data reveal marked differentials in levels of educational attainment throughout the urban area. By modern standards those whose educational attainment did not extend beyond lower secondary level could be considered to be at a disadvantage in the labour market. Such persons constitute up to two-thirds of all those who have ceased education in the Moyross, Ballynanty, Kileely, St. Mary's Park, Garryowen, Prospect and Southill areas. Given the importance of education in determining occupational status and hence social class, it is not surprising that the social class profile of these areas is dominated by the unskilled and semi-skilled social classes. Conversely the higher professional and managerial social classes constitute relatively high proportions of the population in areas where there are high levels of educational attainment. These include the North and South Circular Road areas of the City, and the southern suburbs.

Migration, Nationality and Culture

The 2002 census reveals a considerable degree of mobility in the population of Limerick urban area, with 12 per cent of the usually resident population reporting a different address one year prior to the census. Mobility levels are highest, at over 40 per cent, in the redeveloped areas of the city centre. Some of those who have changed address may have moved a comparatively short distance, possibly within the city itself. However, it is likely that for a significant number of persons, change of residence involved a longer distance move. Altogether, almost 9 per cent of the population was born outside the State, but this rises to 25 per cent in the city centre. While some of the foreign-born population are Irish nationals, there is now a substantial number of non-Irish nationals in Limerick. Again, the largest relative concentrations (though not necessarily the greatest absolute numbers) are found in the city centre. Several of the areas of highest relative concentration of non-nationals contain hostels and other accommodation for asylum seekers, suggesting that the latter group is one of the main components of the city's non-national population. The location of accommodation is also the key to the distribution of the city's indigenous ethnic minority, the Travelling Community, which is considerably more concentrated relative to the population at large than are non-nationals.

Housing

The high level of real estate development in the urban area in recent times is reflected in the fact that 17 per cent of all private households are accommodated in housing that has been constructed since 1995. Altogether 44 per cent of this new housing stock is located in the City. As well as the city centre, there was significant construction activity in the Market ED and the Rhebogue area. Almost all of the new housing in the city centre is in the form of flats and apartments, which now accommodate over 85 per cent of households in this area. Recent housing development has also been associated with a significant shift in the importance of the various categories of housing tenure. Between 1991 and 2002 the number of households owning their own dwelling and the number renting in the private sector both increased, but the number in local authority rentals decreased. The sector with the most significant rate of growth was the private rented sector, where the number of households almost doubled. In the quayside EDs of Shannon A and Dock A approximately three-quarters of households rent their dwelling in the private market. The increase in private rentals reflects both greater supply and changes in housing policy, in particular rapid increase in numbers availing of the rent supplement scheme.

Travel, Transport and Communications

Analysis of the census data on daily travel reveals a significant level of congestion in Limerick, linked partly to high levels of car usage.The median distance travelled to work, school or college is 2.5 miles for City residents and 3.3 miles for those in the suburbs. However, the median times taken for these journeys are 17.4 minutes and 18.4 minutes respectively. This suggests that average speeds of travel are comparatively slow, especially when it is considered that about two-thirds of all commuters in the urban area travel by car or other motorised means of transport.

Travel distances depend on the mode of travel used, as well as the accessibility of workplaces and schools. Surprisingly, less than one-third of commuters resident in the city centre travel less than two miles, implying that the majority have destinations located outside the centre. Levels of car ownership vary considerably throughout the urban area, but are generally lowest in the centre and in the local authority estates. In contrast, almost half of households in the outer suburban areas have two or more cars, and typically 70 per cent of commuters in these areas travel by car to workplaces and schools. High levels of car ownership are mainly due to higher household incomes, and the latter factor also underlies higher levels of access to the Internet in these areas. While 40 to 50 per cent of households in areas such as the North Circular Road, Castletroy, Dooradoyle / Raheen and Corbally / Westbury had Internet access in 2002, the corresponding percentage in each of St. Mary's Park, Prospect and Southill was less than 14 per cent.

Social Exclusion

Despite the economic growth of the late 1990s, social exclusion remains a major problem in the Limerick urban area. The depth and extent of the problem is revealed by the fact that, since 1991, Limerick City has consistently ranked as the second most disadvantaged of the 34 local authority areas in Ireland. Moreover, the single most disadvantaged census tract in the country, based on the 2002 census, is located in the City. A nationally-normed measure of affluence/ deprivation based on the 2002 census shows the city to be characterised by a marked social polarisation, in that there is a very high proportion of areas that are either considerably more affluent, or considerably more disadvantaged, than average. This polarisation has a strong geographical expression, and there exists a sharply defined 'corridor of disadvantage', which extends from Moyross in the northwest of the urban area, through King's Island in the centre, to Garryowen, Prospect / Weston and Southill on the south side.

The geography of deprivation has remained relatively stable in recent years. While all areas in Limerick showed an improvement in their absolute scores on the affluence/ deprivation scale between 1991 and 2002, levels of improvement tended to lag behind the national average, so that most areas disimproved in terms of their relative deprivation scores. There was some tendency for relative improvement to be greatest in the most disadvantaged areas, so that the gap between areas can be said to have narrowed somewhat in this period. However, improvement was neither sufficiently strong, nor sufficiently focused on the more deprived areas – some of which marginally disimproved – to have wrought any significant change.

Social Areas in Limerick

Varied and complex though the social geography of Limerick is, nevertheless it can be substantially understood in terms of four key ways in which areas differ from each other. Essentially, areas in the city vary in terms of: (i) the degree of population mobility and diversity, or what social geographers refer to as the level of 'urbanism'; (ii) socio-economic status; (iii) labour market engagement; and (iv) the degree of ageing of the population. When these four dimensions of variation are taken into account simultaneously, the 43 census tracts that comprise the urban area can be grouped into six distinct types of social area. These are: (a) the suburbs, characterised by youthful populations and high socio-economic status; (b) the city centre, where a high degree of urbanism is expressed in high mobility and cultural diversity; (c) mature working class areas, distinguished by older populations and family-based households; (d) prosperous older areas in which high socio-economic status combines with ageing populations; (e) local authority rented housing characterised mainly by low socio-economic status; and finally (f) student Limerick, consisting of two areas where low levels of labour market engagement reflects large resident populations of third-level students.

Issues and Problems

Arising from the analysis of the city's external and internal relationships presented in this profile, a number of significant and closely interlinked issues that will require attention over the medium term can be identified. The most significant of these are as follows.

- The designation of the city as a Gateway in the National Spatial Strategy presents opportunities for development but also poses a number of challenges. For the city to fulfil its role in the NSS it needs to develop and diversify its industrial base considerably, in particular through the expansion of indigenous manufacturing and traded services.
- The city's labour pool needs to be augmented by improvement of access to and from the city, including upgrading and expansion of the public transport system in the city's hinterland.
- The City boundary needs to be extended outwards so that it is more commensurate with the de facto built-up area, thereby allowing for more effective and socially progressive physical planning. Failing this, there is a need for much greater, and possibly more formally structured, co-ordination of land use and transportation planning in the urban region.
- The City's residential communities are beginning to show signs of ageing, and this will intensify over the coming years. Public service providers need to take account now of the implications of this process. Physical planning in residential areas should have as an explicit objective the promotion of a more balanced social and demographic profile.
- Greater diversity of population, in terms of household and family structures as well as in cultural and ethnic terms, means that service providers must be prepared to respond to a greater range of needs arising from a more varied client base.
- The decline in local authority rentals, combined with sharp population loss in some local authority estates, points to underlying and deep-rooted problems in the latter areas, and constitutes a prima facie case for a review of public housing policy.
- The degree of social polarisation and social segregation must be addressed. The reduction of socio-spatial polarisation is not just desirable on grounds of social equity: the problem represents a major constraint on the city's ability to fully realise its potential, and as such it must be of concern to all involved in the city's development.

1. *See section 3.1 for a precise definition of Limerick urban area.*

1. introduction

Limerick City is located at the lowest bridging point of the River Shannon. It has been a centre of trade since Viking times, and is one of the oldest chartered cities in Ireland. The original city occupied a defensive island site located between the Shannon and its tributary, the Abbey River. This area of King's Island forms the historic core of what is now the third largest urban area in the State, and the industrial, commercial, administrative and cultural capital of the Mid-West Region.

Limerick has undergone extensive and profound change in recent times, as an array of processes operating at the global, the national and the local level have transformed the place and its people. Ireland's on-going integration into the global system of production has been reflected in the restructuring of the city's economic base. Older, indigenous businesses, in traditional sectors such as the food industry and textiles and clothing, have gone out of existence, to be replaced by newer, overseas employers, many of them in the so-called high-technology sectors such as bio-technology and electronics. In hand with this economic change, the physical fabric of the city has been radically overhauled, and Limerick is currently in the midst of the most extensive re-construction since the development of Newtown Pery at the end of the eighteenth century. All of this has occurred in a context of intense demographic and social change, with the 'baby boomers' of the 1970s swelling a labour force already greatly expanded by increased rates of female participation. For many of the younger workers, increased prosperity and changed social norms, in conjunction with the physical developments in the city centre, have allowed a style of living that is radically different to that of a generation ago. Finally, the city's economic boom has attracted to it a significant wave of new immigration that has greatly increased the cultural diversity of its population. No less than the presence of transnational companies on the city's industrial estates and business parks, or of international retail chains in its shopping centres, the new immigrants attest to the on-going globalisation of the local economy.

The purpose of this profile is to chart the outcomes of these changes, by providing a comprehensive and systematic account of the present day social and economic geography of the Limerick urban area. To achieve this, a range of data sources is used, but the most important of these is the small area population statistics derived from the census of population. The profile commences (Section 2) with an overview of the role of the city as a regional capital, and, in the context of the National Spatial Strategy, a centre of emerging significance in national terms. Particular attention is given to the main forms of economic restructuring that have occurred in recent years. The central part of the profile (Section 3) examines the highly differentiated way in which that restructuring has been played out in the city, by looking at the geographical distribution, at the level of the census district, of a wide range of demographic, economic, social and cultural variables. In Section 4 an analysis of these variables is undertaken that allows the complex social geography of the urban area to be distilled into a series of five summary maps, the last of which divides the city into six distinct types of social area. The profile concludes (Section 5) by identifying a number of key emerging issues in the city's development that must be addressed if the growth of recent years is to be translated into sustainable forms of development.

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2. limerick in its national and regional context

The population of Limerick City and its environs[2] was recorded as 86,998 in 2002, having grown by almost 10 per cent in the preceding 6-year period. This growth rate exceeded that for the State as a whole (8 per cent) and places Limerick second highest among the country's five major urban centres.[3] The city dominates the settlement system of the Mid-West Region, with a population almost four times that of the next largest centre, Ennis (Table 1). The region in fact is relatively rural in character, with 57 per cent of its population living in rural areas[4] compared to just 40 per cent for the State as a whole. Limerick accounts for over one-quarter of the region's population.

Table 1: Distribution of Population, Mid-West Region

Settlement size	No. of centres	Total Population	Percentage of Region's Population
50,000 – 100,000	1	86,998	25.6
10,000 – 50,000	1	22,051	06.5
5,000 – 10,000	3	22,440	06.6
1,500 – 5,000	5	15,247	04.5
Rural areas		192,830	56.8

***Source**: CSO Census of Population 2002. Vol. 1.*

The area covered by the Limerick Planning, Land Use and Transportation Study includes not just the built-up urban area but also many rural areas that can be described as peri-urban, in that the socio-economic profile of their inhabitants is similar to that of urban dwellers. Together these areas form the functional region of Limerick, which stretches from Ennis and Nenagh in the north, to Newcastle West and Kilmallock in the south. The population of this region is estimated at 236,000 in 2002, representing 69 per cent of the Mid-West total. According to the National Spatial Strategy (NSS), this is projected to grow to 260,000 by 2020, if current trends in economic growth and population distribution continue. However, under a scenario of somewhat higher economic growth, and, more importantly, with re-distribution of economic activity and population consequent on the adoption of the NSS, the city-region population could reach 280,000. A region of this scale is of sufficient size to sustain a very broad level of functions that can provide the basis for a dynamic approach to regional development in accordance with the objectives that underpin the National Spatial Strategy.

The relative strength of the city-region economy can be ascertained from some summary indicators for Limerick City and County and the Mid-West Region (Table 2). Between 1996 and 2001 per capita disposable income in Limerick City and County grew by over two-thirds. This was the fastest rate of increase in the region, and exceeded the national growth rate in this period of rapid economic expansion. The result was that, by 2001, Limerick had consolidated its position as the third most prosperous county in the State in terms of per capita disposable income.

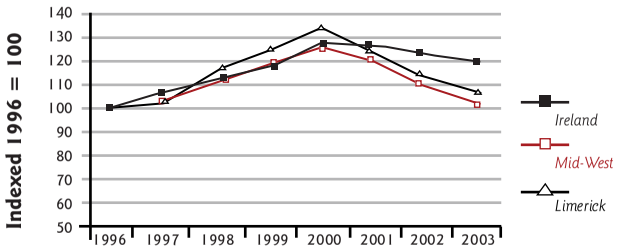
Table 2: Per Capita Disposable Income, 1996-2001

	Disposable Income Per Capita 1996 (€)	Disposable Income Per Capita 2001 (€)	% Growth Rate 1996-2001
Limerick City & County	9,740	16,354	67.9
Mid-West Region	9,481	15,596	64.5
Ireland	9,641	15,953	65.4

***Source** CSO County Incomes and Regional GDP, 2001. Data is not available for Limerick City alone.*

Strong growth in manufacturing and internationally traded services was central to the performance of the local economy in this period. Employment growth in these sectors, in companies assisted by the State's industrial promotion agencies, was particularly rapid from 1996 to 2000 (Fig. 1), the period of most rapid growth in the national economy. In the Mid-West Region as a whole, employment grew by just under 7,000 jobs, with Limerick City and County accounting for 62 per cent of the increase. By contrast, the period from 2000 to 2003 was characterised by a contraction of employment in agency-assisted firms, nationally, regionally, and locally. The downturn in Limerick and the Mid-West Region was more severe, in relative terms, than in the rest of the country. Even so, there were over 1,000 extra agency-assisted jobs in the City and County in 2003 as compared to 1996 (Table 3). Remarkably, foreign-owned firms accounted for almost the entire net job gain, and the industrial base now shows a strong orientation towards the foreign-owned sector. In 2003, 65 per cent of agency-assisted jobs in the City and County were in foreign-owned firms, as compared to a level of 50 per cent for the State as a whole. Nationally, the increasing importance of foreign-owned firms has been accompanied by a refocusing of activities towards the advanced (high-technology) sectors. This is also true in Limerick, yet net output per employee (i.e., productivity) is substantially below the national average, suggesting that the occupational profile is relatively low skilled.

Figure 1: Employment Trends in Agency-Assisted Firms 1996 - 2003



***Source:** Forfás Employment Survey Database, 2004*

Table 3: Industrial Indicators for Limerick City & County and the Mid-West Region

	Limerick	Mid-West	Ireland
1: Net full-time employment gain 1996-2003, all firms	1,018	1,167	49,972
2: Net full-time employment gain, Irish-owned firms	6	-203	22,207
3. Net full-time employment gain, foreign-owned firms	1,012	1,370	27,765
4. Percentage of full-time jobs in foreign-owned firms, 2003	065.3	064.2	050.3
5. Net output per person engaged, 2001 (€000s)	139.9	103.6	210.1

Source: *1–4 Forfás Employment Survey Database, 2004; 5 CSO Census of Industrial Production, 2001*

Manufacturing is the dominant employment sector for the labour force of the city, both in absolute terms and also relative to the national employment profile. Altogether this sector employs 1 in 5 of the city's workers, as compared to roughly 1 in 7 nationally (Table 4). Parallelling the trend in the county and region, the city's manufacturing base has undergone substantial restructuring in recent years, as newer industries such as electronics and computers have superseded older, more traditional activities in the food industry and in textiles and clothing. Employment in the distributive services is also substantial in absolute terms, though broadly in line with what would be expected in a city the size of Limerick. More significant is the business services sector, where the employment level of over 4,000 workers is over one-quarter higher than expected on the basis of the city's population. The importance of third level institutions serving both the national and regional populations is reflected in an employment level in education of 2,779, or 8 per cent of the total at work in Limerick.

The restructuring of the city's (and the region's) economic base towards high technology industries has been accompanied by changes in the locations of businesses. While firms operating from more central locations dominated the older, traditional industries, firms in the newer sectors are more likely to locate on the industrial estates and business parks on the outskirts of the city. The largest of these, at Raheen, Corcanree, Galvone, the Ballysimon Road and the National Technological Park now constitute significant employment locations relative to the city centre. Other manufacturing centres throughout the region, and especially those in the Shannon Estuary area (including Shannon, Aughinish, Askeaton, and Foynes) are also significant sources of employment for city residents. With workers commuting to and from these centres, the city now forms the hub of a complex multi-nodal functional region.

Table 4: Employment in Selected Sectors, 2002, Limerick City and Environs

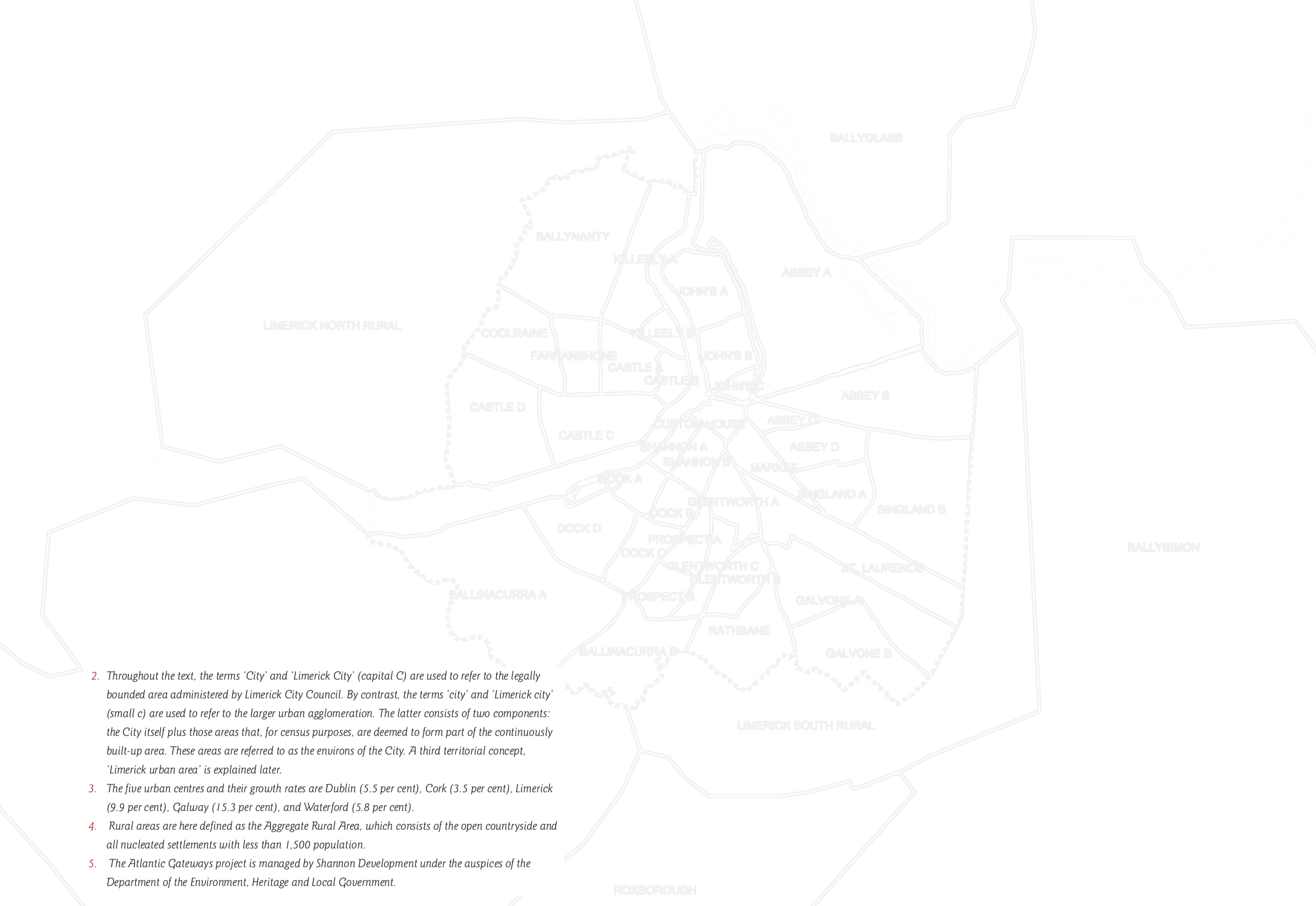
Sector	Number at Work 2002	Sector's Share of Total at Limerick	Sector's Share of National Total at Work
Manufacturing	7,204	20.8	14.9
Wholesale and retail trade	4,838	14.0	13.4
Transport, storage and communications	2,570	07.4	05.9
Real estate, renting and business activities	4,055	11.7	09.2
Education	2,779	08.0	06.7
Health and social work	2,980	08.6	08.7

Source: *CSO Census of Population 2002. Vol. 5.*

The decline of traditional industries in the 1970s and 1980s resulted in the decay and dereliction of large parts of the urban fabric. However, the urban renewal scheme introduced nationwide in 1986 has rejuvenated the city centre. Limerick was a major beneficiary under the scheme, with a higher level of investment in the city during the first 10 years of its operation than for any other urban centre outside Dublin. On a per capita basis, the city attracted the highest level of investment in the State. More significantly, the scheme helped to leverage substantial redevelopment activity on city centre sites outside of the designated areas, and on an on-going basis. The scale of recent construction is unparalleled since the development of Newtown Pery in the Georgian era, with the result that a major part of the urban fabric, especially in the area between the river and O'Connell Street, is newly built.

Urban renewal has greatly increased the attractiveness of Limerick as a centre for tourism and for business investment. This in turn is crucial to the city's role as one of nine Gateways designated in the National Spatial Strategy (NSS). Fundamental to the thinking underpinning the Gateway concept is that these centres will be internationally competitive in terms of attracting foreign direct investment. In order to fulfil this function, Gateways must provide the kinds of locational conditions demanded by advanced manufacturing and internationally traded services. In addition to skilled labour and high quality business services, these include good access to international transportation and communications, especially airports, a vibrant research infrastructure underpinned by centres of knowledge creation in the university and third level sector, and a high level of environmental, social and cultural amenity. Finding centres outside of Dublin that can meet these conditions at the required level will be a major challenge, and it may be that this can only be done through linking together a number of different centres. It is this consideration that has led to the development of the Atlantic Gateways project which aims to identify how Galway, Limerick, Cork and Waterford can collaborate to advance the development of the south and west of Ireland as a polycentric urban region.[5] With its strategic location close to the centre of this region, Limerick is well placed to benefit from the future articulation of this project.

In summary, recent developments and the current thrust of spatial policy have elevated Limerick from the status of a regional capital to that of an urban centre of national significance. The city has tremendous potential for development, and can play a key role in achieving a more balanced development of the national territory. However, further significant investment is required, both within the city itself and in the development of its links to other urban centres, if it is to fully realise that potential.



2. *Throughout the text, the terms 'City' and 'Limerick City' (capital C) are used to refer to the legally bounded area administered by Limerick City Council. By contrast, the terms 'city' and 'Limerick city' (small c) are used to refer to the larger urban agglomeration. The latter consists of two components: the City itself plus those areas that, for census purposes, are deemed to form part of the continuously built-up area. These areas are referred to as the environs of the City. A third territorial concept, 'Limerick urban area' is explained later.*
3. *The five urban centres and their growth rates are Dublin (5.5 per cent), Cork (3.5 per cent), Limerick (9.9 per cent), Galway (15.3 per cent), and Waterford (5.8 per cent).*
4. *Rural areas are here defined as the Aggregate Rural Area, which consists of the open countryside and all nucleated settlements with less than 1,500 population.*
5. *The Atlantic Gateways project is managed by Shannon Development under the auspices of the Department of the Environment, Heritage and Local Government.*

3. the urban mosaic: a socio-spatial profile of limerick

3.1 Defining the Urban Area

Like all large urban centres, Limerick is a complex mosaic of demographic, economic and social patterns. This part of the profile looks in turn at these aspects of the city's internal geography, focusing on key indicators that are representative of each dimension. The commentary is based on a series of maps that show the variation of each indicator (or variable) across spatial units known as Electoral Divisions (EDs). The variables are calculated from data taken mainly from the 2002 census of population. Supplementary data from earlier censuses are also used occasionally to illustrate change over time. The geographical area covered by the maps includes the administrative City of Limerick, consisting of 37 EDs, plus a further 6 EDs in County Limerick and County Clare that contain significant parts of the environs of the City, as defined for census purposes. The EDs in question, and the main suburbs that they contain, are listed in Table 5. The ED of Ballyvarra in County Limerick, which also contains part of the environs, is not included in this analysis, partly because of its greater distance from the City, but mainly because a much lower proportion of its population is located in the environs (Table 6). The location of all the EDs covered by the analysis is shown on **Map 1**. Together the City and the 6 suburban EDs will be referred to henceforward as the Limerick urban area.

Table 5: Suburbs of Limerick included in the Map Analysis

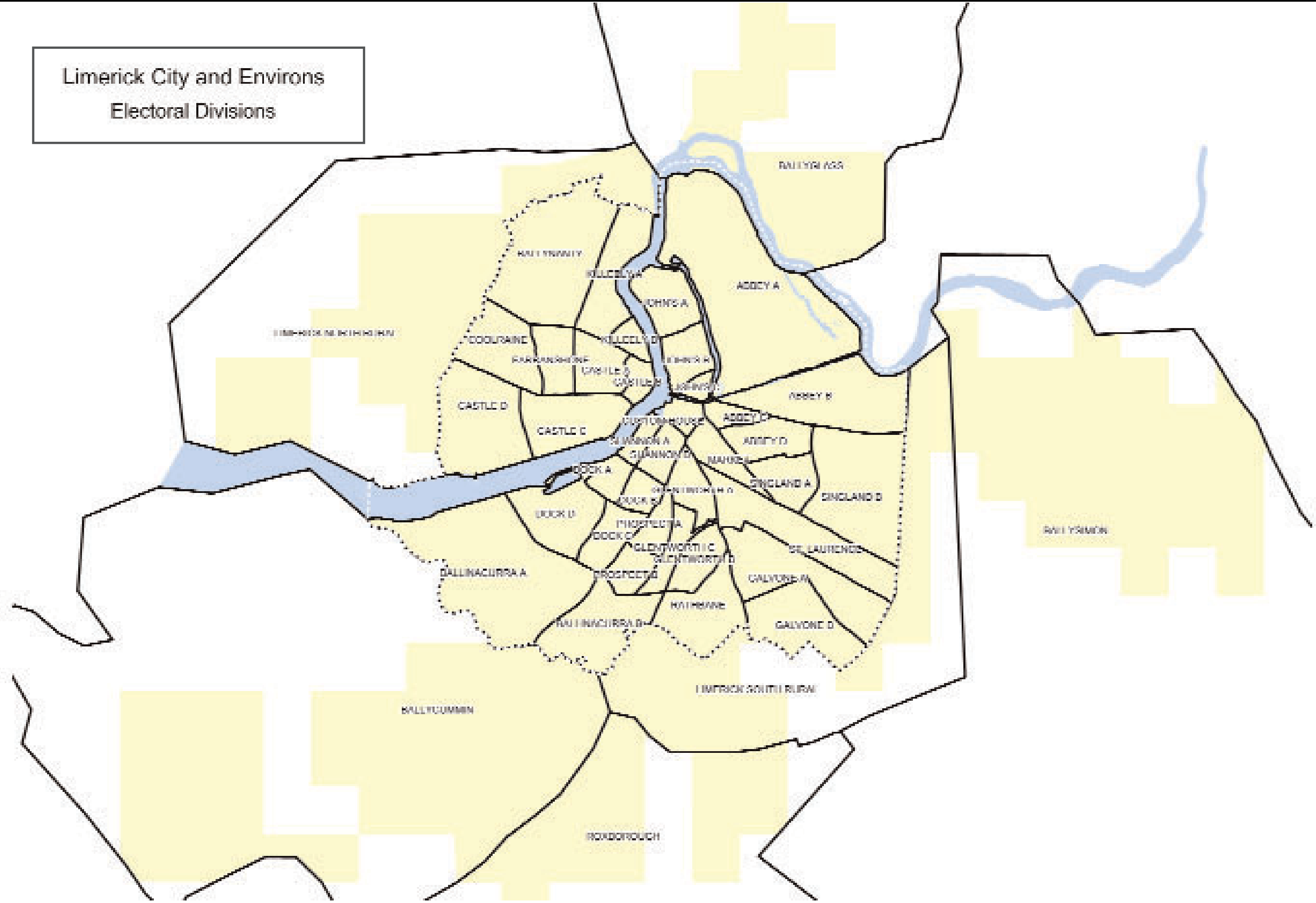
ED	Suburbs Included
County Limerick	
Ballycummin	Dooradoyle, Raheen, Ballykeeffe, Gouldavoher
Ballysimon	Milford, Castletroy, Monaleen, Kilbane
Limerick North Rural	Caherdavin, Aylesbury, Clonmacken, part of Moyross
Limerick South Rural	Bawnmore
Roxborough	Ballysheedy, Ballyclough
County Clare	
Ballyglass	Shannon Banks, Westbury, Parteen

Table 6: Population of EDs containing Limerick Environs

ED	Total Population 2002	Population in Environs	Percentage in Environs
Ballycummin	13,435	12,382	92.2
Ballyglass	4,938	3,851	78.0
Ballysimon	9,675	8,380	86.6
Limerick North Rural	6,932	6,427	92.7
Limerick South Rural	0,980	0,959	97.8
Roxborough	1,678	0,544	32.4
Sub-total	37,638	32,543	86.5
Ballyglass	3,740	0,432	11.6
Total	41,378	32,975	79.7

Several points need to be made in relation to the construction and interpretation of the maps. First, because of their lower population density, the suburban EDs are much larger in area than those located inside the City boundary. As a result, the former EDs tend to dominate the visual impact of maps of the urban area, even though large parts of them have little, if any, resident population. This is potentially misleading it itself, and by reducing the scale at which maps can be produced, it makes the discernment of patterns within the City more difficult. To overcome this problem, representation of the outlying EDs on the maps is confined to just the built-up area adjacent to the City. This area was identified and delimited for each suburban ED by examining the distribution of population across a series of 0.5 kilometre square grids (i.e. each grid square has an area of 0.25 km2). This methodology can be considered to give a close approximation to the environs of Limerick as used by the census authorities, though the use of grid squares gives to the maps a slightly over-regular, 'geometric', appearance in the outlying areas. Second, almost all the maps are based on the categorisation of the 43 EDs into just 5 different classes. While this is done in a way that groups similar areas together, it is inevitable that in some cases there may be a considerable difference between EDs within the same class. Finally, it should be borne in mind at all times that the descriptions that follow are profiles of areas and not of individuals: it must not be assumed that a given individual, family or household in an area will exhibit the aggregate characteristics of the area.

Map 1:



The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.

SCALE 1:60,000
0 .5 1
Kilometer

N

City Bounds
Electoral Division Bounds
Redgate City Locations

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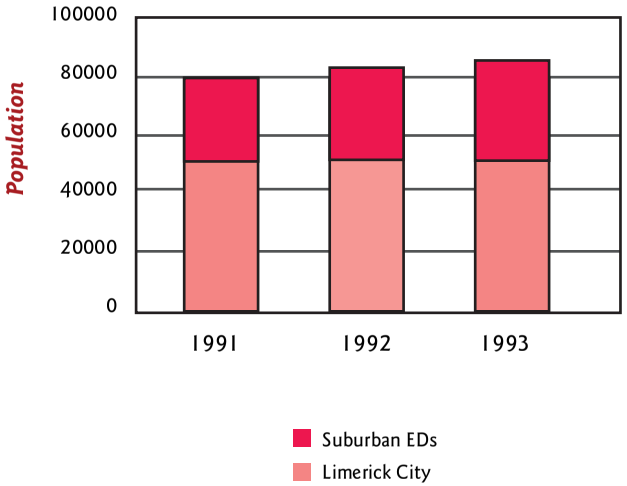
Limerick City Council
Source: CSO 2002

3.2 Population Distribution and Change

Limerick urban area (i.e. the 43 EDs in total) showed strong population growth in the period 1996-2002. However, population increase was unevenly distributed. The City, which grew by 3.8 per cent, accounted for one-quarter of the overall increase, while the suburban EDs, growing at a rate of 18.6 per cent, accounted for the remainder. This divergence in growth as between City and suburbs persisted throughout the 1990s (Fig. 2). As a result, the suburban EDs now contain 41 per cent of the total population of the urban area. Clearly, Limerick is a significantly under-bounded city, in that the administrative limits come nowhere close to encompassing all of the city's population or built-up area.

Figure 2: Population Distribution Limerick City and Suburbs, 2002

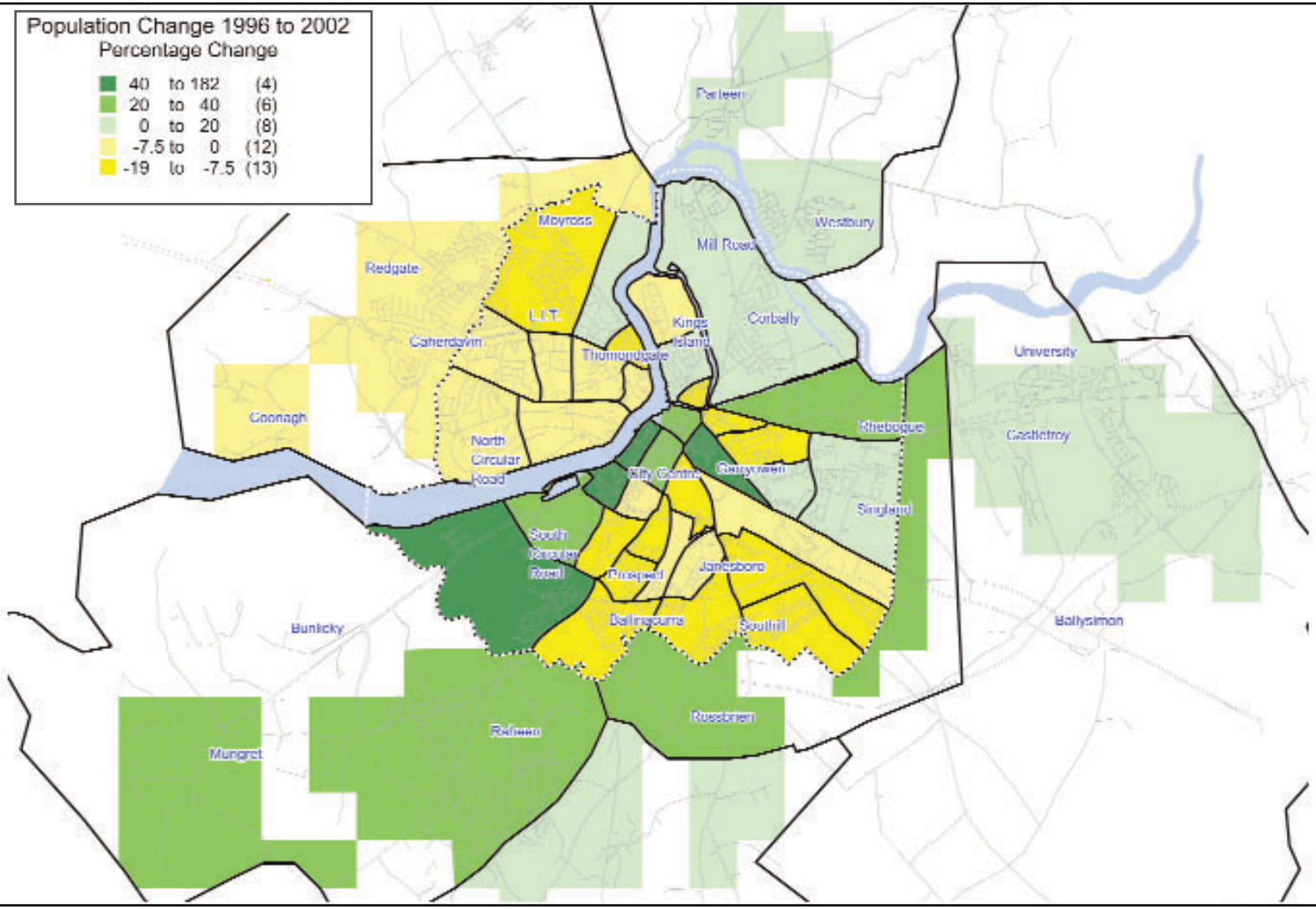


There was even greater variation in population change at the level of the EDs. Generally speaking, the highest growth rates were recorded in the city centre and the suburbs, especially those to the south of the City **(Map 2)**. The growth in the city centre was due in large part to on-going urban renewal activity in the form of apartment construction, especially in the area along the quays, which has induced a high level of migration into the area (see Map 29). This continues a trend first established in these areas in the early 1990s, and represents welcome evidence of population recovery in the urban core, after a prolonged period of decline. The most spectacular growth was in the ED of Dock A, which extends from Steam Boat Quay to the Crescent and from Mallow Street to St. Alphonsus Street. Here an increase of 1,212 persons resulted in almost a trebling of population. Other areas within the City that showed significant growth, both in percentage and absolute terms, included the South Circular Road / Courtbrack Avenue areas, Market ED, and Rhebogue. All of these areas have seen significant new housing construction in recent years (see also Map 34). By far the highest absolute level of population growth – an increase of over three and a half thousand persons – was recorded in the suburban Ballycummin ED to the south of the City, which contains the suburbs of Dooradoyle, Raheen and Gouldavoher. This reflects the continuing spread of suburban development in this area.

With the exception of the city centre EDs, population decline was widespread within the City boundary, where almost two out of every three EDs (24 out of 37) lost population between 1996 and 2002. This included all of the EDs on the northside of the river with the sole exception of Kileely A, which showed just a marginal increase. In many of these areas, decline is the result of population movements associated with the maturing of older residential communities, and in some the absolute level of decrease is not very high. The districts that stand out as having high rates of decrease that involve significant numbers of people are the EDs of Galvone B and Rathbane, which correspond to the Southill area of the city.

Galvone B, which contains the estates of O'Malley Park and Keyes Park, lost close to one-fifth of its population (462 persons). This rate of decrease is so high as to suggest that there is an element of differential out-migration involved, i.e., out-migration in excess of what might be expected from the normal maturing of the area. The population of Galvone B has shown consistent decline at every census since 1981.

Map 2:


Population Change 1996 to 2002
Percentage Change
40 to 182 (4)
20 to 40 (6)
0 to 20 (8)
-7.5 to 0 (12)
-19 to -7.5 (13)
Parteen
Moyross
Westbury
Mill Road
Redgate
L.I.T.
Kings Island
Corbally
Caherdavin
Thomondgate
University
Coonagh
Rhebogue
Castletroy
North Circular Road
City Centre
Garryowen
Singland
South Circular Road
Prospect
Janesboro
Dalligcourt
Southill
Ballysimon
Bunlicky
Raheen
Rossbrien
Mungret
The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.
SCALE 1:60,000
0 .5 1
Kilometer
N
City Bounds
Electoral Division Bounds
Hodgate
City Locations
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Limerick City Council
Source: CSO 2002

3.3 Age Structure

It is with respect to the age structure of the population that some of the most marked contrasts are found between different areas of the city. These contrasts are of significance because of their implications in terms of the demand for local services: areas with different age profiles tend to require different kinds of services and facilities. In general, the age profile in the urban area shows a degree of maturation, brought about by a sharp drop in the birth rate in the 1980s (Fig. 3). The effects of this decrease are discernible in the contraction of the population pyramid in cohorts aged less than 20 years of age.

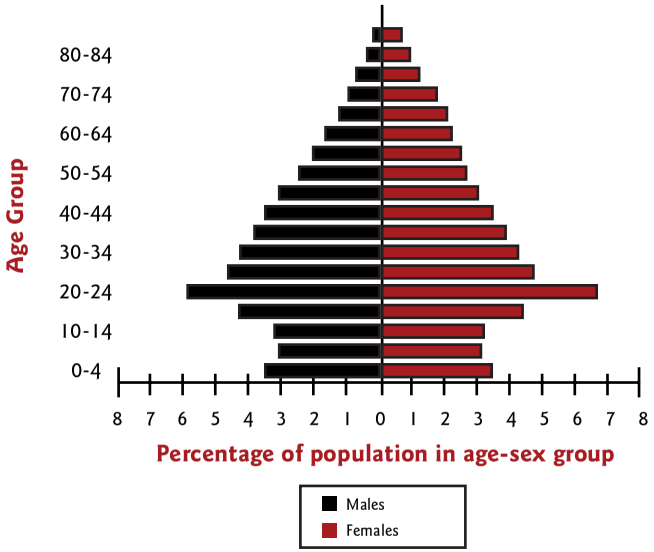
Focusing first on the younger segment of the population, relatively high proportions of children are evident in areas to the north and southeast of the city centre **(Map 3)**. In the former area, Moyross and St. Mary's Park have particularly high proportions of children, but the rate is also relatively high in Kileely, Corbally and Westbury. To the south, the O'Malley Park / Keyes Park area again stands out, with slightly lower rates in Weston, Rathbane and Singland. In contrast, all of the EDs in the city centre have low proportions of children. Low child densities also prevail along the Ennis Road and South Circular Road, as well as in the Castletroy area, where the largest cohort is that aged 15-24 years, and the percentage of the population accounted for (41.8 per cent) is the highest in the city **(Map 4)**. This is due to the concentration of students in the vicinity of the university, and a similar explanation applies in the case of Dock D where a large proportion of the population is resident in accommodation for students of Mary Immaculate College.[6] The city centre and quays are also characterised by high percentages of young adults, reflecting the predominance of private rented housing in the form of flats and apartments in this area (see Maps 35 and 38).

The city centre also shows high proportions of population in the key, economically active, 25-44 years age group, as do the southern suburbs and the Rhebogue and Singland areas on either side of the Dublin Road (Map 5). By contrast, this age group is relatively underrepresented in Castletroy, Ballinacurra Weston, King's Island, and throughout much of the northside of the city. Low proportions in the latter case once again reflect the maturation of this area, and the next two maps, which show the distribution of the older age cohorts, confirm this. The North Circular Road, Ennis Road, and Thomondgate have relatively high percentages of both middle-aged **(Map 6)** and elderly **(Map 7)** populations, as does Prospect and the Hyde Road area. The percentage of population aged 65 years and over is also high in the area from Nicholas Street to Island Road and the Lee Estate, as well as the Garryowen, Janesboro and South Circular Road areas.[7] Overall there is a very high degree of polarisation on this variable: most EDs show either relatively high or very low percentages of elderly population, with correspondingly few in the middle range of the variable. The key contrast is that between the City and suburbs: the elderly population is mainly concentrated within the City, with all of the outlying districts showing relatively low percentages of older persons. However, elderly population shows little correlation with measures of housing tenure: high percentages of elderly population are as likely to be found in areas of owner-occupied housing as in areas where renting is more common.

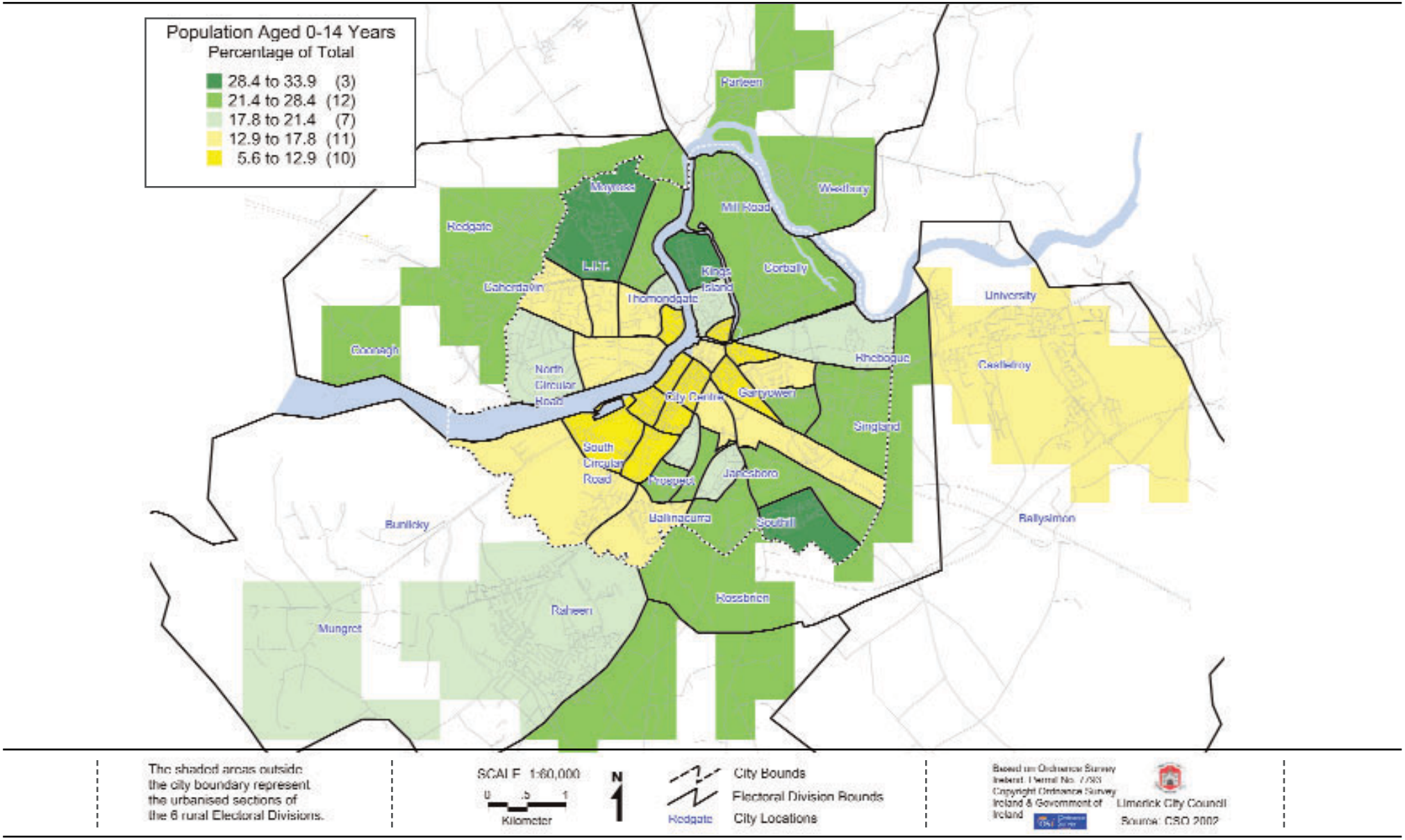
The variations described above are summarised in the next three maps, which illustrate the spatial distributions of the youth dependency ratio, the elderly dependency ratio and the vitality ratio. The youth and elderly dependency ratios measure the population aged less than 15 years and over 65 years respectively, per thousand of population aged 15 to 64 years. Reflecting the distribution of population aged 0-14 years, the youth dependency ratio **(Map 8)** is highest in EDs within the City that contain large local authority housing estates (in particular O'Malley Park and St. Mary's Park, but also Moyross, Kileely and Weston / Rathbane). The ratio is low in the city centre, where children form a very small part of the resident population. The elderly dependency ratio **(Map 9)** is also low in the city centre, but the main contrast is between the suburban areas and the rest of the city. While no fewer than 26 of the 37 City EDs (i.e., 70 per cent) have an above average elderly dependency, all of the suburban areas have below average ratios.

The vitality ratio **(Map 10)** measures population in the main family forming age range (aged 20-40 years) relative to that in the older (60 years and over) age group. As such, it is a measure of the 'demographic potential' of the population. This ratio is particularly high in the redeveloped areas of the city centre, specifically the quayside EDs of Dock A and Shannon A, which, as illustrated above, are characterised by concentrations of young adults. However, it is by no means certain that the demographic potential in these areas will eventually translate into a growing child population. Survey evidence from similar areas in Dublin suggests that it is more likely that young people will move out of these areas to suburban locations if / when they begin the process of family formation. The vitality ratio is particularly low along the North Circular Road and Ennis Road, in Garryowen, and to a lesser extent Janesboro.

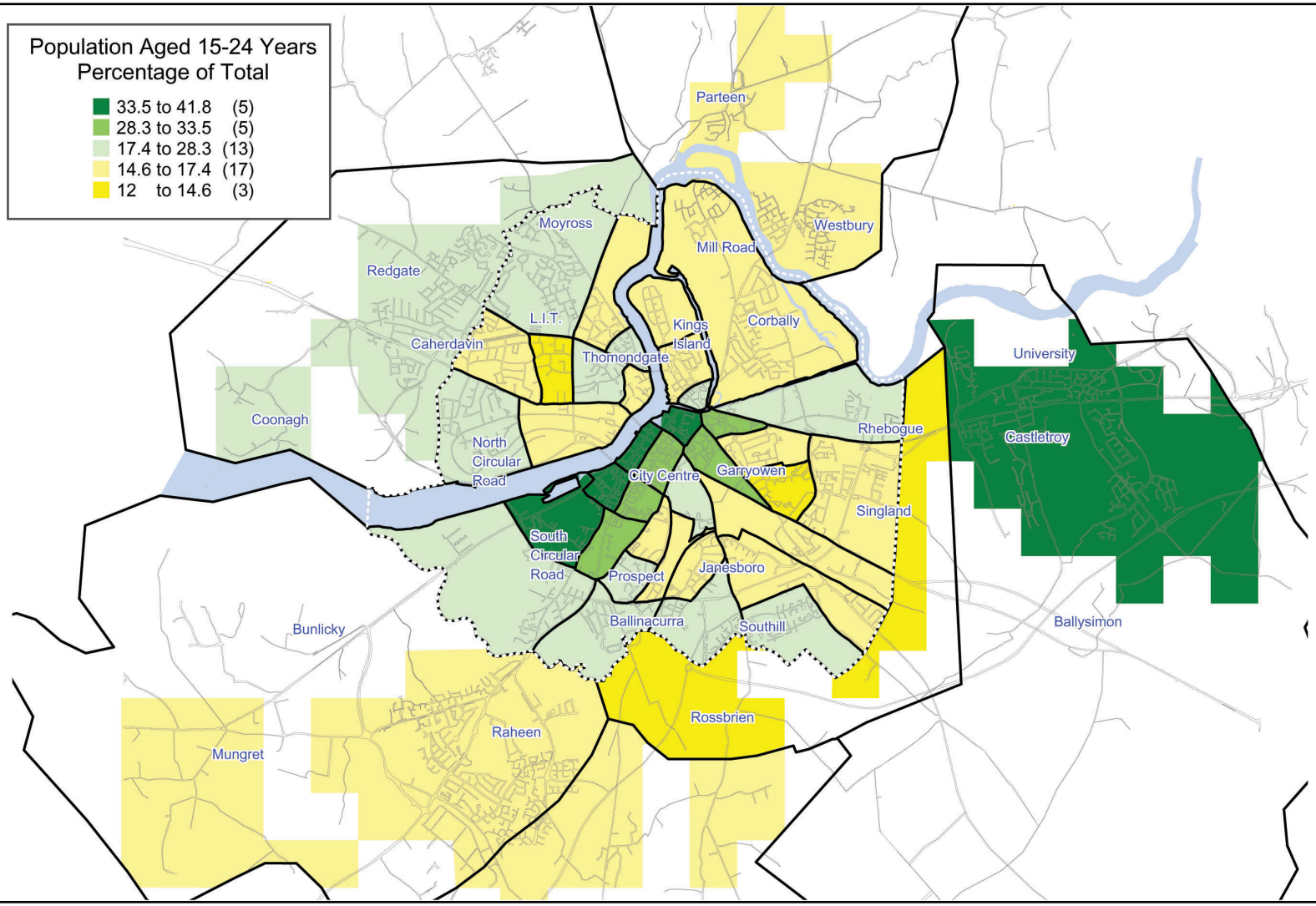
Figure. 3: Population by Age and Sex
Limerick Urban Area, 2002



Map 3:


Population Aged 0-14 Years
Percentage of Total
28.4 to 33.9 (3)
21.4 to 28.4 (12)
17.8 to 21.4 (7)
12.9 to 17.8 (11)
5.6 to 12.9 (10)
Parteen
Weelbury
Mayorstone
Mill Road
Rhodgate
Corbally
Caherdavin
Thomondgate
University
Garryowen
Singland
Janesboro
Ballinacurra
Southill
Ballysimon
Raheen
Mungret
Rossbrien
The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.
SCALE 1:60,000
Kilometer
City Bounds
Electoral Division Bounds
City Locations
Limerick City Council
Source: CSO 2002

Map 4:


Population Aged 15-24 Years
Percentage of Total
33.5 to 41.8 (5)
28.3 to 33.5 (5)
17.4 to 28.3 (13)
14.6 to 17.4 (17)
12 to 14.6 (3)
Parteen
Moyross
Westbury
Mill Road
Redgate
L.I.T.
Kings Island
Corbally
Caherdavin
Thomondgate
University
Coonagh
Rhebogue
Castletroy
North Circular Road
City Centre
Garryowen
Singland
South Circular Road
Prospect
Janesboro
Bunlicky
Ballinacurra
Southill
Ballysimon
Rossbrien
Raheen
Mungret
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SCALE 1:60,000
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City Bounds
Electoral Division Bounds
Redgate
City Locations
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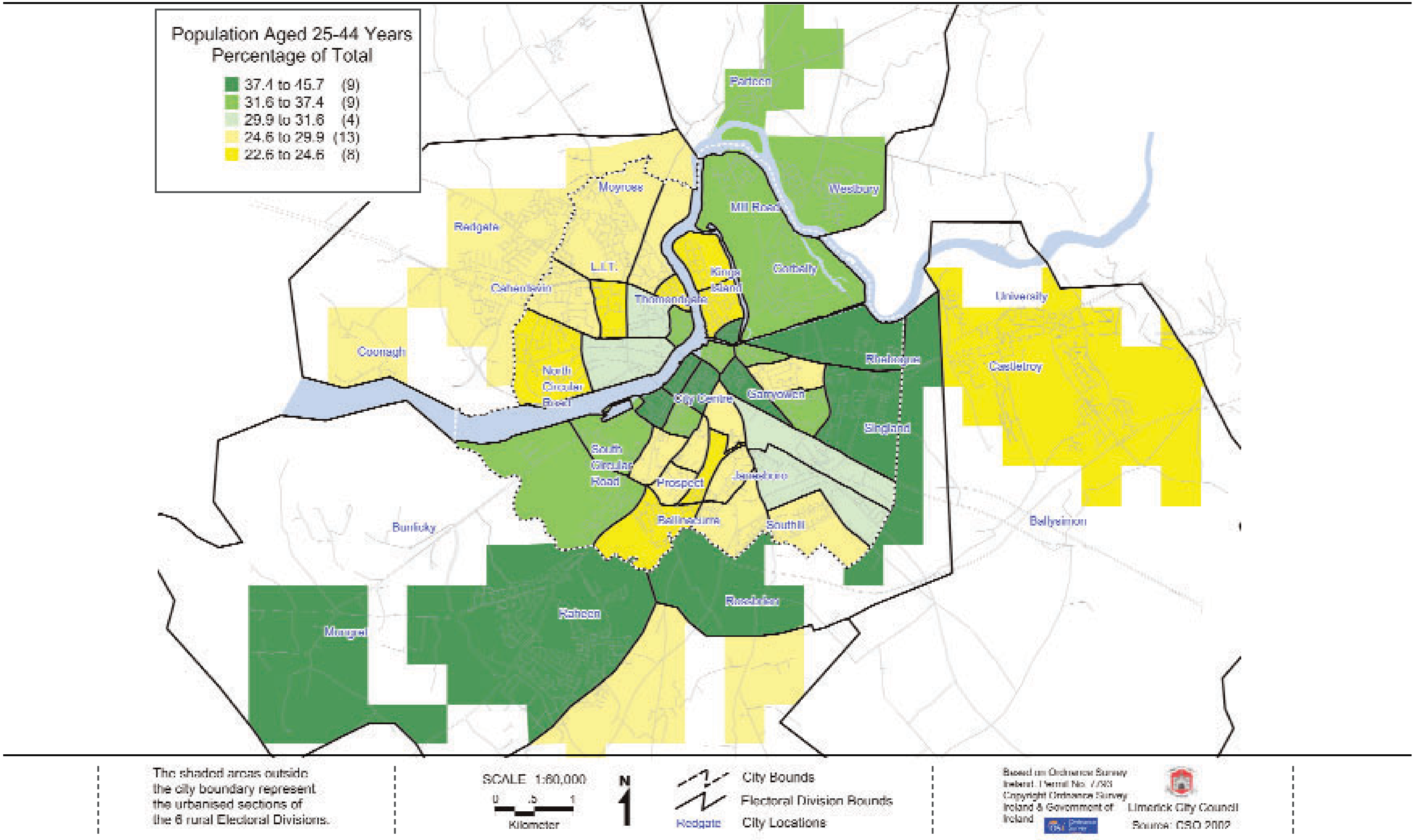
Limerick City Council
Source: CSO 2002

Map 5:


Population Aged 25-44 Years
Percentage of Total
37.4 to 45.7 (9)
31.6 to 37.4 (9)
29.9 to 31.6 (4)
24.6 to 29.9 (13)
22.6 to 24.6 (8)
Parteen
Westbury
Moyross
Mill Road
Redgate
Corbally
L.I.T.
Kings Island
Caherdavin
Thomondgate
University
Coonagh
Rhebogue
Castletroy
North Circular Road
City Centre
Garryowen
Singland
South Circular Road
Prospect
Janesboro
Ballinacurra
Southill
Ballysimon
Bunlicky
Roxboro
Raheen
Mungret
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SCALE 1:60,000
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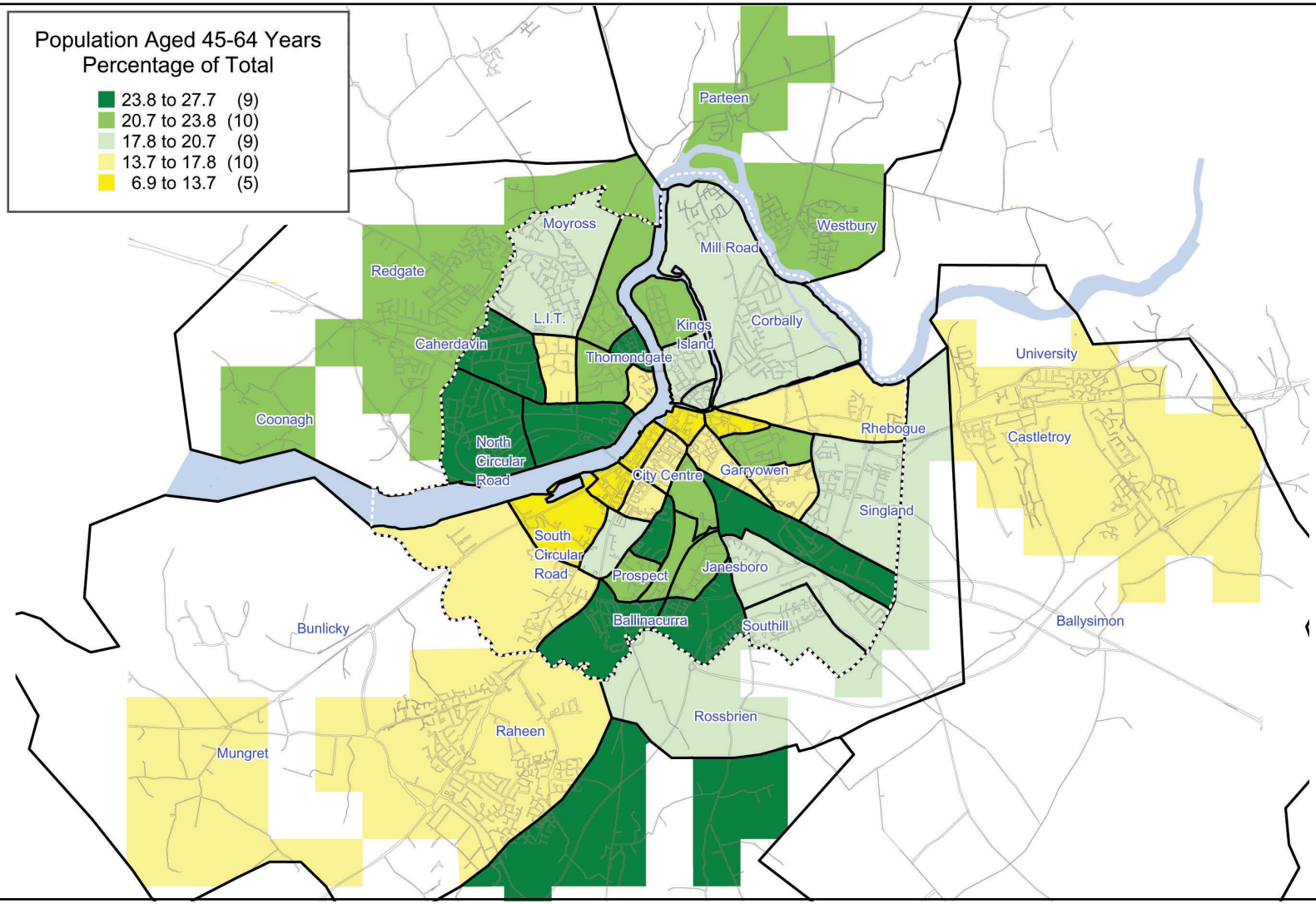
City Bounds
Electoral Division Bounds
Redgate City Locations
Limerick City Council
Source: CSO 2002

Map 6:


Population Aged 45-64 Years
Percentage of Total
23.8 to 27.7 (9)
20.7 to 23.8 (10)
17.8 to 20.7 (9)
13.7 to 17.8 (10)
6.9 to 13.7 (5)
Parteen
Moyross
Westbury
Mill Road
Redgate
L.I.T.
Kings Island
Corbally
Caherdavin
Thomondgate
University
Coonagh
Rhebogue
Castletroy
North Circular Road
City Centre
Garryowen
Singland
South Circular Road
Prospect
Janesboro
Bunlicky
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Mungret
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SCALE 1:60,000
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City Bounds
Electoral Division Bounds
Redgate
City Locations
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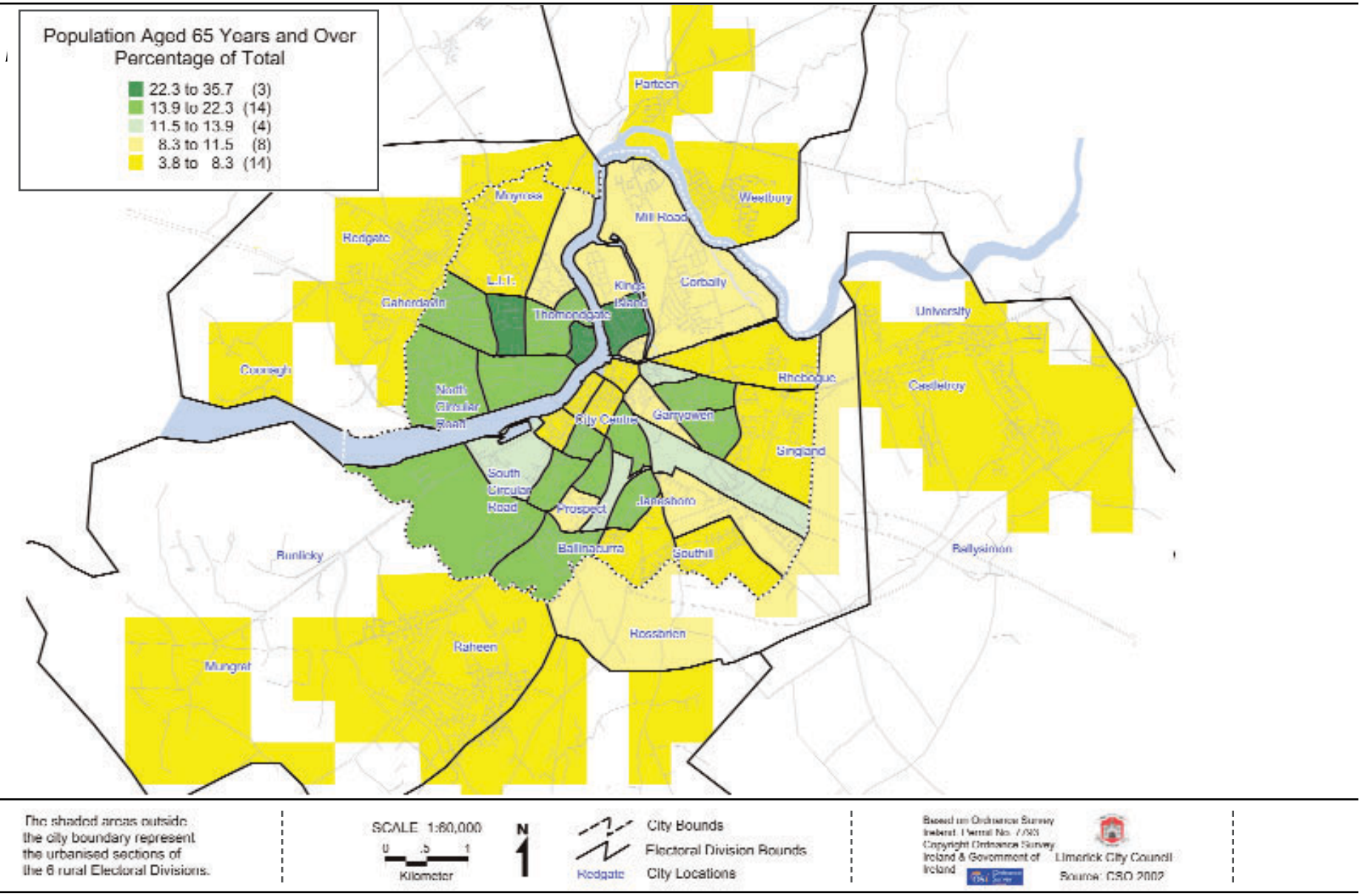
Limerick City Council
Source: CSO 2002

Map 7:



The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.

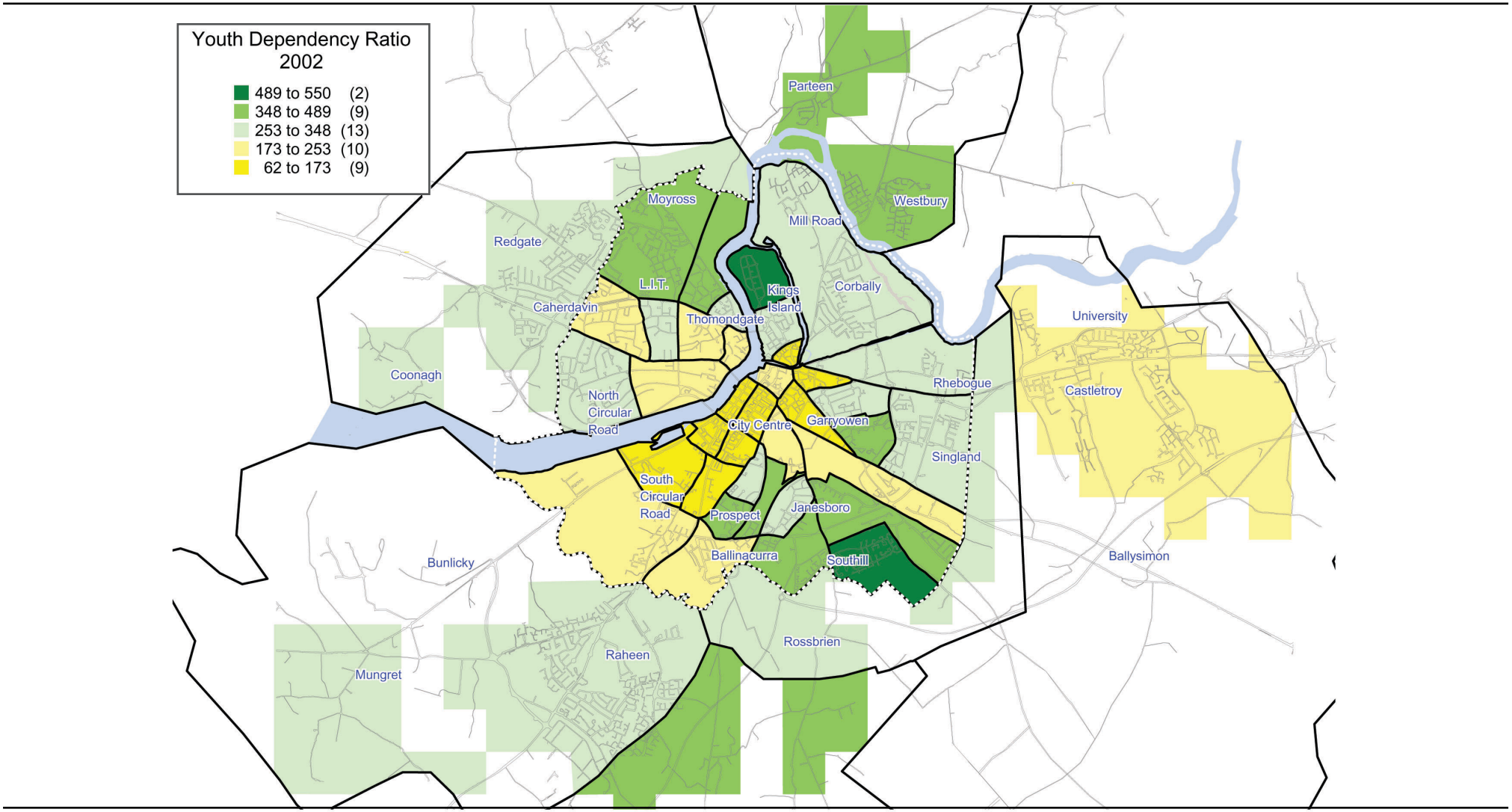
SCALE 1:60,000
0 .5 1
Kilometer

N

City Bounds
Electoral Division Bounds
Ridgate City Locations

Limerick City Council
Source: CSO 2002

Map 8:


Youth Dependency Ratio 2002
489 to 550 (2)
348 to 489 (9)
253 to 348 (13)
173 to 253 (10)
62 to 173 (9)
Parteen
Moyross
Westbury
Mill Road
Redgate
L.I.T.
Kings Island
Corbally
Caherdavin
Thomondgate
University
Coonagh
Rhebogue
Castletroy
North Circular Road
City Centre
Garryowen
Singland
South Circular Road
Prospect
Janesboro
Bunlicky
Ballinacurra
Southill
Ballysimon
Rossbrien
Raheen
Mungret
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0 .5 1
Kilometer
N
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Electoral Division Bounds
Redgate
City Locations
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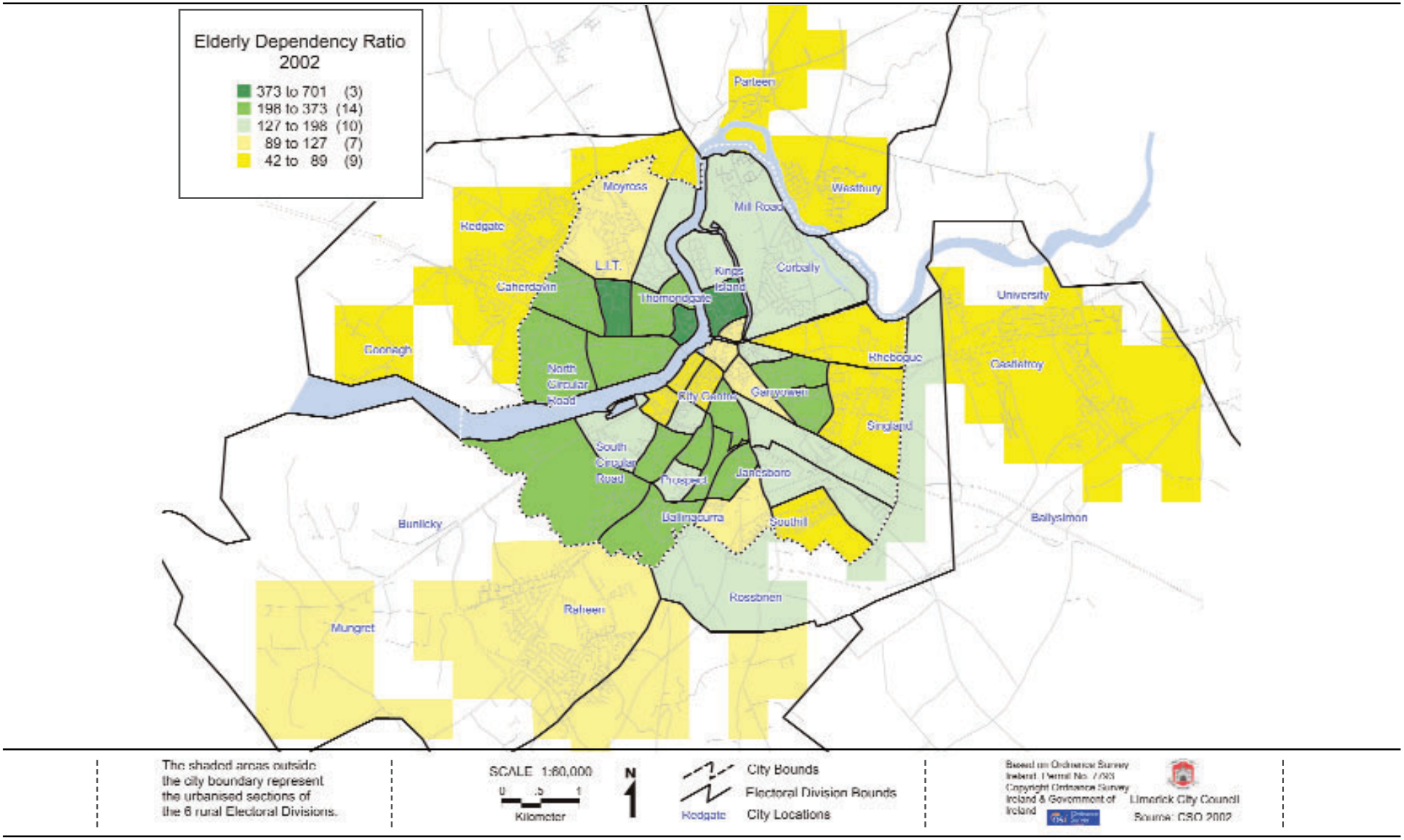
Limerick City Council
Source: CSO 2002

Map 9:


Elderly Dependency Ratio 2002
373 to 701 (3)
198 to 373 (14)
127 to 198 (10)
89 to 127 (7)
42 to 89 (9)
Parteen
Moyross
Mill Road
Westbury
Kedgate
L.I.T.
Kings Island
Corbally
Caherdavin
Thomondgate
University
Gouragh
Rhebogue
Castletroy
North Circular Road
City Centre
Garryowen
Singland
South Circular Road
Prospect
Janesboro
Ballinacurra
Southill
Ballysimon
Bunlicky
Raheen
Rossbrien
Mungret
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SCALE 1:60,000
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City Bounds
Electoral Division Bounds
Kedgate
City Locations
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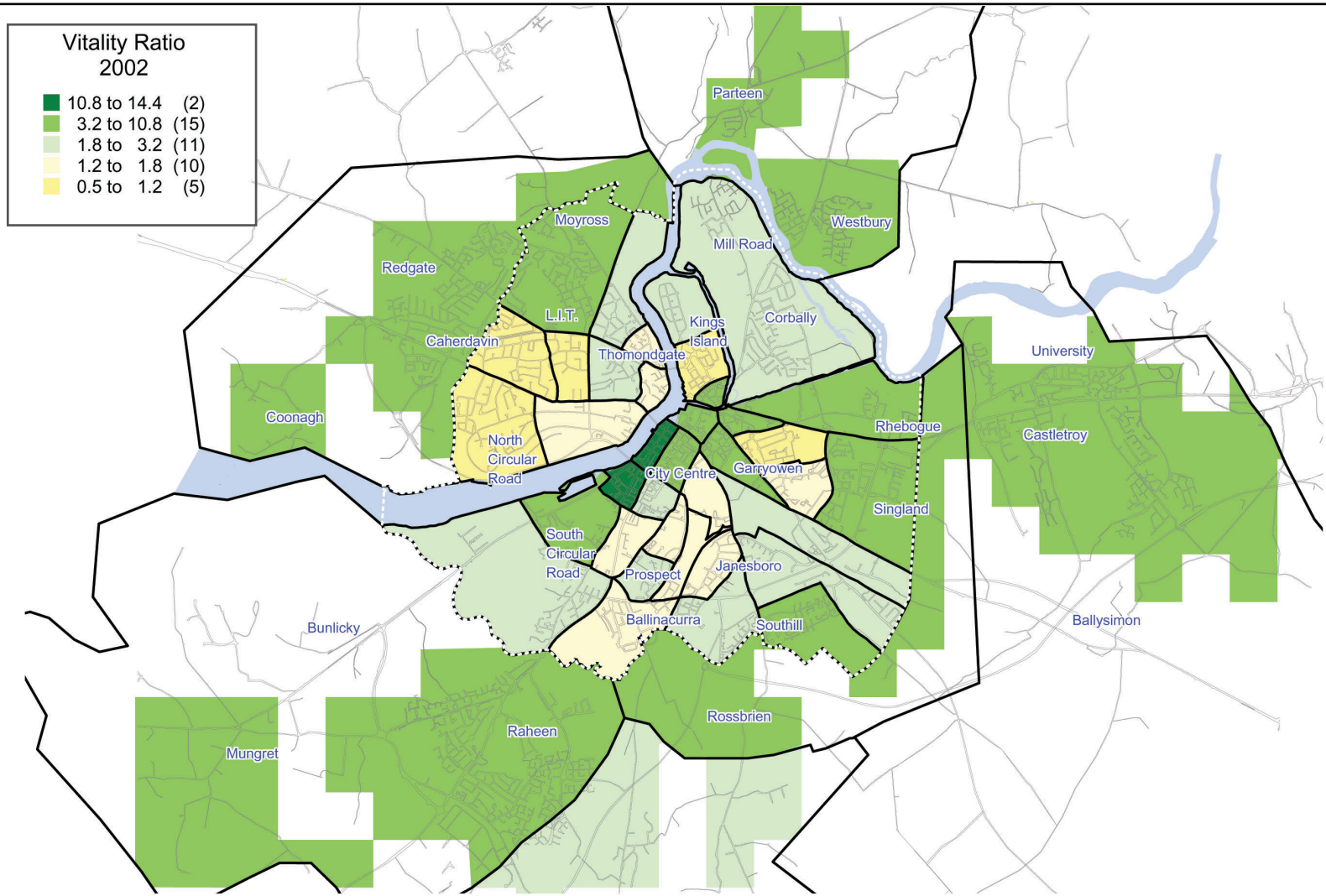
Limerick City Council
Source: CSO 2002

Map 10:



The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.

SCALE 1:60,000
0 .5 1
Kilometer

N

City Bounds
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

3.4 Household and Family Structures

As suggested above, it is not just the distribution of a population across the age spectrum that determines its reproductive capacity: the family and household structure of the population are also key influences. One of the most significant contrasts in the social geography of urban areas is that between areas where most households are based on the traditional unit of the family, and those where non-family households predominate. In Limerick this contrast has a distinct spatial expression, with the distribution of family households following an essentially concentric pattern based on the city centre. In the centre, the majority of households are non-family based, but as distance from the centre increases so also does the percentage of family-based households, so that in the suburbs this is the dominant type of household **(Map 11)**. The only notable exception to this pattern is the Castletroy area where, despite its suburban location, a relatively high 43 per cent of households are non-family based. This of course is due once again to the significant student population of that area.

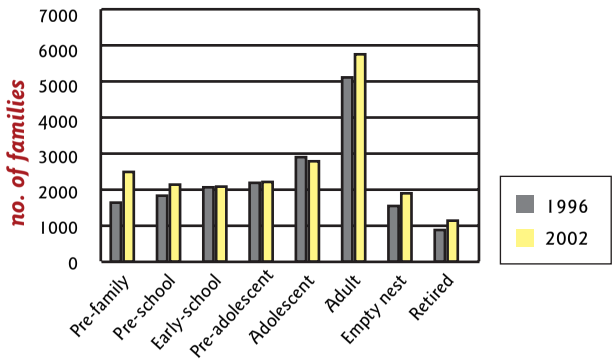
The most numerous type of non-family household in Limerick urban area is that consisting of a single person. Single-person households account for 65 per cent of non-family households and for 22 per cent of all households. Not surprisingly, therefore, the distribution of these households also follows a concentric pattern **(Map 12)**. The rate of occurrence of 'singleton' households is highest in the city centre and lowest in both the inner suburbs (i.e., those within the City boundary) and outer suburbs.
In the centre, single-person households are most prevalent in areas where there has been less redevelopment in recent years, specifically the EDs of Shannon B and Dock B, which extend from Patrick Street / O'Connell Street to Wickham Street / Parnell Street. This area constitutes the city's older "flatland".

The next three maps focus on family-based households, and illustrate the distribution of families across different stages of the family cycle. The concept of the family cycle is based on the notion that families go through a series of life stages that can be operationally defined with respect to the ages of the female partner and the children. The cycle starts with a young couple living together (the pre-family stage), and then, with the initiation of a family, proceeds through stages such as the pre-school stage, and the adolescent stage, to finally the 'empty-nest' stage, when all children have left the family home. The needs of families for various kinds of supports and services depend on what stage of the cycle they have reached. The distribution of families across the stages of the family cycle in Limerick is illustrated in Fig. 4 for 1996 and 2002. An increase of 877 (55 per cent) in the number of pre-family households is evidence of potential for demographic regeneration in the urban area. However, the diagram also attests to the on-going maturing of the community, with an increase in the numbers of families in the more advanced stages of the cycle.

Families at the pre-school stage make up 12.5 per cent of all families in the urban area. However the proportion is much higher in the city centre and the Dublin Road area as well as the southern inner suburbs (South Circular Road) and outer suburbs (Raheen, Gouldavoher) **(Map 13)**. The relative importance of very young families in the latter areas can be attributed to the high rate of new housing construction in recent years. However, the high rate of pre-school families in the city centre needs to be regarded with caution. As indicated already, the majority of households in this area are in fact non-family based (over 70 per cent in the case of Shannon B, for example), so that the absolute numbers of pre-school families are quite small by comparison with the suburban areas. In this respect it is worth noting that almost half (46%) of all pre-school families in the urban area are found outside the City boundary. Also notable is the relatively low rate of pre-school families throughout the entire northside of the city: not one of the EDs north and west of the river has a rate above that for the urban area as a whole (10.7 per cent).

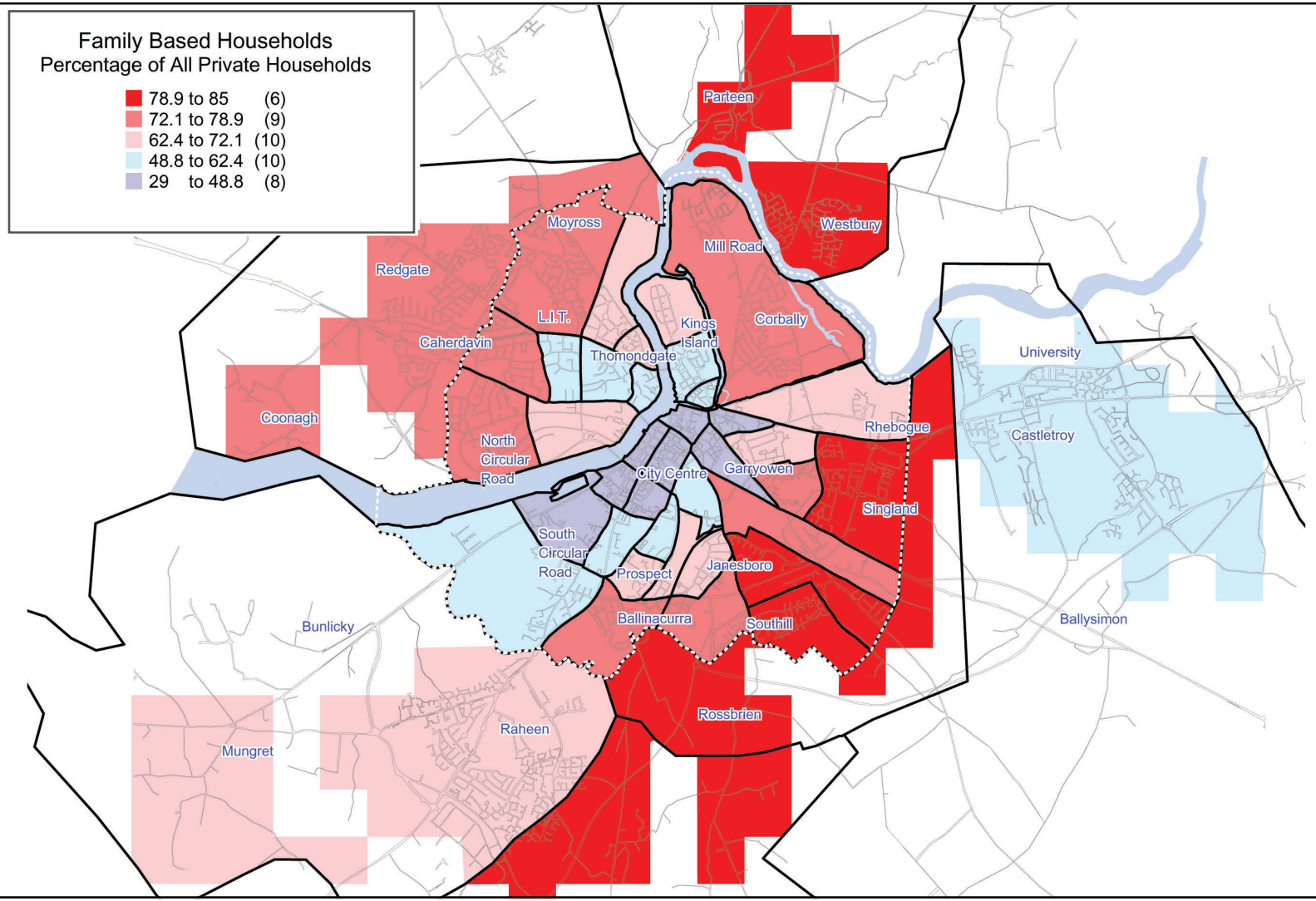
One of the stages in the family cycle that has attracted increasing attention is the adult family stage, where offspring are now adults but still living at home with their parent(s).[8] Evidence suggests that in recent years the numbers of such families has increased nationwide, and one of the contributing factors cited has been the difficulty experienced by young people in the housing market. As noted above and illustrated by (Fig. 4), this is the dominant stage in the family cycle in Limerick, accounting for 28 per cent of all families. Within the city, the highest rates are found in a sector extending from northwest to southeast of the city centre, which includes Moyross, Ballynanty, Thomondgate, St. Mary's Park, Assumpta Park, Killalee/ Garryowen, Prospect, Ballinacurra Gardens/ Greenfields, Weston and Janesboro **(Map 14)**. Most of these areas were originally built as public housing areas.

Figure 4: Stage in Family Cycle, Limerick Urban Area



'Empty-nest' families are those consisting of a couple only (no children) where the female partner is aged between 45 and 64 years. This category increased by 27 per cent (407 families) between 1996 and 2002 when it accounted for 9.4 per cent of all families in Limerick. It shows particularly high rates in a clearly defined area extending from the North Circular Road to the Ennis Road[9] **(Map 15)**. This is in keeping with the emerging profile of these as areas undergoing population ageing with attendant low demographic vitality (see Maps 9 and 10). The rate of empty-nest families is also above average in the South Circular Road and Ballinacurra areas, as well as in Castletroy.

Map 11:



The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.

SCALE 1:60,000
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Kilometer

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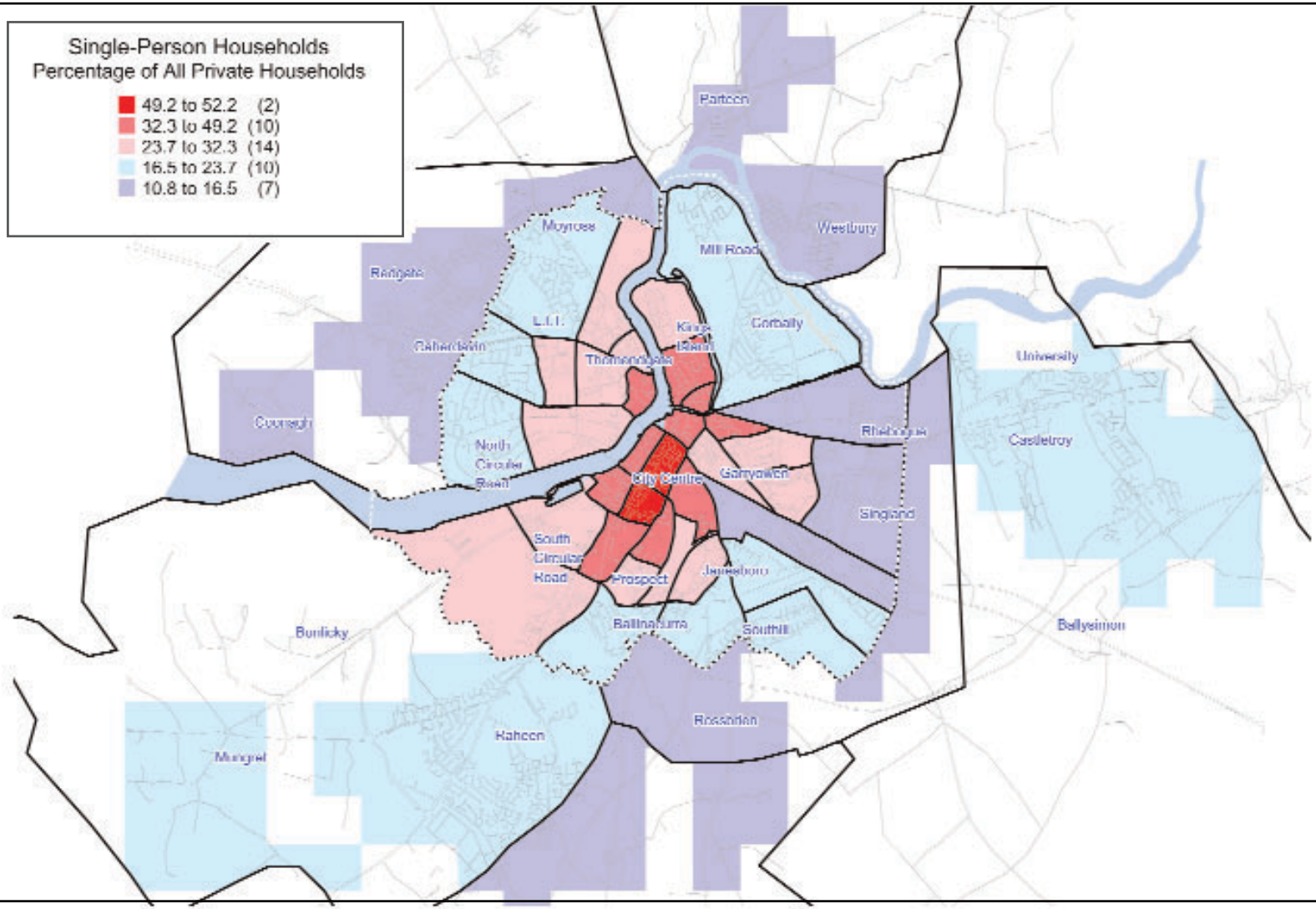
City Bounds
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

Map 12:


Single-Person Households
Percentage of All Private Households
49.2 to 52.2 (2)
32.3 to 49.2 (10)
23.7 to 32.3 (14)
16.5 to 23.7 (10)
10.8 to 16.5 (7)
Patrickswell
Moyross
Mill Road
Westbury
Ballinacurra Weston
Raheen
L.I.T.
Corbally
Thomondgate
University
Caherdavin
Coonagh
Castletroy
North Circular Road
City Centre
Garryowen
Singland
South Circular Road
Prospect
Dooradoyle
Ballinacurra
Southill
Ballysimon
Bunlicky
Rosbrien
Raheen
Mungret
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City Bounds
Electoral Division Bounds
Redgate
City Locations
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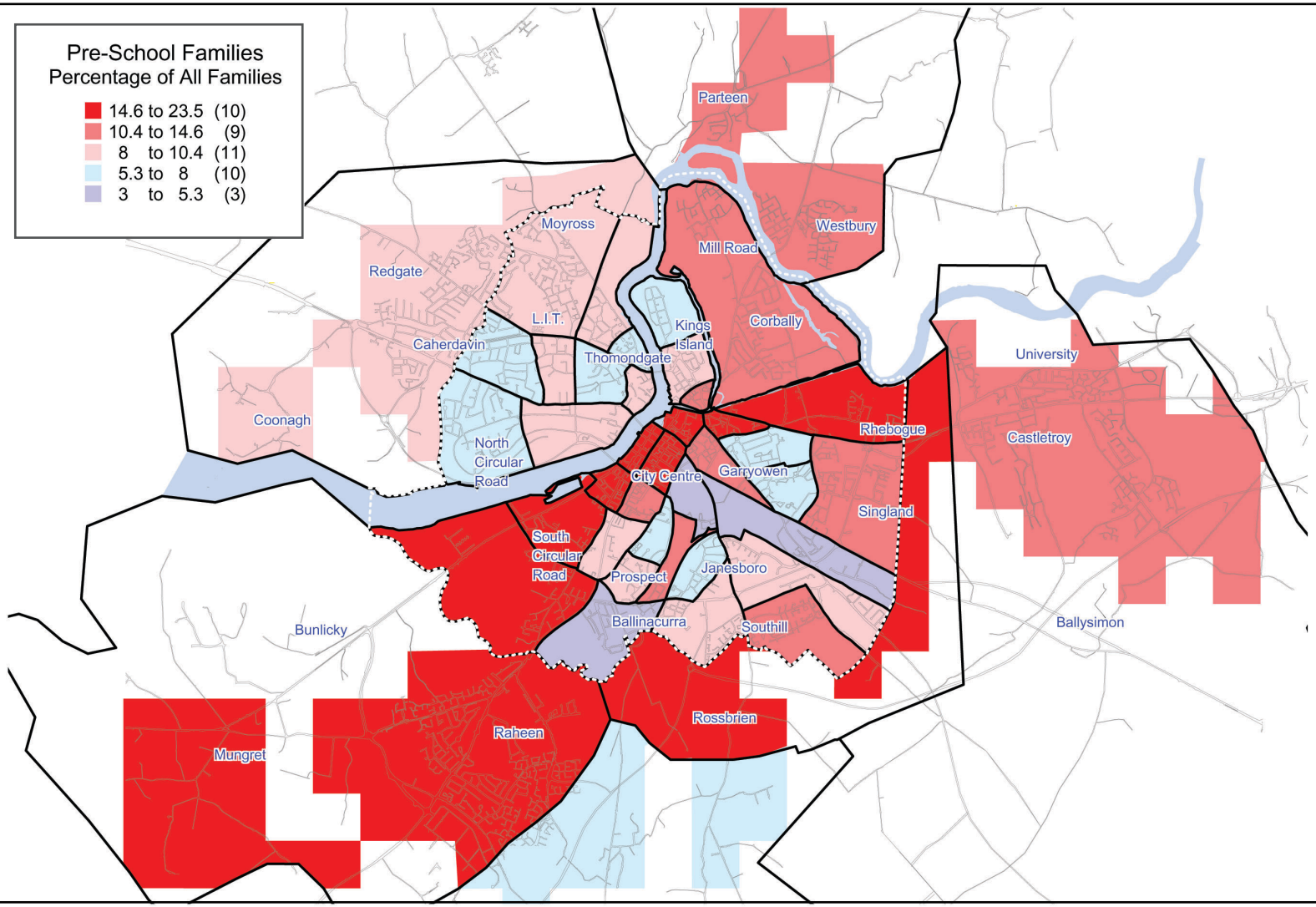
Map 13:



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Kilometer

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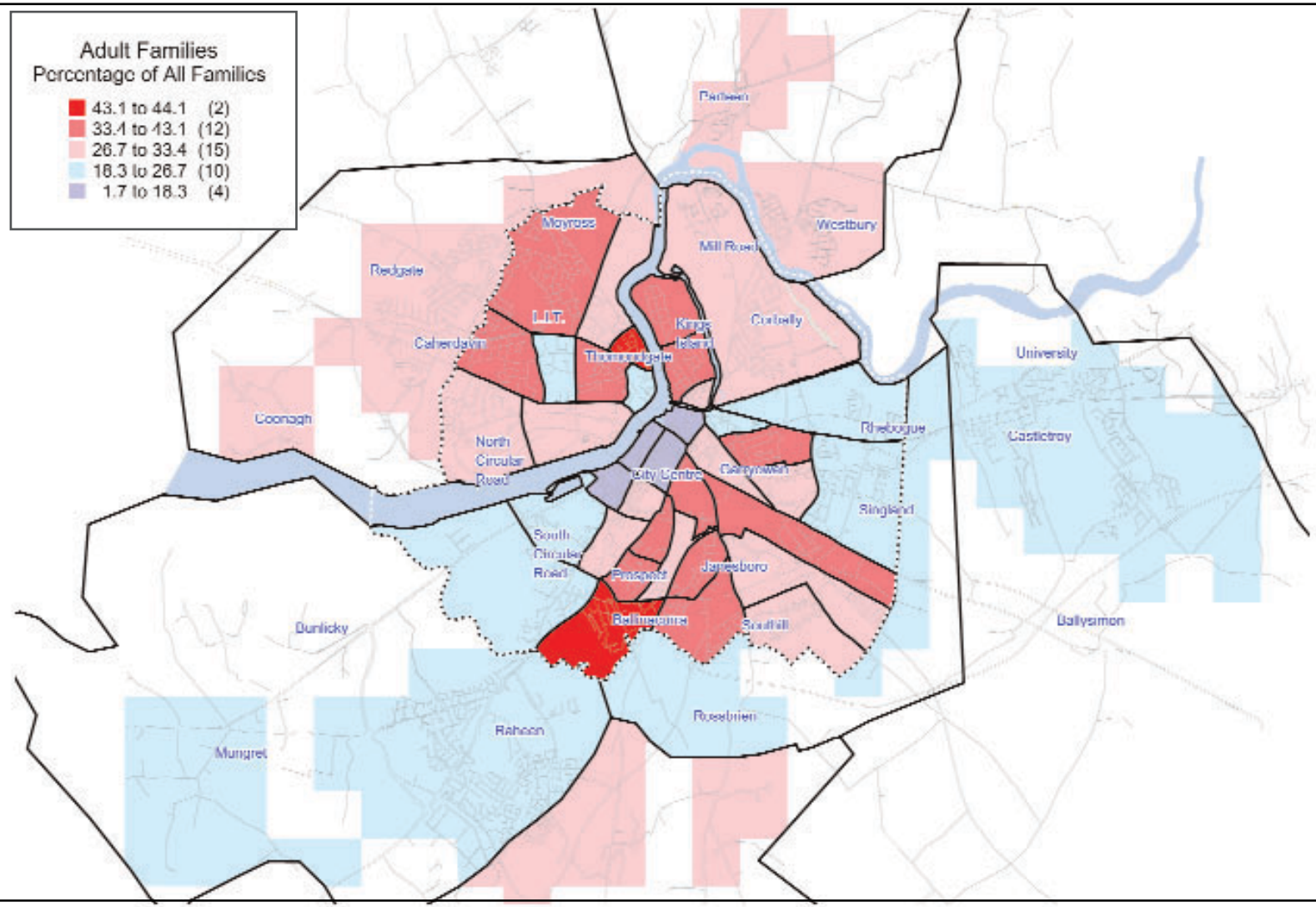
City Bounds
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

Map 14:


Adult Families
Percentage of All Families
43.1 to 44.1 (2)
33.1 to 43.1 (12)
26.7 to 33.4 (15)
18.3 to 26.7 (10)
1.7 to 18.3 (4)
Parteen
Moyross
Westbury
Mill Road
Redgate
I.I.T.
Kings Island
Corbally
Caherdavin
Thomondgate
University
Coonagh
Rhebogue
Castletroy
North Circular Road
City Centre
Garryowen
Singland
South Circular Road
Prospect
Janesboro
Ballinacurra
Southill
Dunlicky
Ballysimon
Rosbrien
Raheen
Mungret
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Electoral Division Bounds
Redgate City Locations
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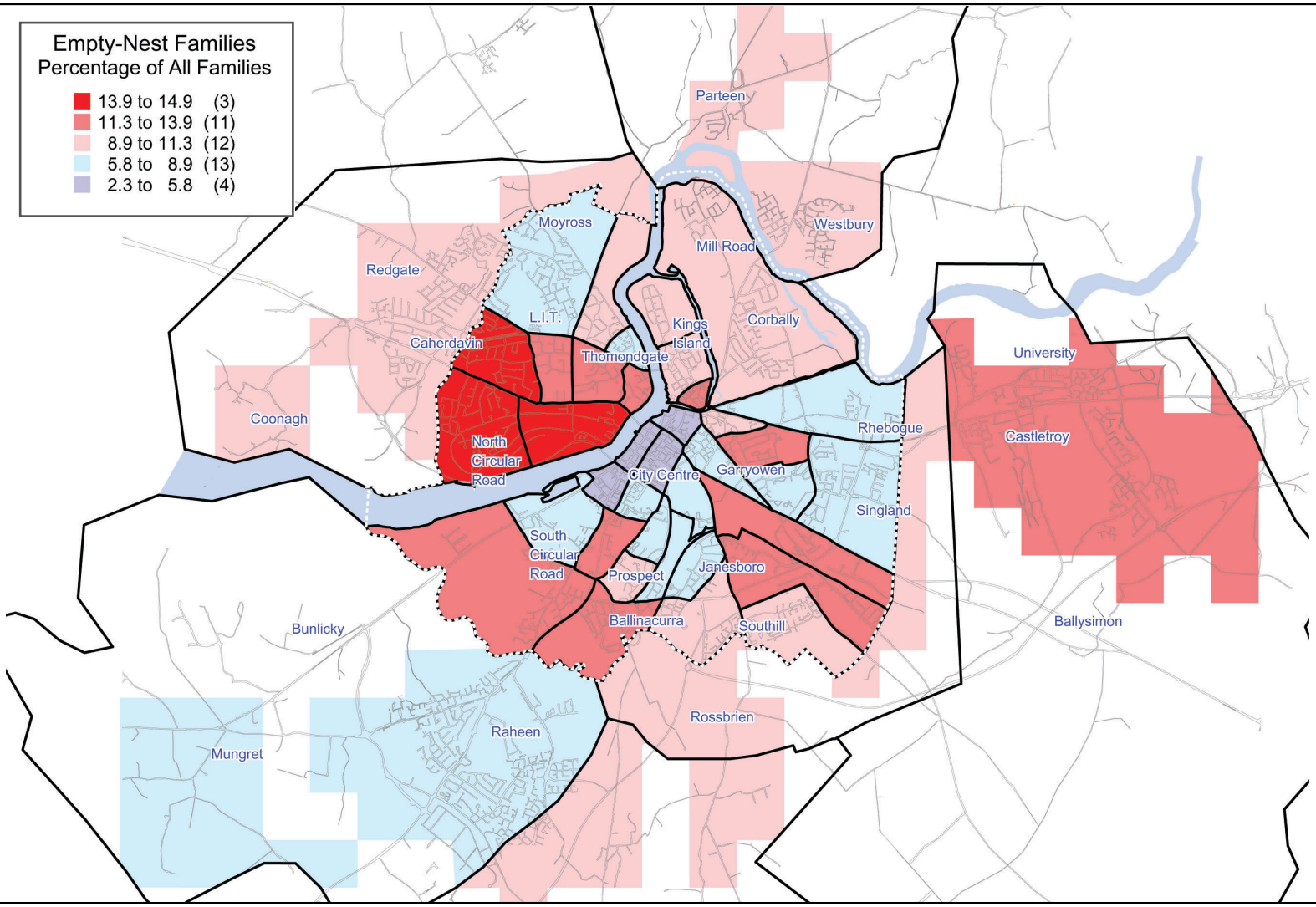
Limerick City Council
Source: CSO 2002

Map 15:



The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.

SCALE 1:60,000
0 .5 1
Kilometer

N

City Bounds
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

3.5 Labour Force and Employment Patterns

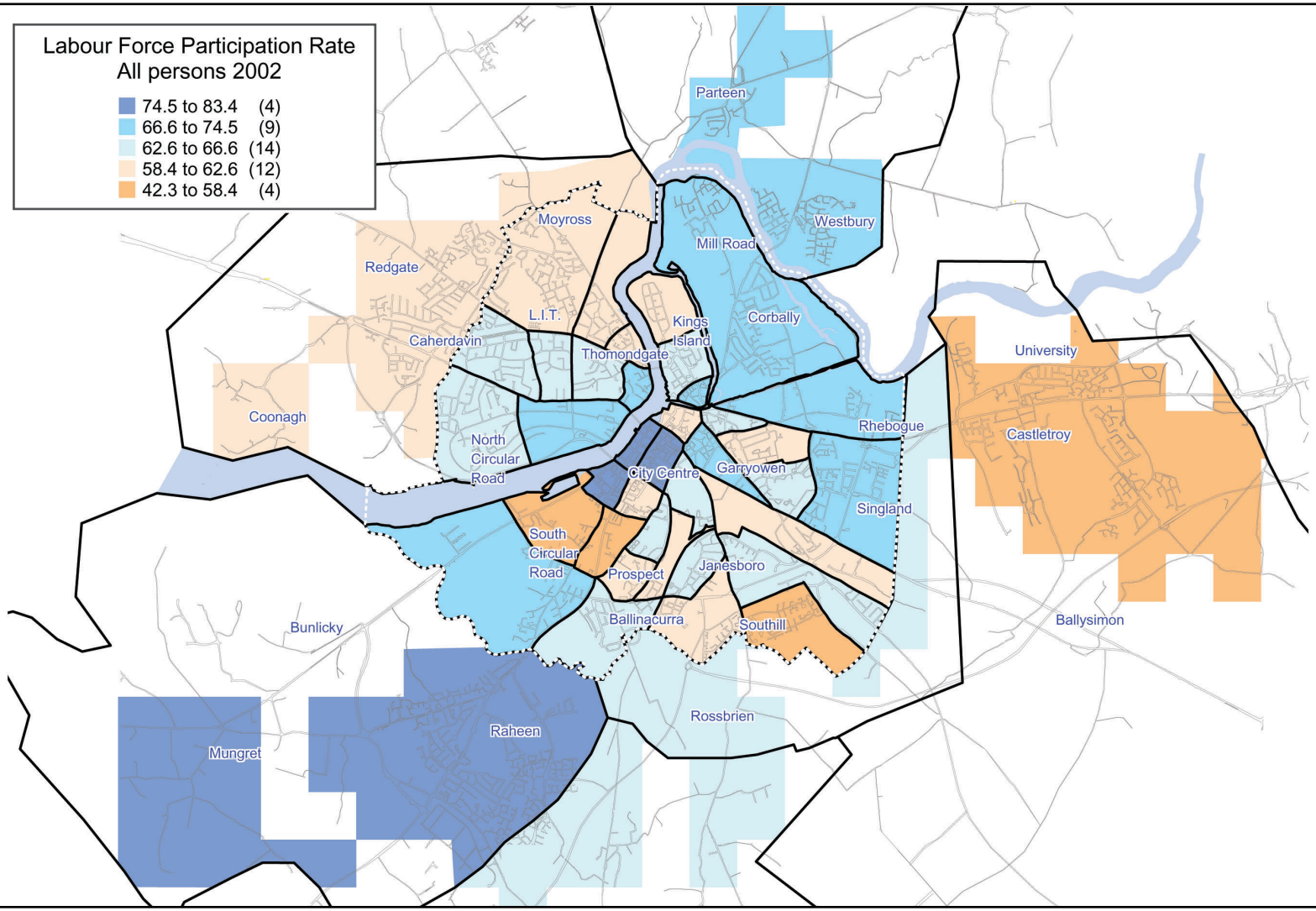
This section of the profile looks at some key aspects of the economy of Limerick, with a particular focus on labour force and employment patterns. The labour force of the Limerick urban area grew from 35,026 to 41,082 between 1996 and 2002, a growth rate of over 6,000 persons or 17 per cent. Much of this growth can be attributed to demographic factors, in particular the fact that the 'baby-boomers' of the late 1970s entered the labour force in the late 1990s. However, it also reflects the economic expansion of the Celtic Tiger era, when jobs growth (see below) induced more of the population of labour force age to enter the labour market. The relationship between the labour supply and the population base is governed by the labour force participation rate (LFPR, also know as the activity rate), defined as the percentage of those aged 15 to 65 years who are in work, or actively seeking work. In Limerick, the participation rate is highest in the city centre and the ED of Ballycummin, which contains large parts of the outer southern suburbs **(Map 16)**. Rates in excess of 70 per cent in the city centre result largely from the fact that its population is heavily weighted towards the 25-44 years age group (see Map 5), which is traditionally the age group with the highest participation rate. But although the EDs in the city centre have higher rates, the suburban areas supply a much larger volume of labour: Ballycummin ED alone accounts for 18 per cent (7,282) of Limerick urban area's labour force. The lowest LFPRs are found in areas with large student populations, i.e., Castletroy and Dock D. However, participation is also comparatively low in the EDs that contain the large local authority estates of Moyross (Ballynanty ED and Limerick North Rural ED) and Southill (Galvone B and Rathbane).

Among the more significant sources of labour force growth in recent years has been the increasing rate of female participation in the labour force, which in turn is tied into changing patterns of marriage and fertility. Although the overall female participation rate in Limerick is lower than the male rate (53.5 per cent as compared to 73.2 per cent), it shows a higher degree of variation between EDs, and it contributes more to explanation of variation in the overall rate.[10] The spatial pattern is similar to that of the aggregate LFPR, with EDs near the city centre showing the highest values, followed by Ballycummin ED **(Map 17)**. In addition to having a favourable age profile, as noted above, these areas are also characterised by good access to local employment opportunities. This is an important influence on the female activity rate, due to the fact that women workers tend to be more dependent on employment opportunities close to home. All of these areas offer significant employment opportunities for female workers: offices and retail outlets in the city centre, and Limerick Regional Hospital, Dooradoyle shopping centre, and Raheen Industrial Estate in the case of Ballycummin ED.

In the period 1991-96, employment in the Limerick urban area increased by 17 per cent, reflecting a growth of over 4,000 in the number at work. Growth accelerated in the period 1996-2002 with an increase of 25 per cent, giving an extra 7,323 at work. Most areas of the City and suburbs registered an increase in employment, but the rate of increase varied hugely between areas. The highest percentage increases occurred in areas where there was substantial growth in population, which, as noted earlier, correspond to the areas of new housing development **(Map 18)**. These are the city centre EDs and the southern suburbs. Despite the overall growth in numbers at work, ten EDs experienced employment decreases: without exception these also declined in terms of population. The areas affected include EDs close to the city centre on the lower Ennis Road, inner city areas that did not undergo extensive redevelopment and the Ballinacurra Weston / Rathbane area.

While jobs growth in the urban economy was instrumental in the overall level of employment growth, the pattern identified above suggests that demography and labour force change were the main drivers of local employment growth in recent years. To investigate the nature of employment growth in more detail, **Map 19** depicts the absolute change (measured in percentage points) in the employment rate in each ED: in other words, any change in the labour force is allowed for in the data underpinning this map. The pattern that emerges is different from the previous map in a number of respects. First, the number of areas showing decreases is now reduced to just four, all of which have particular circumstances that account for the decrease.[11] Secondly, and more significantly, the areas with the greatest increases are now seen to correspond with areas traditionally regarded as disadvantaged. These include the EDs containing Moyross, Ballynanty, the King's Island estates, Garryowen, Prospect and Southill. An obvious interpretation is that these areas experienced the greatest increase in the employment rate largely because there was greater scope for increase. In contrast, areas that were close to full employment experienced more modest, if any, increase in the employment rate. This pattern of change - with the 'lagging' areas catching up to some extent - means that there was less variation in the employment rate in 2002 as compared to 1996.[12]

Map 16:



The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.

SCALE 1:60,000
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Kilometer

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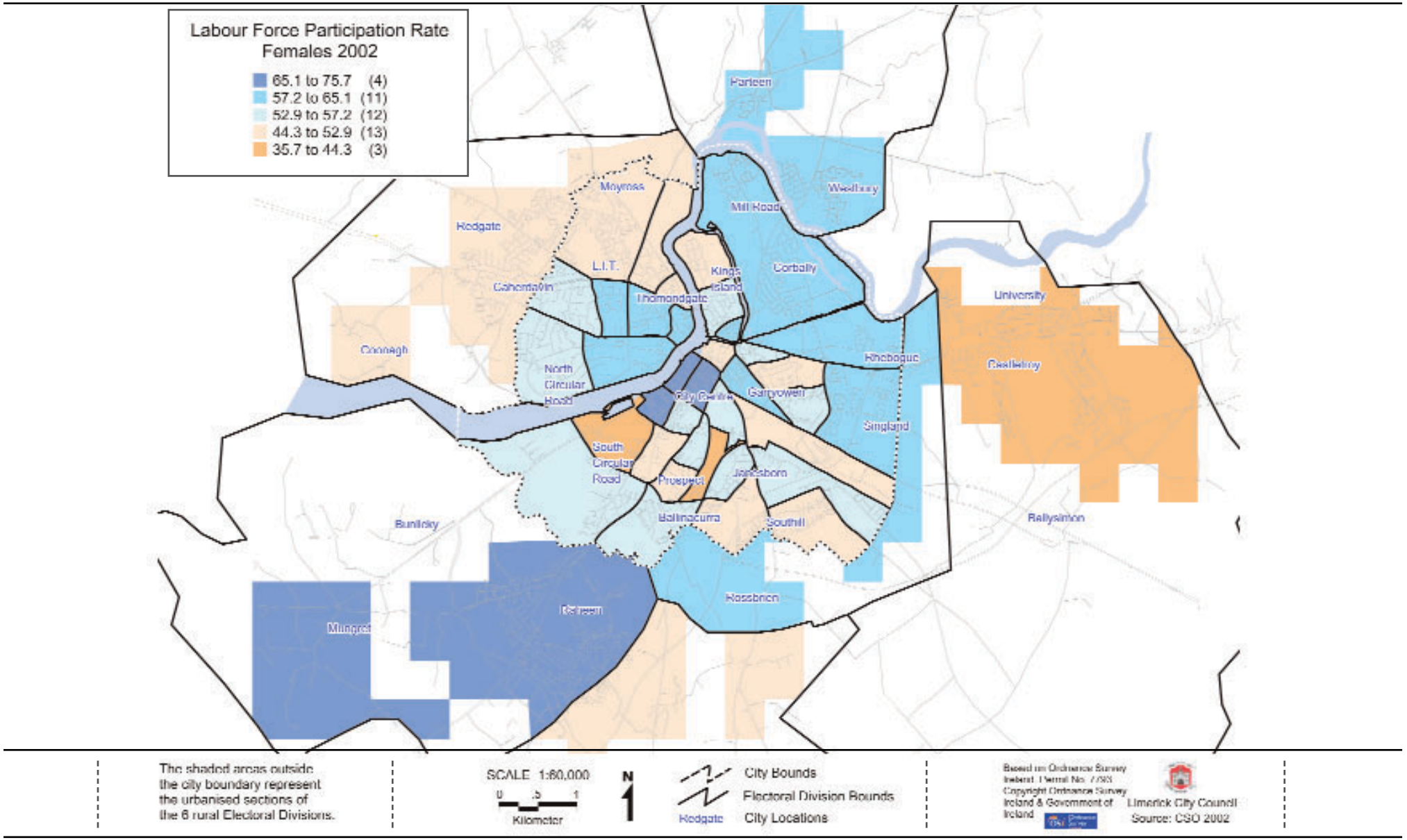
City Bounds
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

Map 17:


Labour Force Participation Rate
Females 2002
65.1 to 75.7 (4)
57.2 to 65.1 (11)
52.9 to 57.2 (12)
44.3 to 52.9 (13)
35.7 to 44.3 (3)
Parteen
Moyross
Westbury
Mill Road
Hodgate
L.I.T.
Kings Island
Corbally
Caherdavin
Thomondgate
University
Coonagh
Rhebogue
Castletroy
North Circular Road
City Centre
Garryowen
Singland
South Circular Road
Prospect
Janesboro
Ballinacurra
Southill
Rallynahon
Bunlicky
Mungret
Raheen
Rossbrien
The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.
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Kilometer
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City Bounds
Electoral Division Bounds
Hodgate City Locations
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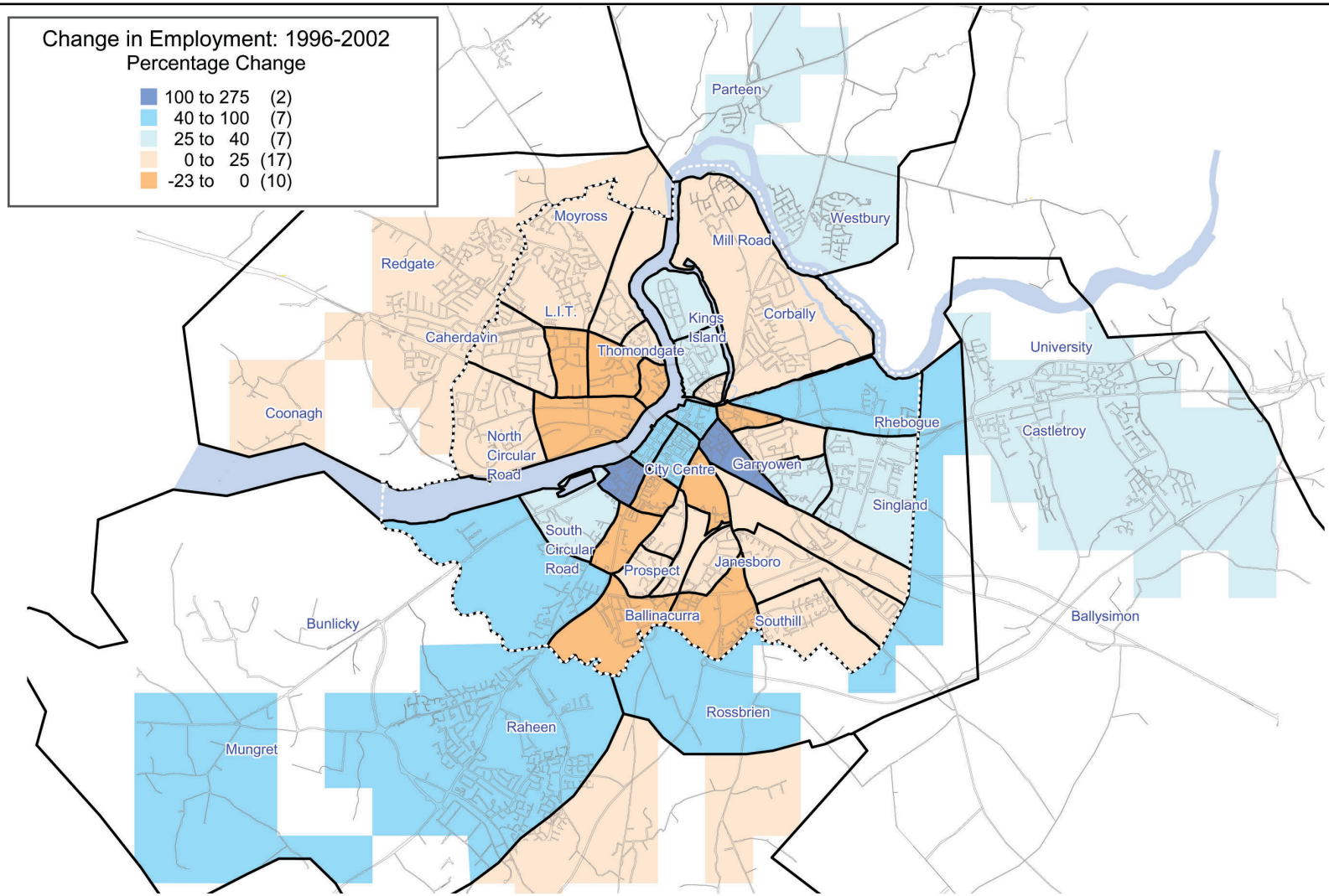
Limerick City Council
Source: CSO 2002

Map 18:



The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.

SCALE 1:60,000
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Kilometer

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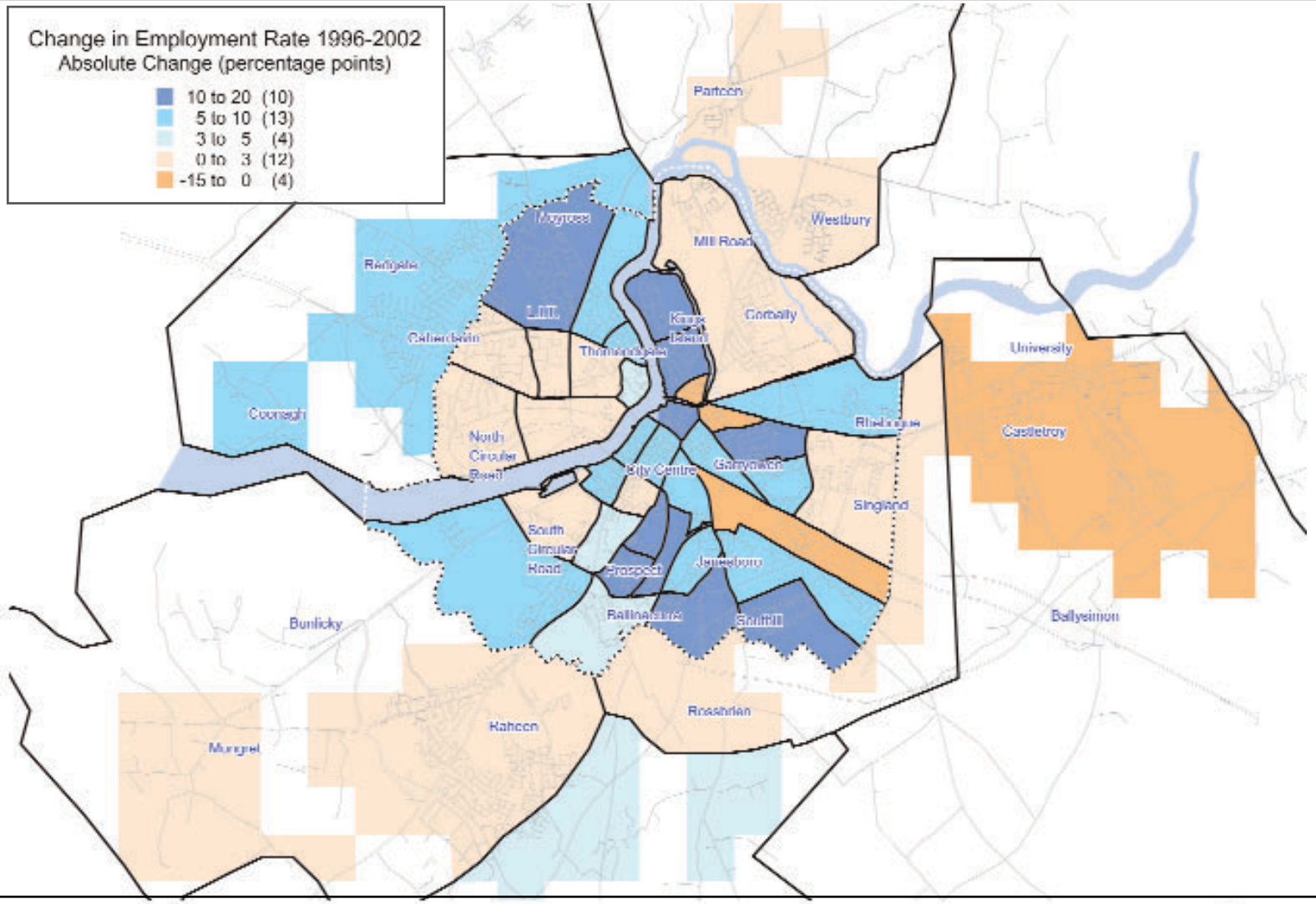
City Bounds
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

Map 19:


Change in Employment Rate 1996-2002
Absolute Change (percentage points)
10 to 20 (10)
5 to 10 (13)
3 to 5 (4)
0 to 3 (12)
-15 to 0 (4)
Partoon
Westbury
Mill Road
Moyross
Ballgate
Corbally
Caherdavin
Thomondgate
University
Coonagh
Castletroy
North Circular Road
City Centre
Garryowen
Singland
South Circular Road
Prospect
Janesboro
Ballinacurra
Southill
Ballysimon
Bunlicky
Rosbrien
Kahcon
Mungret
The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.
SCALE 1:60,000
0 .5 1
Kilometer
N
1
City Bounds
Electoral Division Bounds
Redgate
City Locations
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Source: CSO 2002

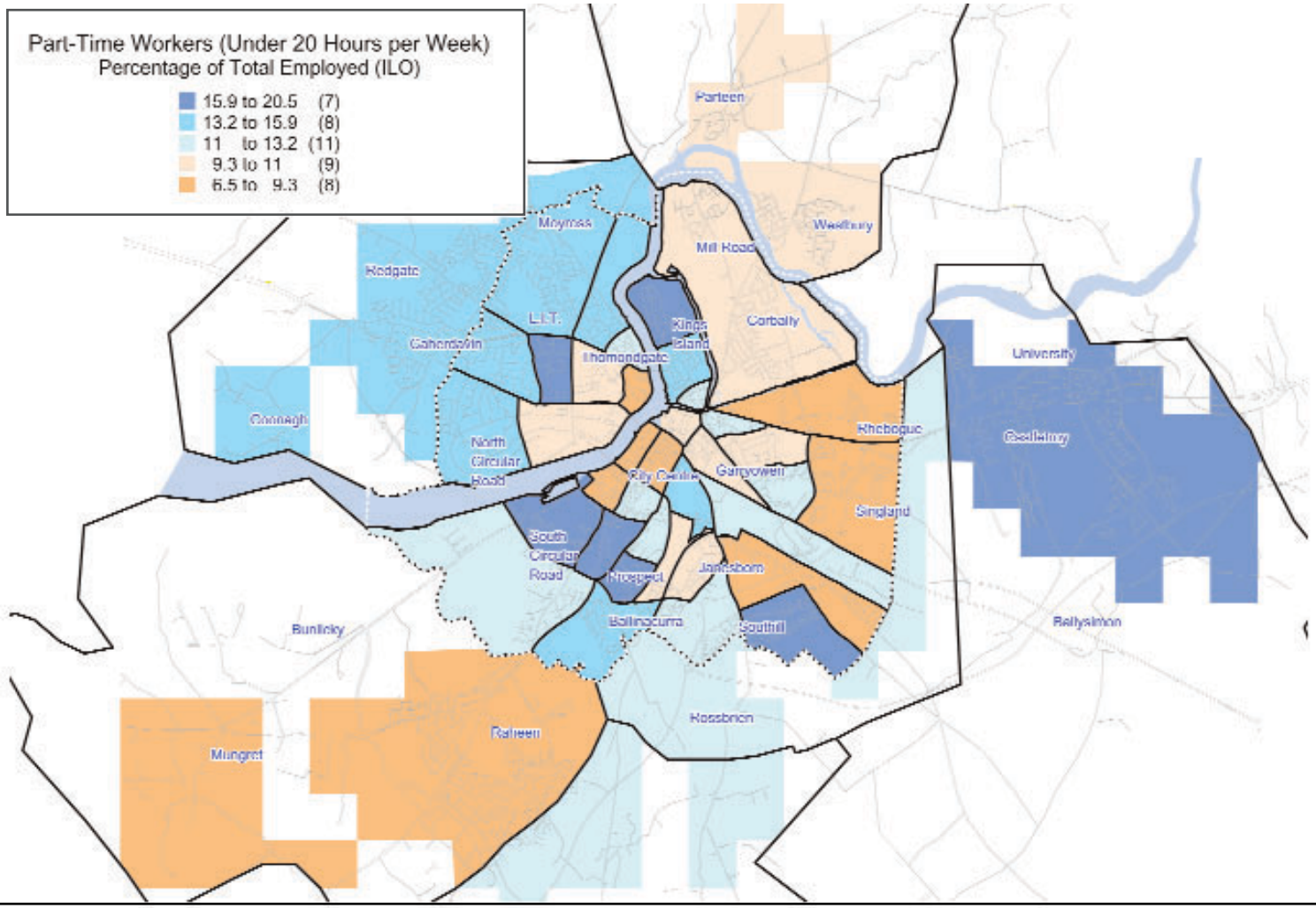
The employment rate is one measure of the engagement of an area's labour supply in economic activity, based on the assessment of each individual's principal economic status. However, individuals who are described in terms of their principal economic status as unemployed, or not in the labour force (e.g. students and retired persons), may actually work on a part-time or occasional basis. The International Labour Organisation (ILO) measure of labour market status is based on whether the individual undertook any employment for payment in the week before census day. This measure allows for the classification of individuals according to the number of hours of employment. Using these data, a measure of part-time employment can be derived by focusing on the proportion of the total employed (according to the ILO definition) that worked under 20 hours in the reference week.

Not surprisingly, the geographical pattern of part-time workers **(Map 20)** shows high concentrations in areas with a substantial student population (Castletroy and Dock D). More generally however, the pattern is almost the inverse of that for labour force participation: areas with high activity rates tend to have low levels of part-time workers, while areas with low participation rates (such as the O'Malley Park area) have high concentrations. This suggests that in-depth analyses of labour market performance need to go beyond simple dichotomous measures of economic activity such as the activity or employment rates.

Altogether two-thirds of those at work in Limerick in 2002 were employed in three broad industrial groups: manufacturing, commerce, and professional services. Manufacturing employs 21 per cent of workers, though its significance is considerably greater than this in economic terms, due to the dependence of many other sectors on demand that is generated by manufacturing firms and their workers. Workers in this sector show comparatively high concentration in areas to the southeast of the city centre, including Singland, Janesboro, Kennedy Park, Rathbane, and Ballinacurra Weston, as well as in Ballycummin ED **(Map 21)**. The correspondence with the city's industrial geography is noticeable: these areas are close to the major industrial estates located on Ballysimon Road and Childers Road, as well as in Raheen. However, proximity alone does not explain the distribution of manufacturing employment. The tradition of industrial employment in these areas is also important, as is the nature of the local skills base.

Commerce, which includes insurance, finance and business services, as well as retailing, employs 29 per cent of those at work in the urban area. Reflecting the strong concentration of these jobs in the city centre, areas close to the centre (e.g. along the lower Ennis Road) have high proportions of workers engaged in this sector **(Map 22)**. Commerce is also the dominant employment sector for workers resident in the Castletroy area, some of whom are employed locally in services companies located in the National Technological Park. Employment in professional services, which includes education and health, presents an inverse image to that of the manufacturing sector, with particularly high levels in the North and South Circular Road areas, the southern suburbs, and the university area **(Map 23)**. Employment in this sector is also significant in the Prospect / Weston and O'Malley Park areas of the city. However the occupational status (or skills level) of the jobs involved differs widely between the latter areas and the former. This is evident from the next section, which examines factors directly related to occupational status.

Map 20:


Part-Time Workers (Under 20 Hours per Week)
Percentage of Total Employed (ILO)
15.9 to 20.5 (7)
13.2 to 15.9 (8)
11 to 13.2 (11)
9.3 to 11 (9)
6.5 to 9.3 (8)
Parteen
Moynoe
Westbury
Mill Road
Redgate
L.I.T.
Corbally
Kings Island
Caherdavin
Thomondgate
University
Dooradoyle
Coonagh
Rhebogue
North Circular Road
City Centre
Garryowen
Singland
South Circular Road
Hospital
Janesboro
Ballinacurra
Southill
Ballysimon
Bunlicky
Rossbrien
Raheen
Mungret
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SCALE 1:60,000
0 .5 1
Kilometer
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City Bounds
Electoral Division Bounds
Redgate
City Locations
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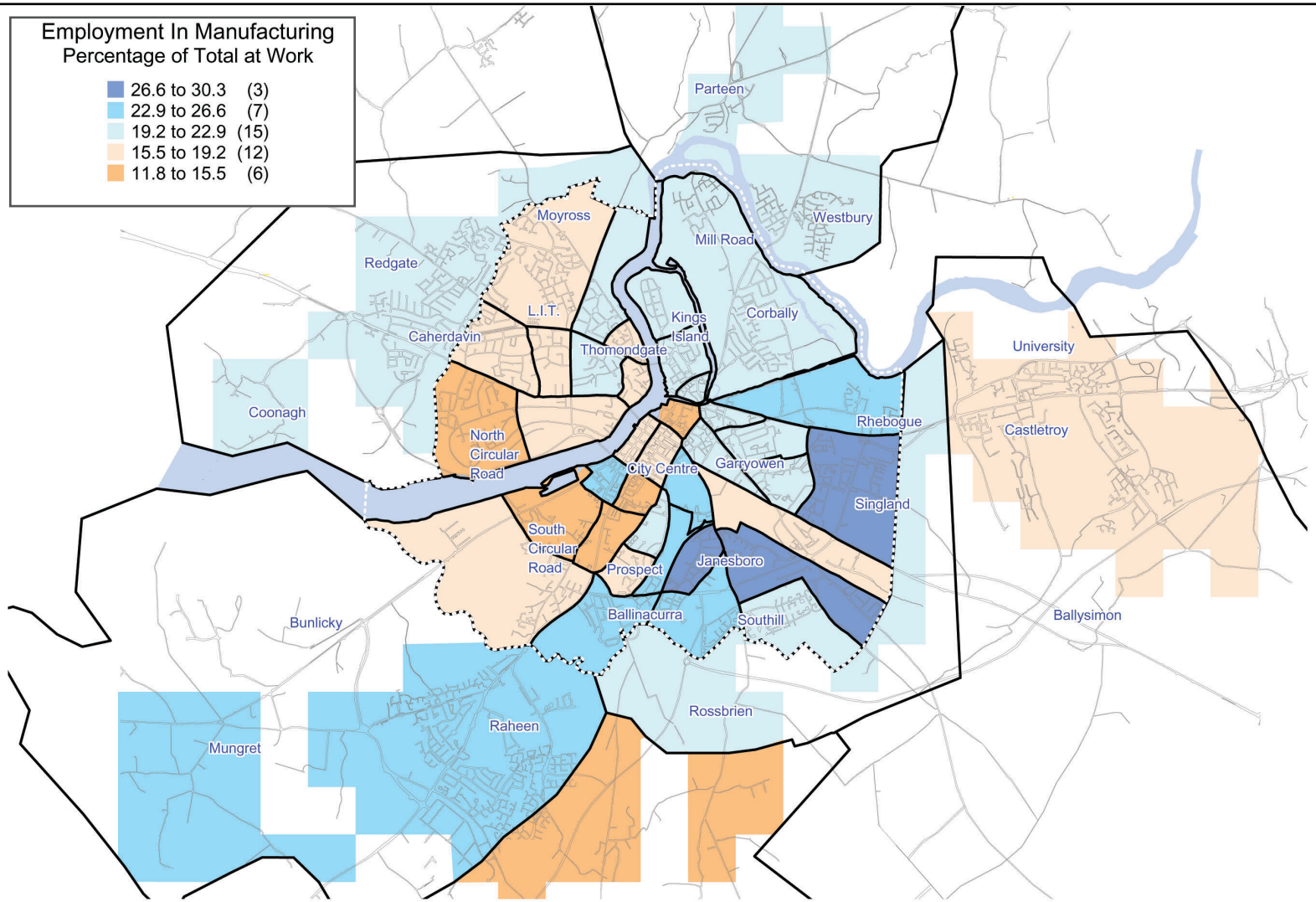
Map 21:


Employment In Manufacturing
Percentage of Total at Work
26.6 to 30.3 (3)
22.9 to 26.6 (7)
19.2 to 22.9 (15)
15.5 to 19.2 (12)
11.8 to 15.5 (6)
Parteen
Moyross
Westbury
Mill Road
Redgate
L.I.T.
Kings Island
Corbally
Caherdavin
Thomondgate
University
Coonagh
Rhebogue
Castletroy
North Circular Road
City Centre
Garryowen
Singland
South Circular Road
Prospect
Janesboro
Bunlicky
Ballinacurra
Southill
Ballysimon
Rossbrien
Raheen
Mungret
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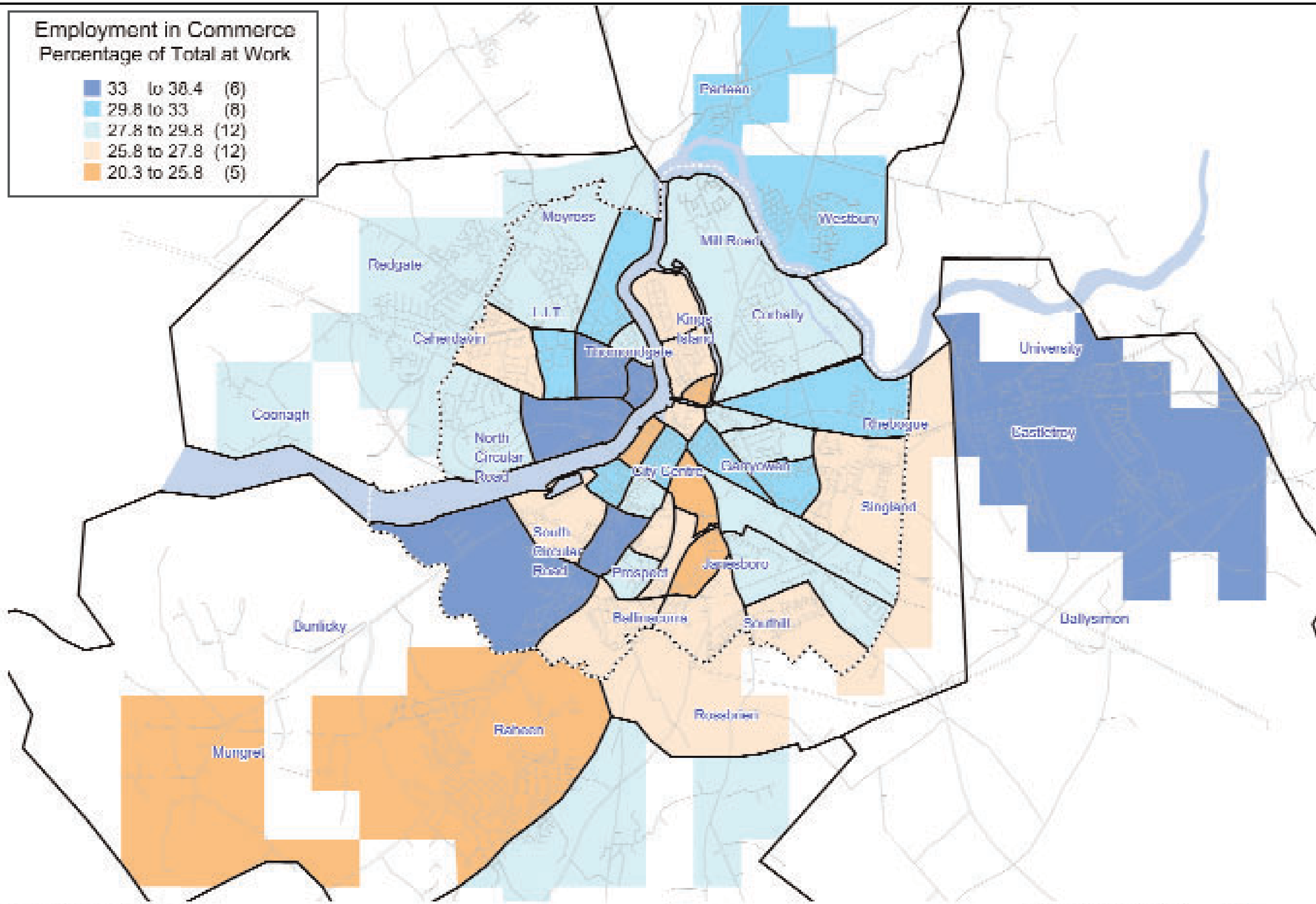
Map 22:


Employment in Commerce
Percentage of Total at Work
33 to 38.4 (6)
29.8 to 33 (8)
27.8 to 29.8 (12)
25.8 to 27.8 (12)
20.3 to 25.8 (5)
Parteen
Westbury
Moyross
Mill Road
Redgate
L.I.T.
Kings Island
Corbally
Caherdavin
Thomondgate
University
Coonagh
Rhebogue
Castletroy
North Circular Road
City Centre
Garryowen
Singland
South Circular Road
Prospect
Janesboro
Dunlicky
Ballinacurra
Southill
Ballysimon
Roxboro
Raheen
Mungret
The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.
SCALE 1:80,000
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Kilometer
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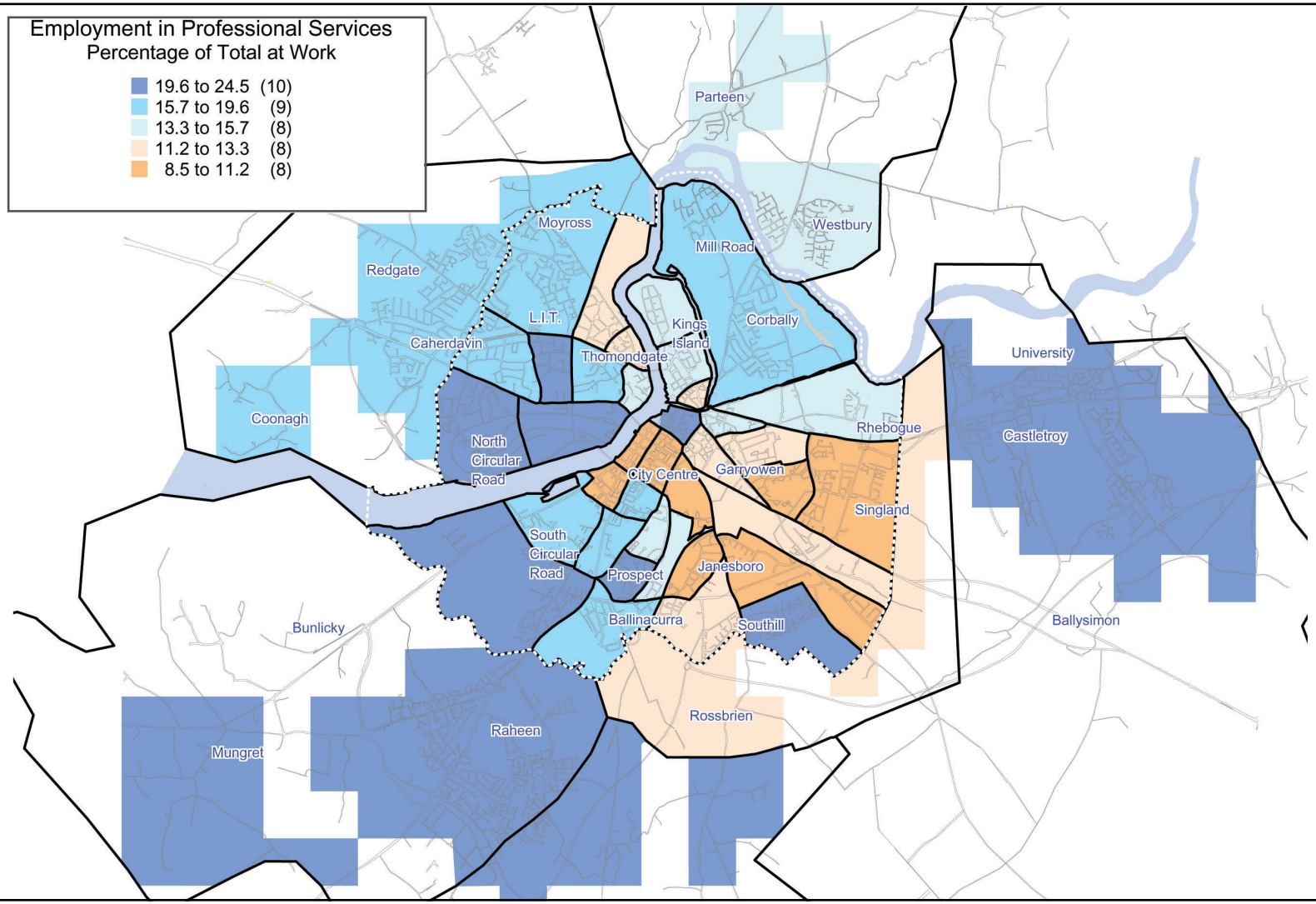
City Bounds
Electoral Division Bounds
Redgate
City Locations
Limerick City Council
Source: CSO 2002

Map 23:



The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.

SCALE 1:60,000
0 .5 1
Kilometer

N

City Bounds
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

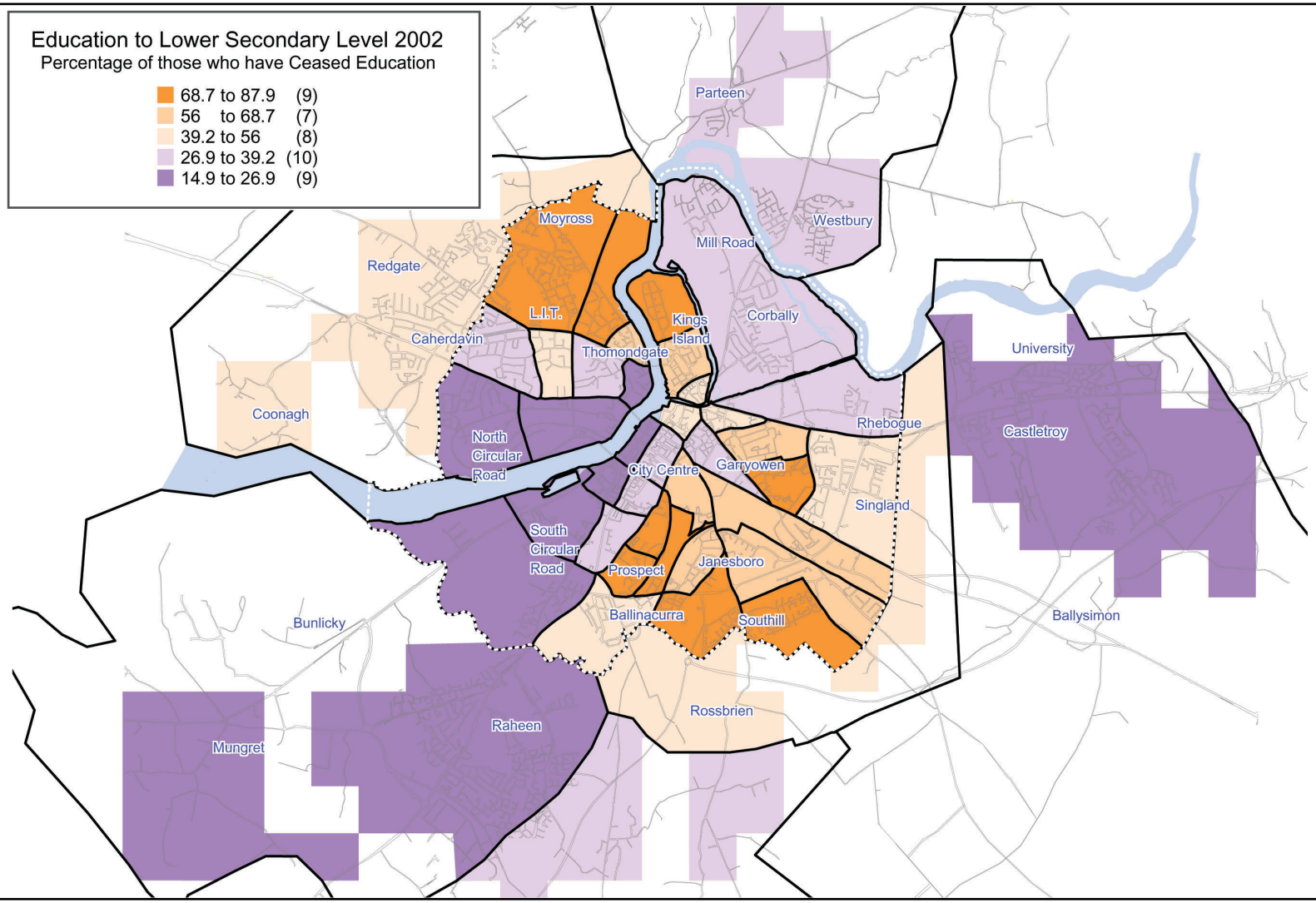
3.6 Education and Social Class

As noted earlier, the economic base of the urban area has undergone significant restructuring in recent years, one aspect of which is the shift in employment towards more highly skilled occupations. Because these occupations demand higher levels of formal qualification, education has emerged as perhaps the most significant determinant of the labour market prospects of the individual: those with lower levels of educational attainment are less likely to gain access to higher status, more remunerative, occupations. Likewise, differences in levels of educational attainment between areas reflect variations in the skills levels of the available labour force. Areas with high concentrations of less educated, lower skilled workers, tend to be less attractive to modern manufacturing and service industries.

Reflecting the changing norms in education and employment, workers whose education extended to lower secondary level or less can be considered to be at a disadvantage in the labour market. When the number of such persons is expressed as a percentage of all those whose education has ceased, the resulting variable shows a high level of variation across the urban area. For the urban area as a whole, the percentage with lower secondary level education or less is 41 per cent. However, this rises to over two-thirds in the EDs containing the residential areas of Moyross, Ballynanty, Kileely, St. Mary's Park, Garryowen, Prospect, Rathbane and Southill **(Map 24)**. Not surprisingly, this pattern is almost identical to that of early school leavers, defined as those who have left education aged 15 years or younger **(Map 25)**. At the other end of the educational spectrum are those who have attained a postgraduate qualification. For the urban area as a whole such individuals constitute a relatively low percentage – just 2.6 per cent – of those who have ceased education. However the percentage with postgraduate education is comparatively high in the EDs containing the North and South Circular Roads and the university, as well as the suburbs of Ballyclough and Ballysheedy **(Map 26)**.

While educational attainment strongly influences occupational status, occupation in turn is used to determine the individual's social class; and consequently the geographical pattern of social class corresponds closely to that of educational attainment. Professional workers and managerial / technical workers together with their dependants (social classes 1 and 2 combined) form a relatively high proportion of the population in areas where higher levels of educational attainment are more common, notably the North and South Circular Road areas and the southern suburbs **(Map 27)**. Conversely, the highest relative concentrations of population in social classes 5 and 6, representing semi-skilled and unskilled workers respectively, are found in those areas identified above as having lower levels of educational attainment **(Map 28)**. These extend from the local authority housing estates in the northwest of the City, through the city centre, and out to the estates that form the southeastern boundary of the City.

Map 24:



The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.

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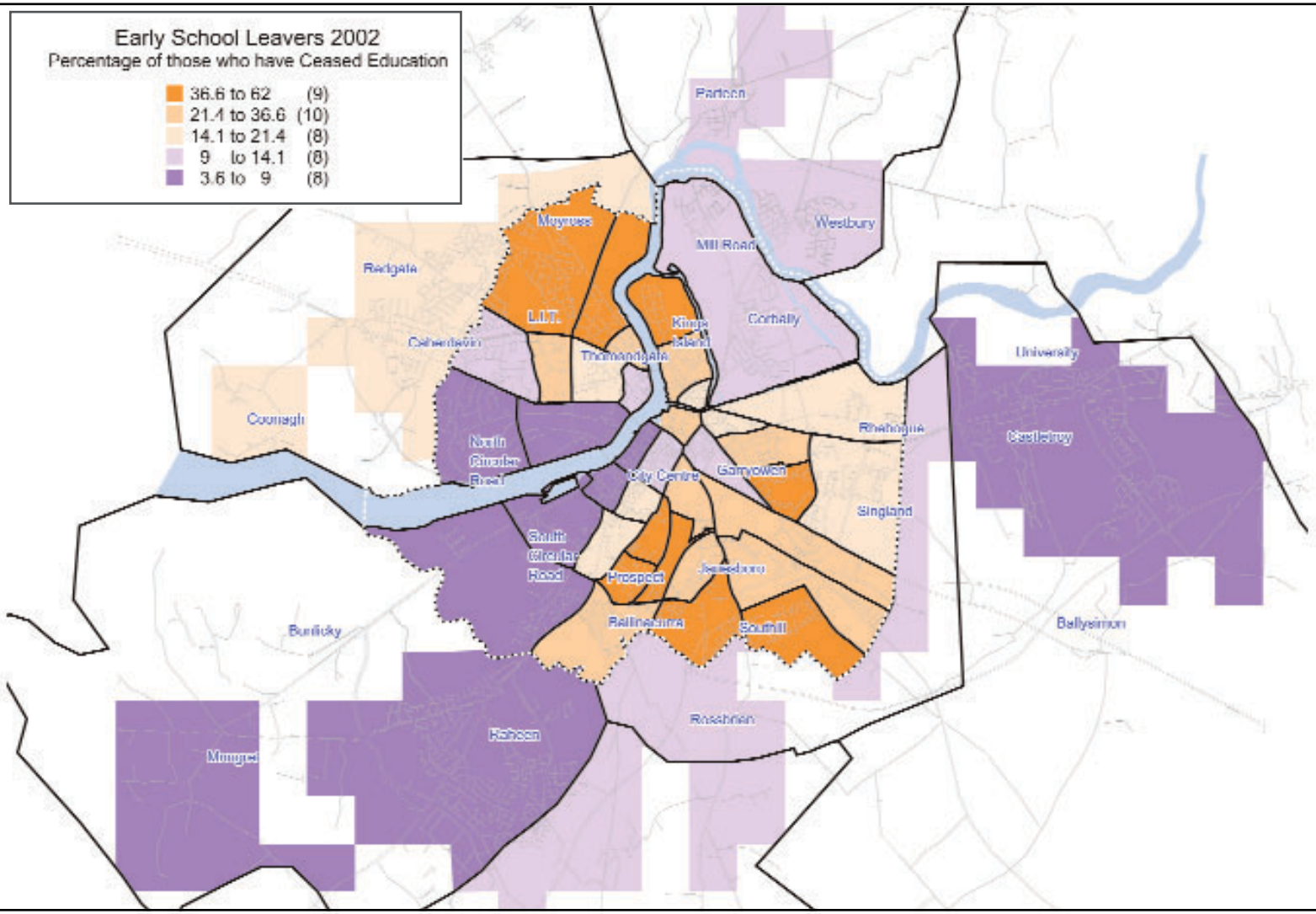
City Bounds
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

Map 25:



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City Bounds

Electoral Division Bounds

Redgate City Locations

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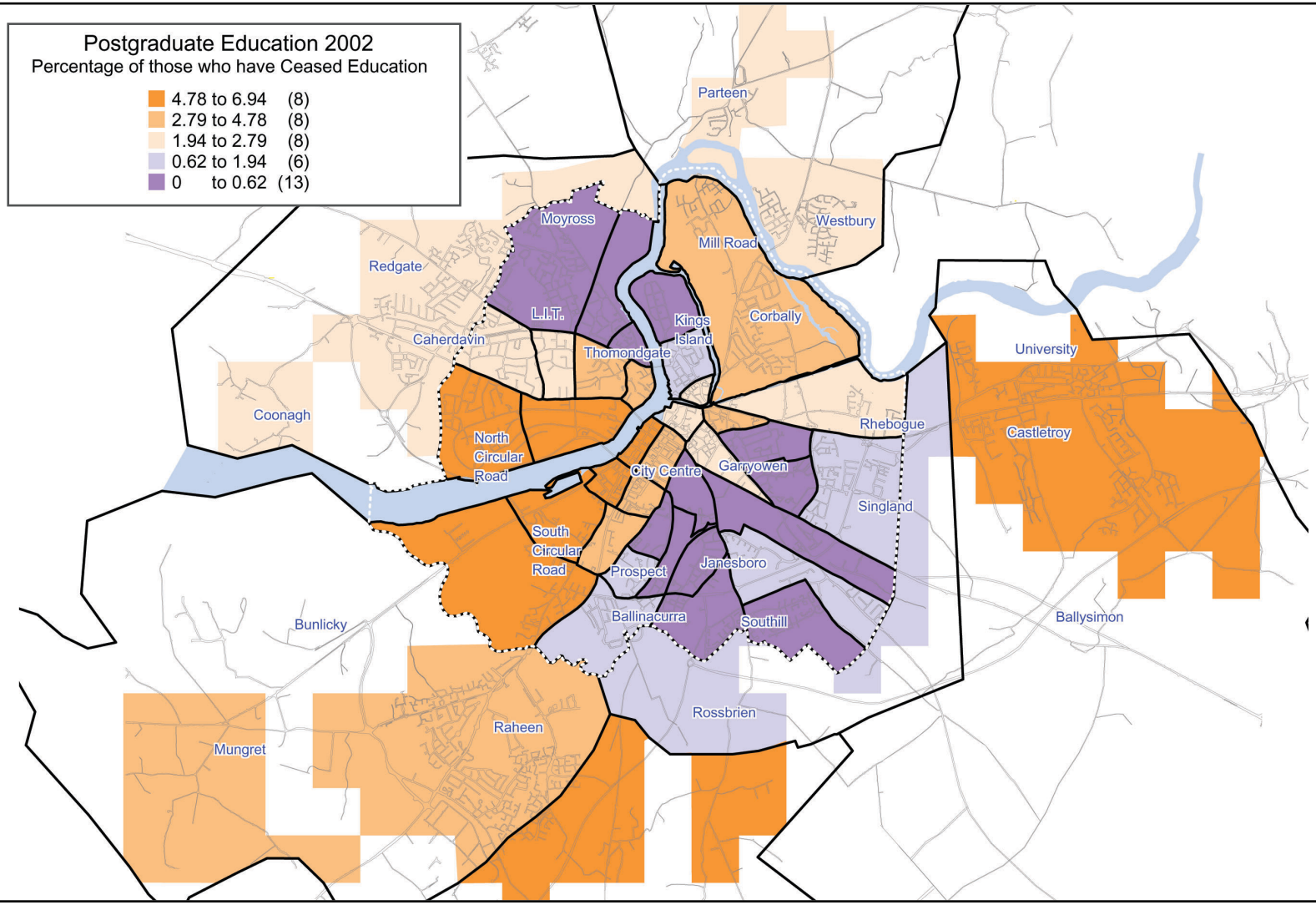
Limerick City Council

Source: CSO 2002

Map 26:



The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.

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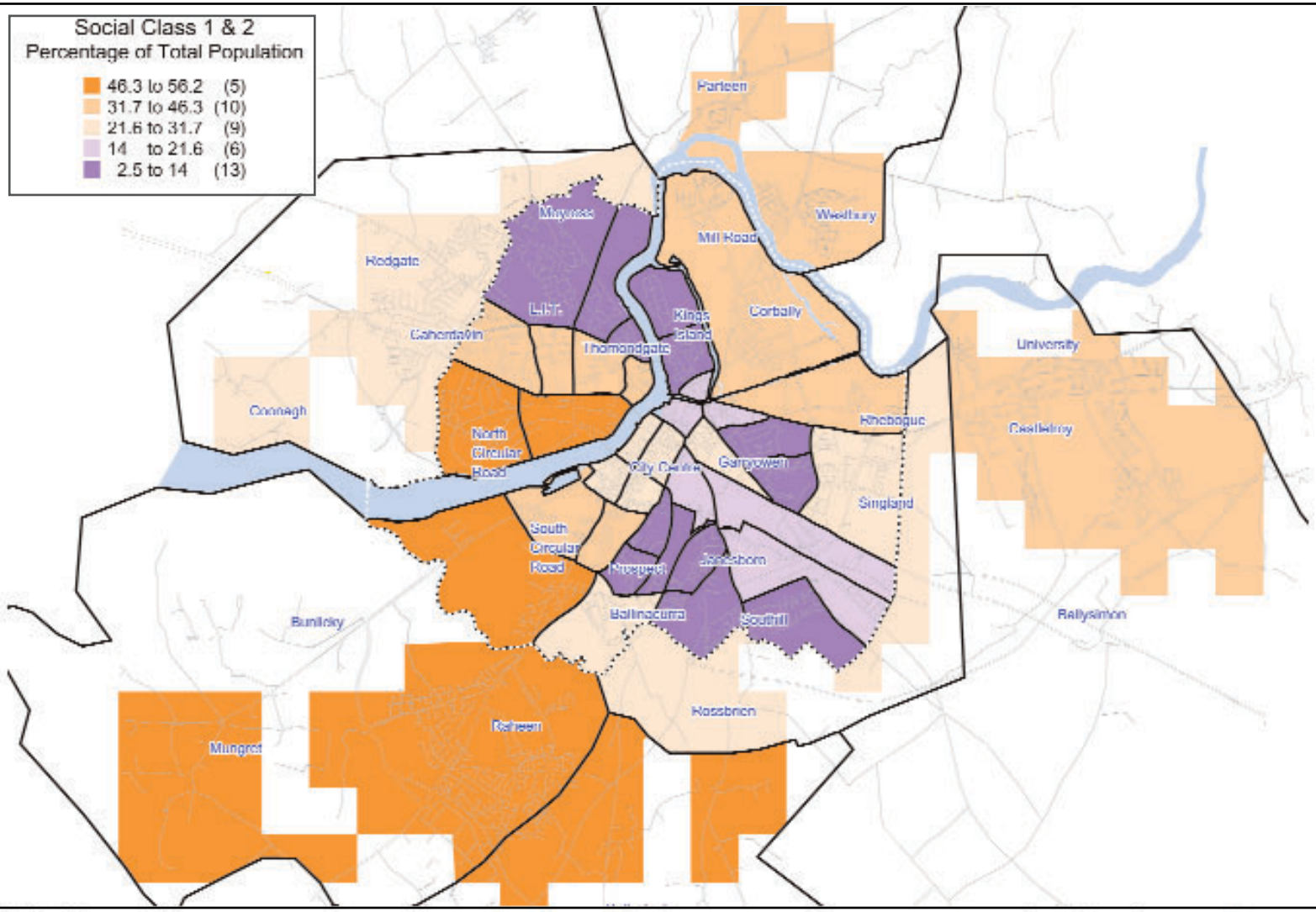
City Bounds
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

Map 27:


Social Class 1 & 2
Percentage of Total Population
46.3 to 56.2 (5)
31.7 to 46.3 (10)
21.6 to 31.7 (9)
14 to 21.6 (6)
2.5 to 14 (13)
Parteen
Weelbury
Mill Road
Hodgate
Corbally
Kings Island
Thomondgate
University
Caherdavin
Coonagh
Rhebogue
Castletroy
North Circular Road
City Centre
Garryowen
Singland
South Circular Road
Ballinacurra
Southill
Rallyshinon
Bunlicky
Raheen
Mungret
Rossbrien
The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.
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City Bounds
Electoral Division Bounds
Hodgate
City Locations
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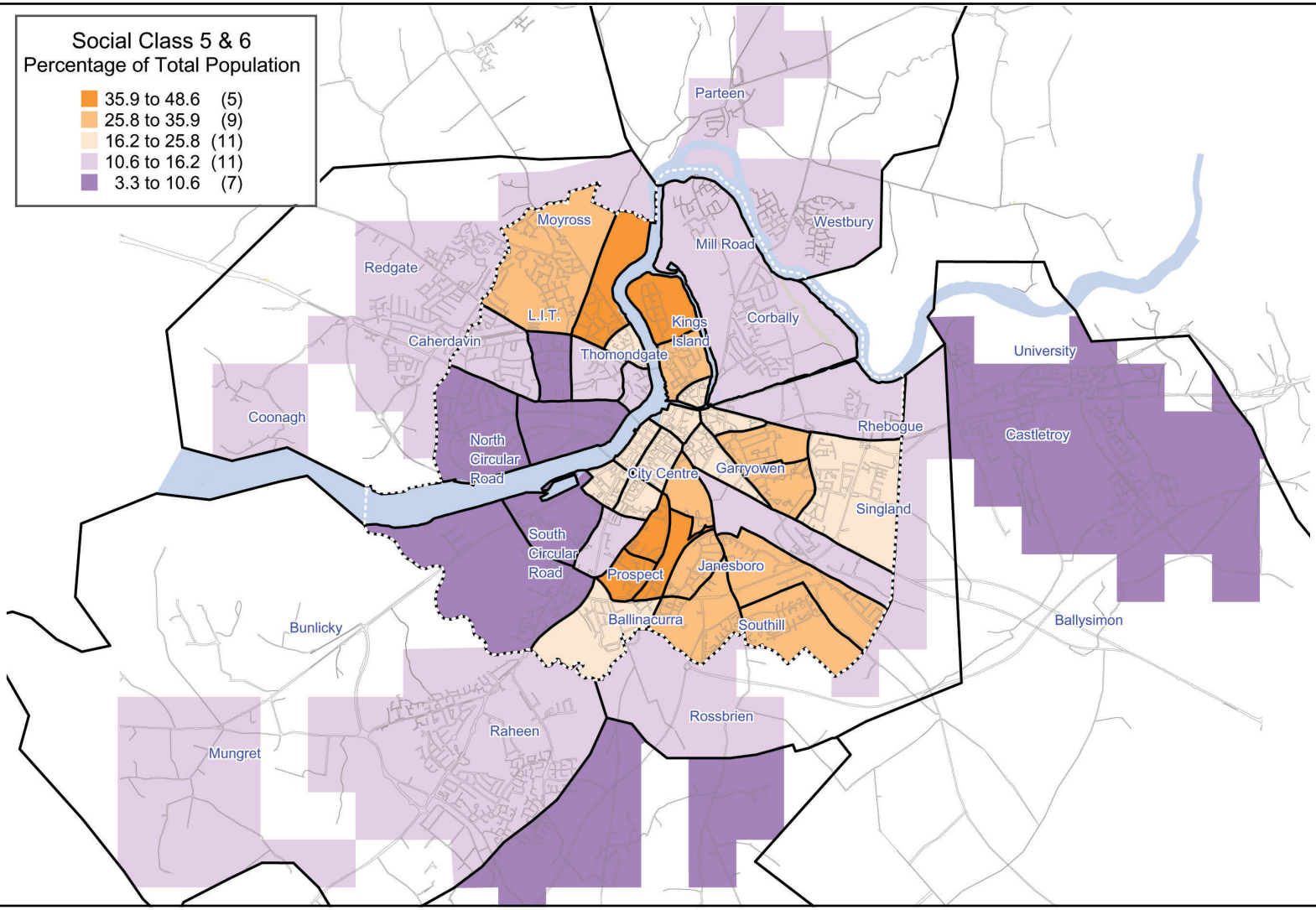
Limerick City Council
Source: CSO 2002

Map 28:



The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.

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City Bounds
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

3.7 Migration, Nationality and Culture

Urban areas are characterised by a higher turnover of population than rural areas, as residents move into and out of the area with greater frequency and in higher volumes. In turn these movements are linked to a greater diversity and heterogeneity of population in the urban realm, which is expressed in terms of attributes such as nationality, ethnicity, and culture. The next series of maps looks at some of these aspects of Limerick's population, starting with an exploration of mobility and migration patterns.

The census of population provides two different ways of estimating in-migration to an area. First, a measure of mobility that includes not just migrants from overseas but from elsewhere in Ireland, including the locality of Limerick itself, can be derived from information on the place of residence of the usually resident population, one year prior to the census.[13] While not all of those who have recently changed address are migrants in the usual sense of the word, it is likely that a considerable proportion is. For Limerick urban area as a whole, 12 per cent of the usually resident population in 2002 had a different address one year previously. The percentage of recently moved population was at its highest, at over 40 per cent, in the Shannon A and Dock A Electoral Districts in the city centre **(Map 29)**. This reflects the high level of population growth in these areas noted earlier, in turn consequent on the development of new apartments along the quays. Outside of the city centre, high levels of population turnover are also notable in the two EDs that contain large student populations – Ballysimon ED (containing UL) and Dock D (containing Mary Immaculate College). In both areas the proportion of those who have changed address within the previous year is roughly one in four.

The second measure of migration focuses specifically on immigration (i.e. in-migration from abroad) and is derived from information on the individual's country of birth. The period 1996-2002 was unique in Irish demography in that it is the first period in the history of the State in which a high level of population growth was fuelled not by natural increase but by the excess of immigration over emigration. While much of the immigration of recent years reflects the return migration of Irish people who emigrated in earlier decades, a significant part consists of non-Irish born and non-Irish nationals. The result is that Irish society has become considerably more multi-cultural.

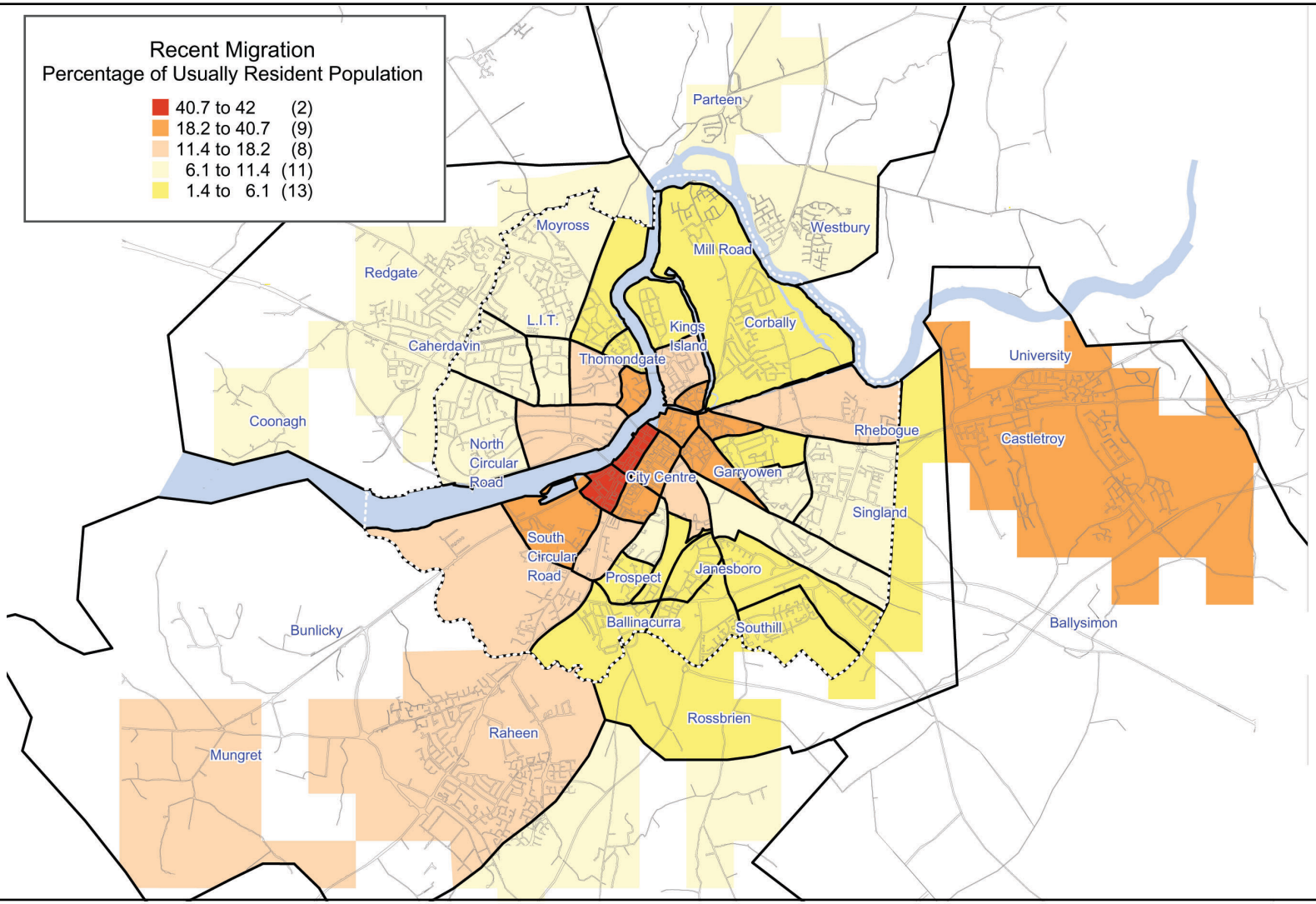
In Limerick urban area as a whole, the percentage of non-Irish born population in 2002 stood at 8.6 per cent (roughly one in twelve of the usually resident population).[14] Once again, this variable shows a high level of variation between EDs, with the highest relative concentrations found in the city centre areas, where ratios are as high as one in four **(Map 30)**. Higher concentrations in the city centre are to be expected, as this is traditionally the focus for immigration in urban areas, due to a range of factors including the local availability of employment and housing for rent. Outside the city centre one of the highest concentrations is in the Dooradoyle and Raheen areas. The ED in question, Ballycummin, contains the largest absolute number of foreign born at 1,640 persons (over 12 per cent of the usually resident population). The location here of several organisations with significant numbers of non-Irish employees may provide the explanation.

The census small area statistics do not provide detailed information on the country of origin of foreign-born persons, other than for those born in the UK (including Northern Ireland). In Limerick, 54 per cent of those born outside the State have UK birthplaces. When this component is filtered out, and the distribution of those born outside Ireland and the UK is mapped, the pattern is similar to that noted above **(Map 31)**. Thus the four city centre EDs of John's C, Shannon A and B, and Dock A again have the highest relative concentrations. Indeed the degree of concentration in these areas is even greater than for persons born outside the State alone. This is evident in the fact that the four central EDs, which together account for less than four percent of the usually resident population, contain 10 per cent of those born outside the State, and 16 per cent of those with birthplaces other than Ireland or the UK. This also suggests a higher degree of residential assimilation of the population born in the UK as compared to those born elsewhere.

Many of those born outside the State hold Irish citizenship, or otherwise consider themselves as Irish. This is reflected in the fact that while the foreign born population of the urban area in 2002 was 7,767, the number of persons describing themselves as non-Irish in terms of nationality was somewhat less, at 5,330. It is likely that the latter group comprises more recent arrivals in Limerick than the general category of those born outside the State, and that it corresponds more closely with in-migrants attracted to Ireland by the economic growth of the late 1990s. However, once again their geographical distribution relative to the usually resident population is focused largely on the city centre **(Map 32)**. Several of the areas of high concentration contain hostels and other accommodation for asylum seekers and refugees, suggesting that these groups constitute one of the main components of the city's non-national population.

Not all of the cultural diversity of Ireland is the result of immigration: the Travelling Community represents an indigenous ethnic group. Numerically it is quite a small community in Limerick, with 464 members making up just 0.5 per cent, or 5.1 per thousand, of the population. However its distribution is characterised by a very high degree of unevenness: in fact the Travelling Community is more highly segregated in spatial terms than are non-Irish nationals. While no members of the Travelling Community were enumerated in 13 of the 43 EDs in the urban area, 5 EDs had levels of over 23 per thousand population **(Map 33).** Geographically, the main concentrations of Travellers were in the ED of Kileely A on the northside of the city, the Rhebogue area to the east, and the Rathbane / Southill area to the south. All of these areas have Traveller accommodation in the form of halting sites.

Map 29:



The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.

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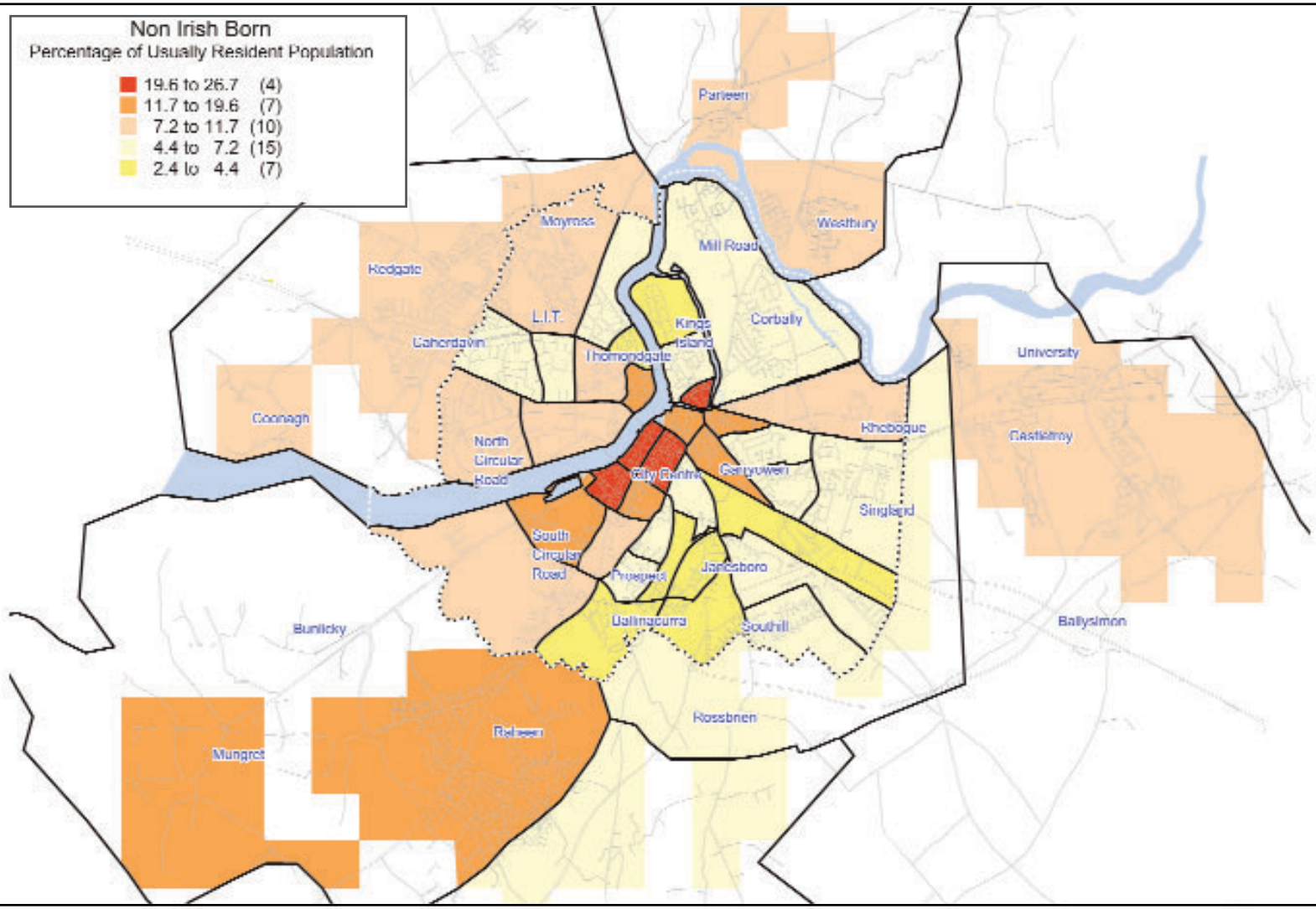
City Bounds
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

Map 30:



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City Bounds

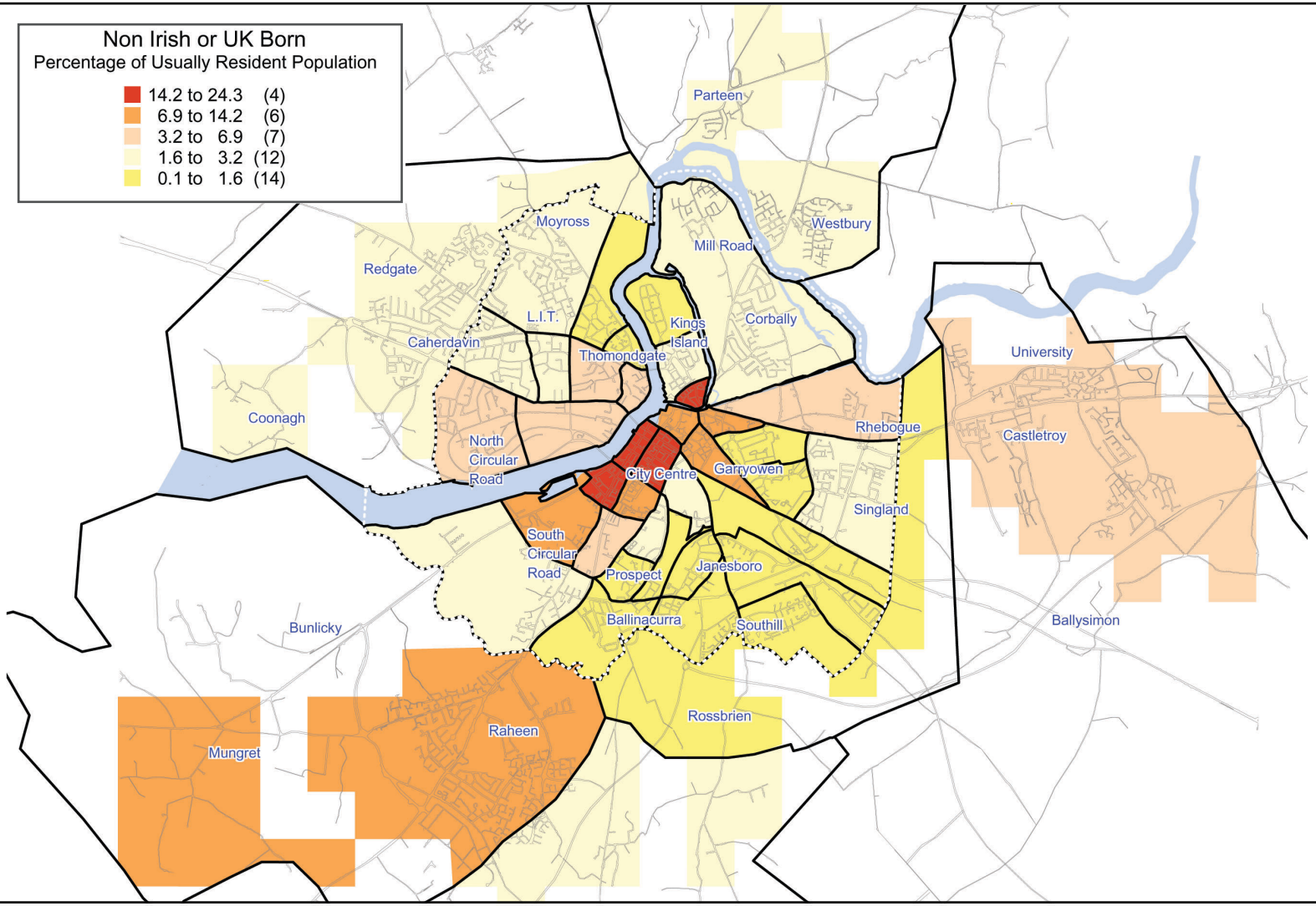
Electoral Division Bounds

Rodgate City Locations

Limerick City Council

Source: CSO 2002

Map 31:



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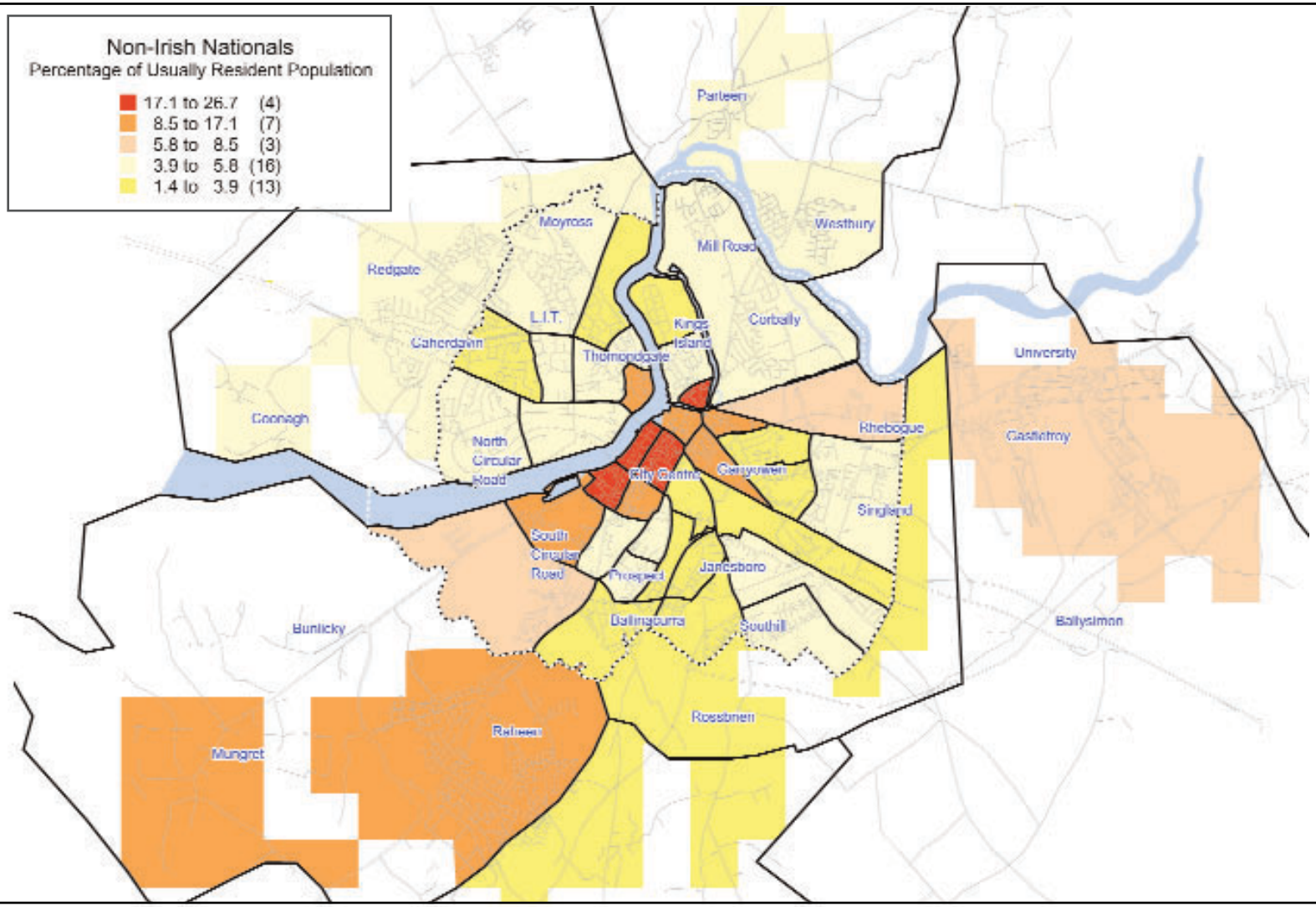
City Bounds
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

Map 32:


Non-Irish Nationals
Percentage of Usually Resident Population
17.1 to 26.7 (4)
8.5 to 17.1 (7)
5.8 to 8.5 (3)
3.9 to 5.8 (16)
1.4 to 3.9 (13)
Parteen
Moyross
Westbury
Mill Road
Redgate
L.I.T.
Kings Island
Curbally
Caherdavin
Thomondgate
University
Castletroy
Coonagh
Rhebogue
North Circular Road
City Centre
Garryowen
Singland
South Circular Road
Prospect
Janesboro
Ballinacurra
Southill
Ballysimon
Bunlicky
Raheen
Rosbrien
Mungret
The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.
SCALE 1:60,000
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City Bounds
Electoral Division Bounds
Redgate
City Locations
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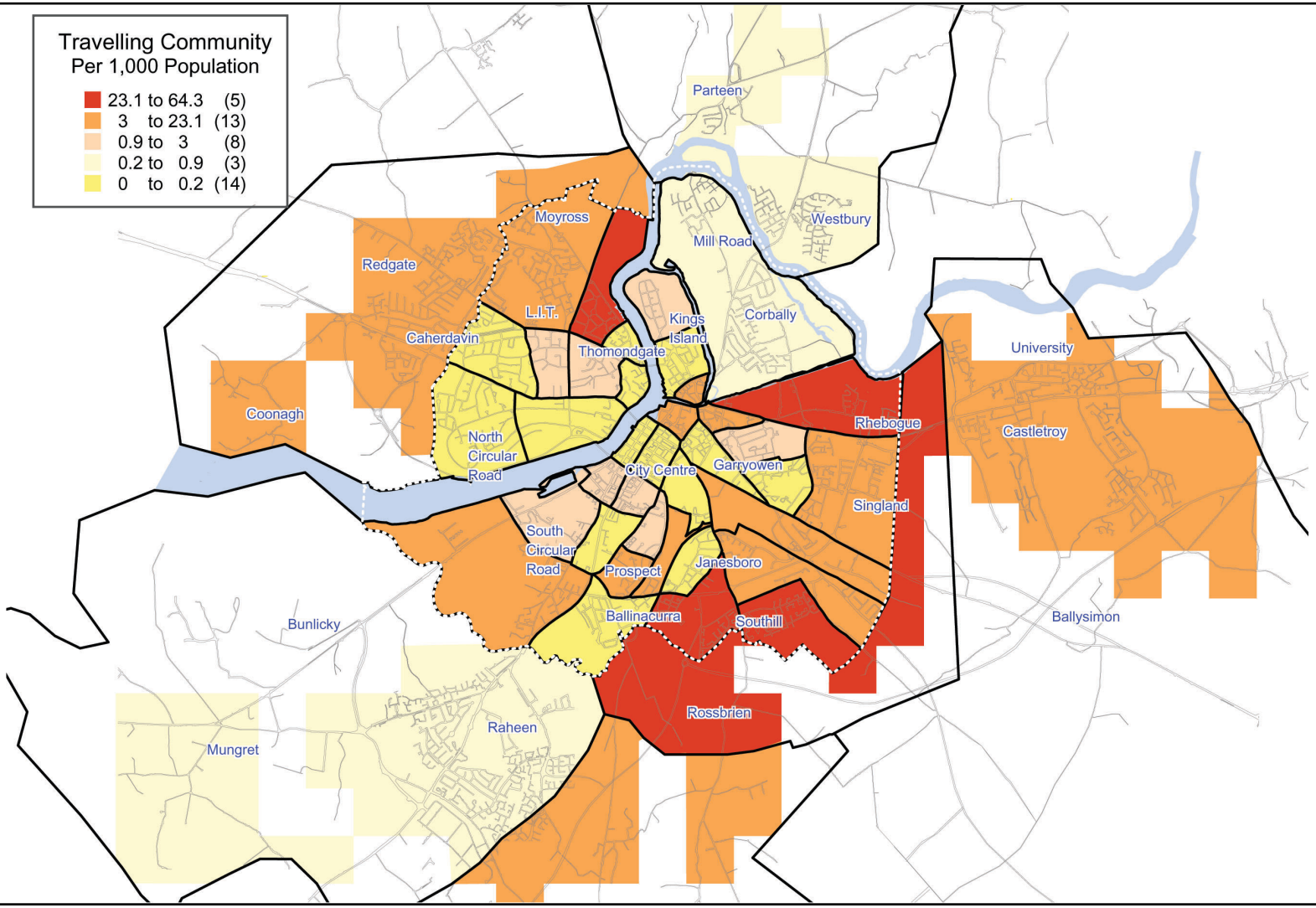
Limerick City Council
Source: CSO 2002

Map 33:



The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.

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City Bounds
Electoral Division Bounds
Redgate City Locations

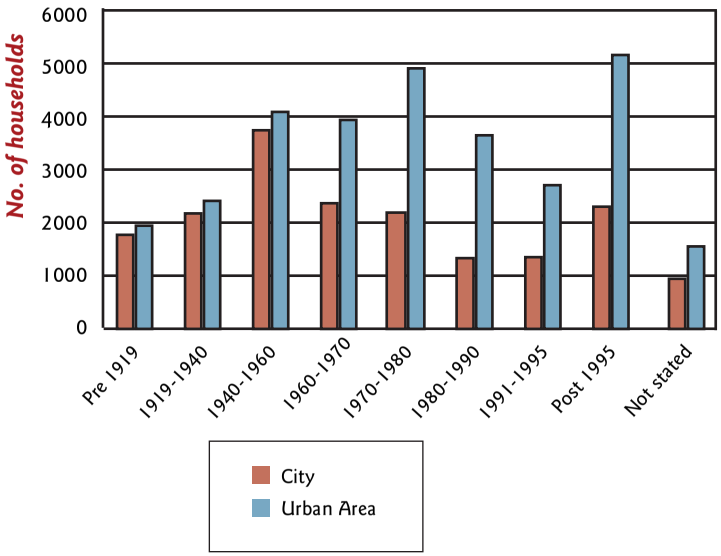
Limerick City Council
Source: CSO 2002

3.8 Housing

One of the main axes of differentiation between households in any city relates to the nature of the housing that they occupy. This section examines three of the key dimensions of housing differentiation in Limerick, namely age, type of construction, and tenure status.

The high level of real estate development in the urban area in recent times is borne out by the fact that 26 per cent of all private households are accommodated in housing that has been constructed since 1990, and 17 per cent (i.e., one in six households) in housing built since 1995. Most of the new housing has been built in the suburbs, and therefore the age profile of housing in these areas is younger than that in the City (Fig. 5).

Figure 5: Age Profile of Housing, 2002

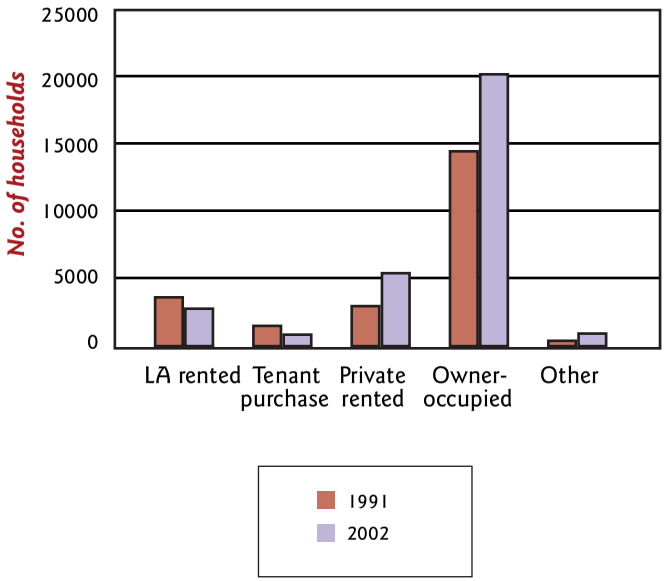


Nevertheless, 44 per cent of the stock built in the six years to 2002 is located in the City. This is again a reflection of the recent high level of renewal activity. Three main areas of new construction are evident in the post-1995 period **(Map 34)**. These are the city centre, including both the quays area and Market ED which extends from Mungret Street to Cathedral Place and along Mulgrave Street to the Fair Green; the Rhebogue area off the Dublin road; and the South Circular Road / Courtbrack Avenue area (ED of Ballinacurra A). In these areas roughly one in three households occupy new housing. In contrast there has been comparatively little new housing construction on the north side of the river.

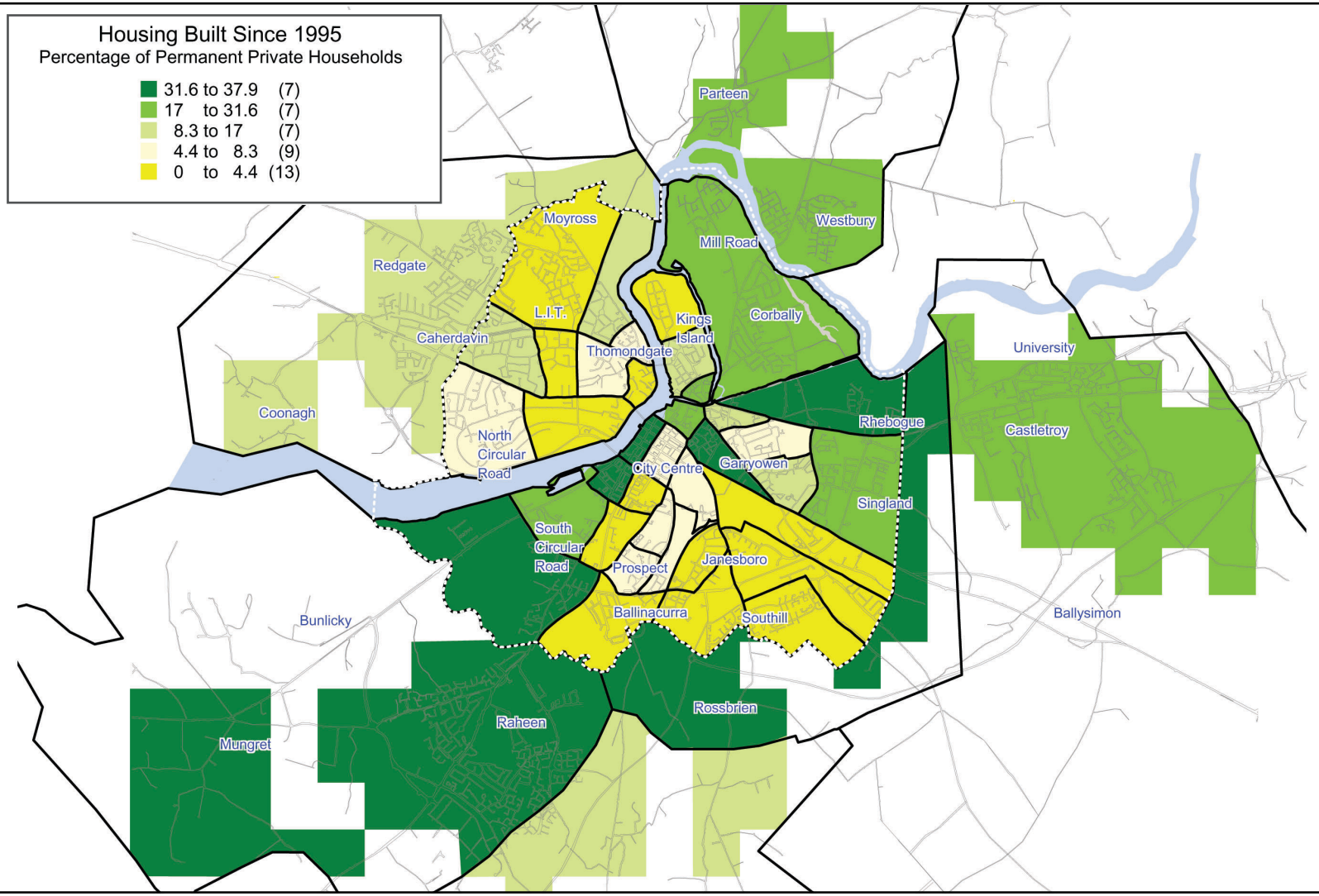
The most significant contrast between the city centre and the suburban areas in housing terms relates to the type or style of accommodation provided. The predominant form of new construction in the city centre has been apartment blocks, and flats and apartments now accommodate over 85 per cent of households resident in this area **(Map 35)**. In suburban areas of the city this style of housing rarely accounts for more than 10 per cent of the stock. This contrast between city and suburbs is of course driven in the first instance by the economics of property development, and specifically the higher price of land in the centre, which necessitates more intensive use. In turn it is one of the main factors underpinning the contrasts in household and family structures that were noted earlier.

The period 1991-2002 witnessed some significant changes in the tenure status of housing in Limerick urban area. These changes occurred in the context of a one-third increase in the total number of households. This increase reflects the high rate of net in-migration to the urban area in the 1990s, as well as the very high rate of household formation, both of which contributed to rapid growth in demand for housing and the consequent escalation of house prices. Higher demand was accompanied by increases in both the number of households owning their dwelling and the number renting in the private sector, but the numbers in local authority rentals, and on tenant purchase schemes, decreased (Fig. 6).[15] The sector with the most significant rate of growth over the decade was the private rented sector where the number of households almost doubled, from 2,720 (11.8 per cent of households) to 5,330 (17.5 per cent of households). In contrast the number of households in local authority rentals decreased from 3,387 (14.7 per cent of households) to 2,688 (8.8 percent). These figures suggest that part of the increase in private rentals was due to households leaving the local authority sector, an inter-sector migration that was facilitated by rapid growth in the rent supplement scheme in this period.

Figure 6: Tenure Status of Households, 1991 and 2002



Map 34:


Housing Built Since 1995
Percentage of Permanent Private Households
31.6 to 37.9 (7)
17 to 31.6 (7)
8.3 to 17 (7)
4.4 to 8.3 (9)
0 to 4.4 (13)
Parteen
Moyross
Westbury
Mill Road
Redgate
L.I.T.
Kings Island
Corbally
Caherdavin
Thomondgate
University
Coonagh
Rhebogue
Castletroy
North Circular Road
City Centre
Carryowen
Singland
South Circular Road
Prospect
Janesboro
Bunlicky
Ballinacurra
Southill
Ballysimon
Rossbrien
Raheen
Mungret
The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.
SCALE 1:60,000
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City Bounds
Electoral Division Bounds
Redgate
City Locations
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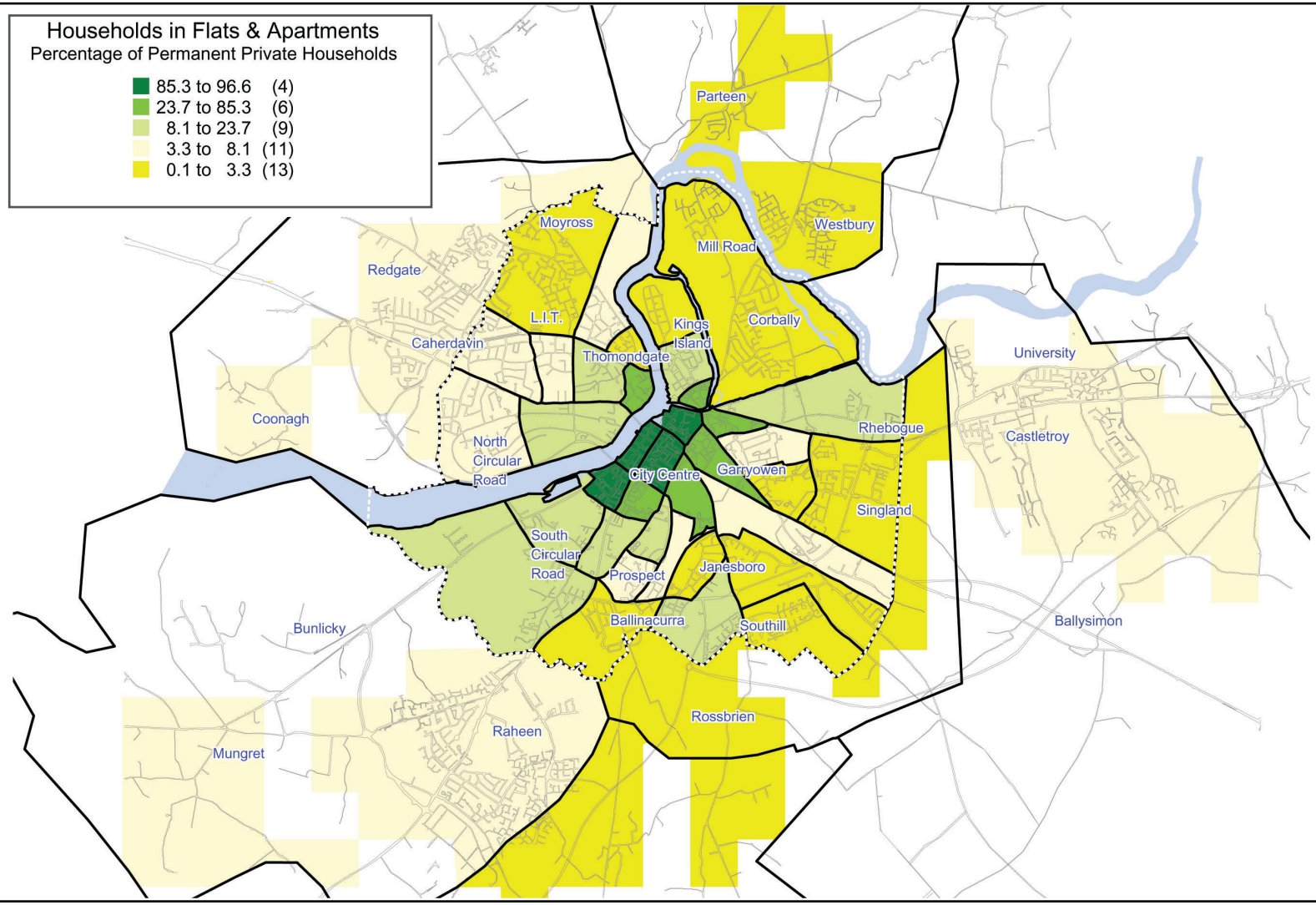
Limerick City Council
Source: CSO 2002

Map 35:



The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.

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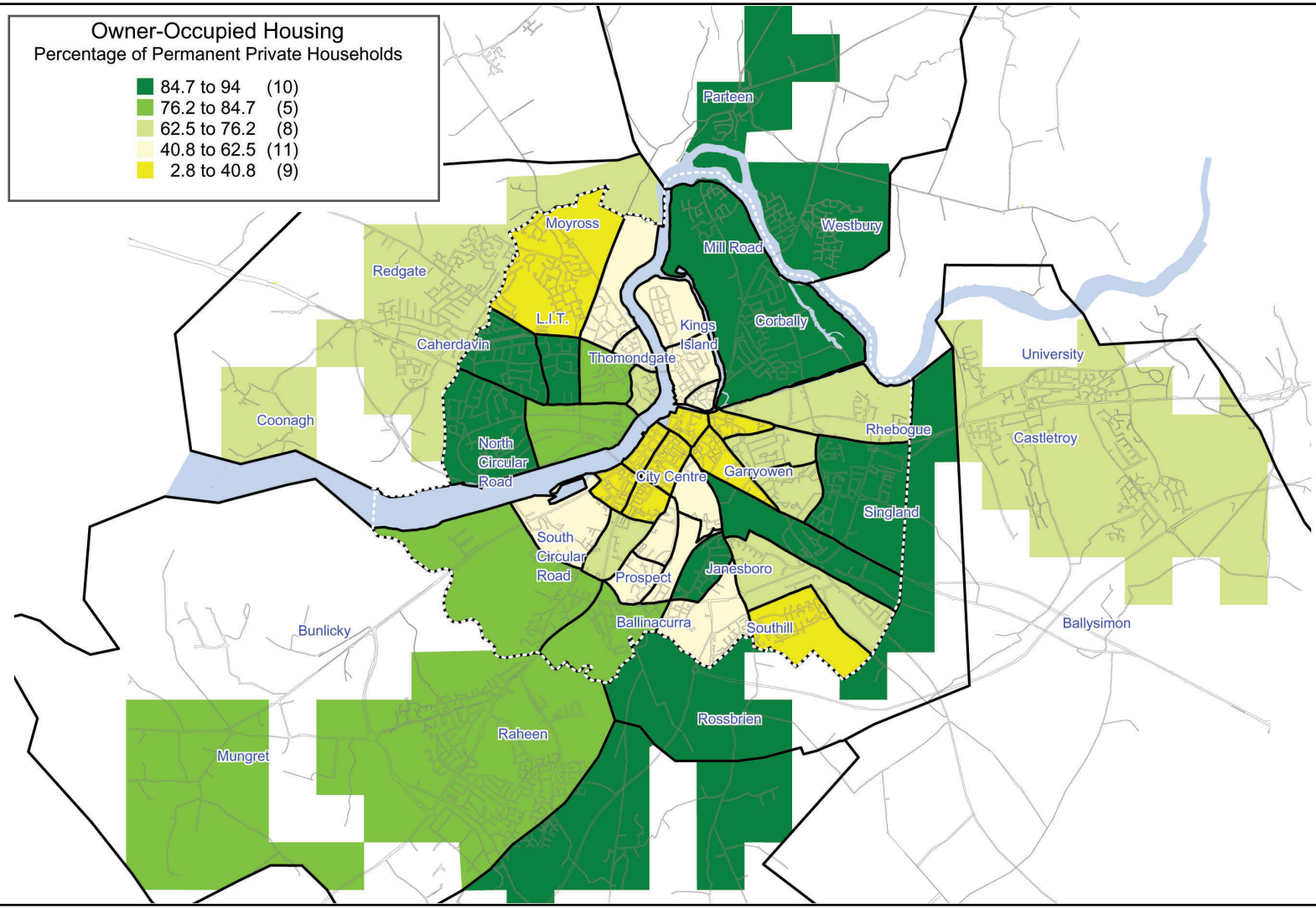
City Bounds
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

The geographical pattern of tenure status is quite complex. While the level of owner occupancy tends to increase away from the city centre, there are also marked differences among suburban areas. Levels of owner occupation are highest, at 85 per cent or more, in four main areas **(Map 36)**. These are the northern suburbs of Corbally and Westbury, the Singland and Janesboro areas, the southern suburbs of Ballyclough and Ballysheedy, and the North Circular Road / Ennis Road area. In contrast, levels of owner occupancy are relatively low in the city centre and the Moyross / Ballynanty and Southill areas. In the latter areas the predominant tenure status, at over 40 per cent of households, is renting from the local authority (Limerick City Council), and this is also relatively high in the Kileely, King's Island, Prospect and Rathbane areas **(Map 37)**. Private renting is by far the most prevalent tenure status in the city centre, and is also notably high in the areas with student populations such as Castletroy and Dock D **(Map 38)**. In the quayside EDs of Shannon A and Dock A approximately 3 in 4 households rent their dwelling in the private market.

The highly differentiated geography of housing tenure suggests that the shift of households between tenure categories noted above may be a side effect of inter-area mobility. Given that different areas are characterised by different tenures, then relocation of households within the city will almost inevitably result in changes in the numbers in different tenure categories. However, the relationship between inter-sectoral migration in the housing market and spatial mobility is quite complex, and further investigation is needed to clearly distinguish cause from effect.

Map 36:



The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.

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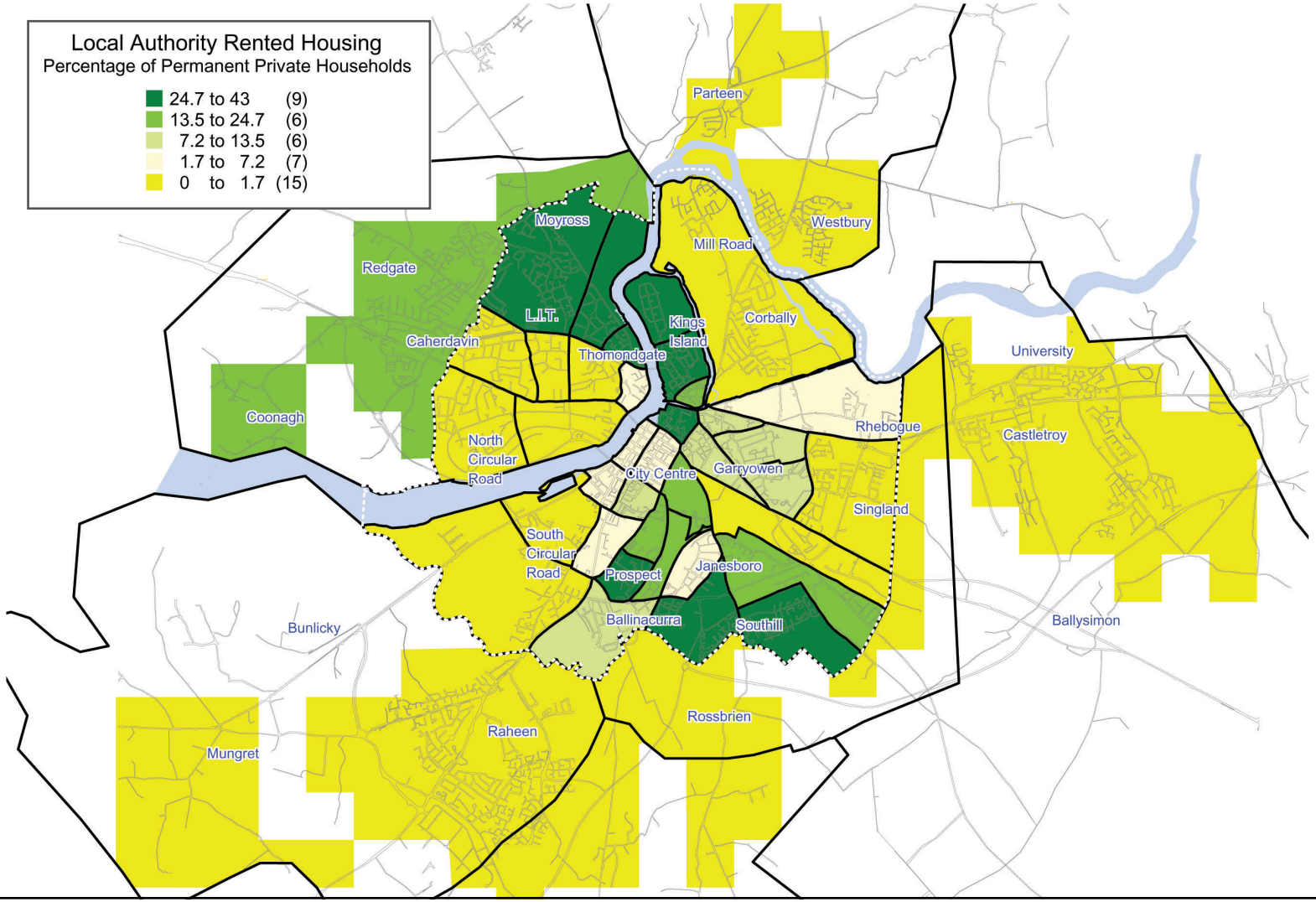
City Bounds
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

Map 37:



The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.

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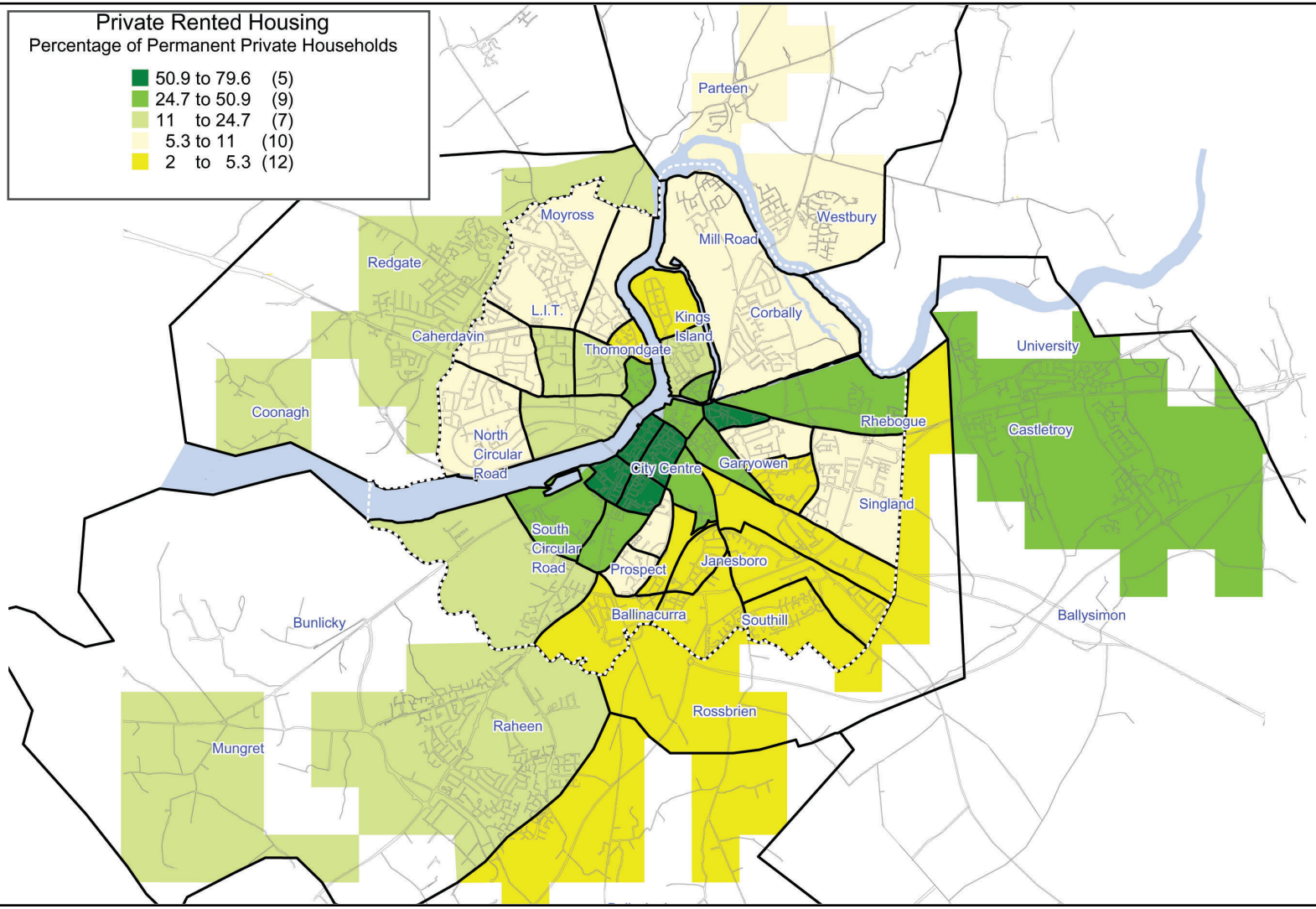
City Bounds
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

Map 38:



The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.

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City Bounds

Electoral Division Bounds

Redgate City Locations

Limerick City Council
Source: CSO 2002

3.9 Aspects of Accessibility: Travel, Transport and Communications

The decentralisation of manufacturing and services employment from the city centre to suburban and ex-urban areas has been a feature of the changing geography of Limerick over the past 25 years. As employment opportunities have decentralised, commuting distances for the public at large have generally increased. In this context, access to reliable and economic means of transportation has become increasingly important for individuals and households.

The distribution of distance travelled to work, school and college for the City and the suburban EDs is illustrated in Fig. 7. The modal (i.e., most frequently reported) travel distance for residents of both areas is between 1 and 2 miles, but, as would be expected from the distribution of employment and of schools and colleges, distances travelled are generally less in the City.[16] This is reflected in an estimated median travel distance for the City of 2.5 miles as compared to 3.3 miles in the suburbs. However, when travel times are examined, the differences between City and suburbs are less pronounced (Fig. 8). As expected, travel times are lower on average in the City, but the estimated median of 17.4 minutes, is only slightly below that of 18.4 minutes in the suburbs. This narrowing of the differential between City and suburbs, together with the relatively high value of both travel time medians compared to the corresponding median distances of travel, is consistent with a significant level of congestion within the City. This conclusion is further supported by the fact that roughly two out of three of those commuting do so by motorised means of transport (i.e., car or public transport – see below).

Figure 7: Distance Travelled to Work, School or College

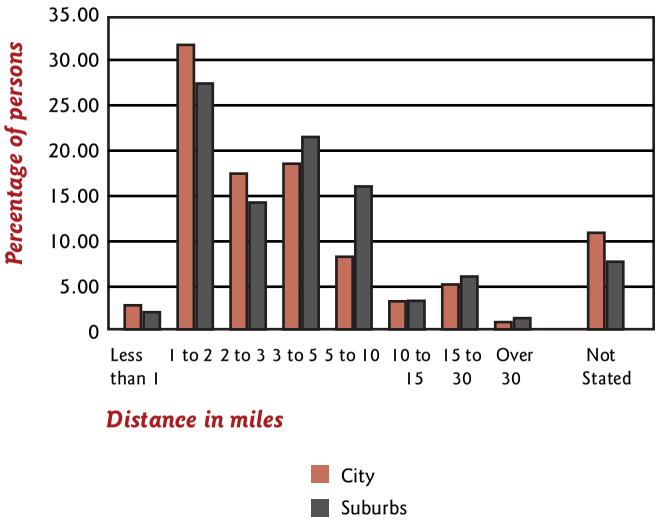
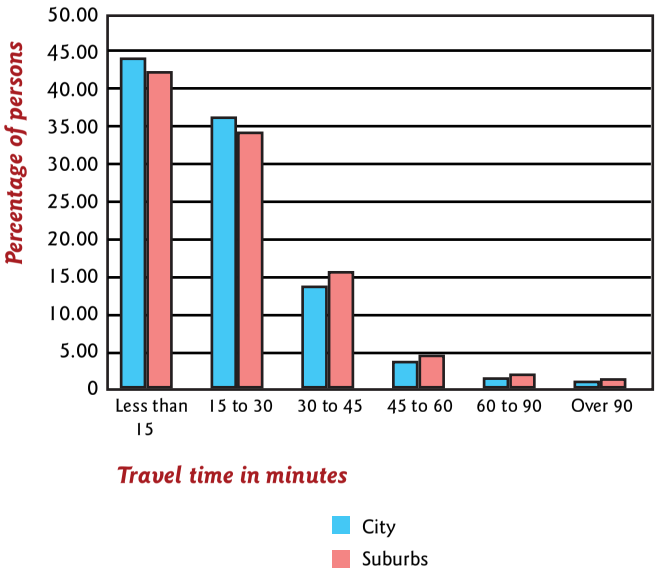


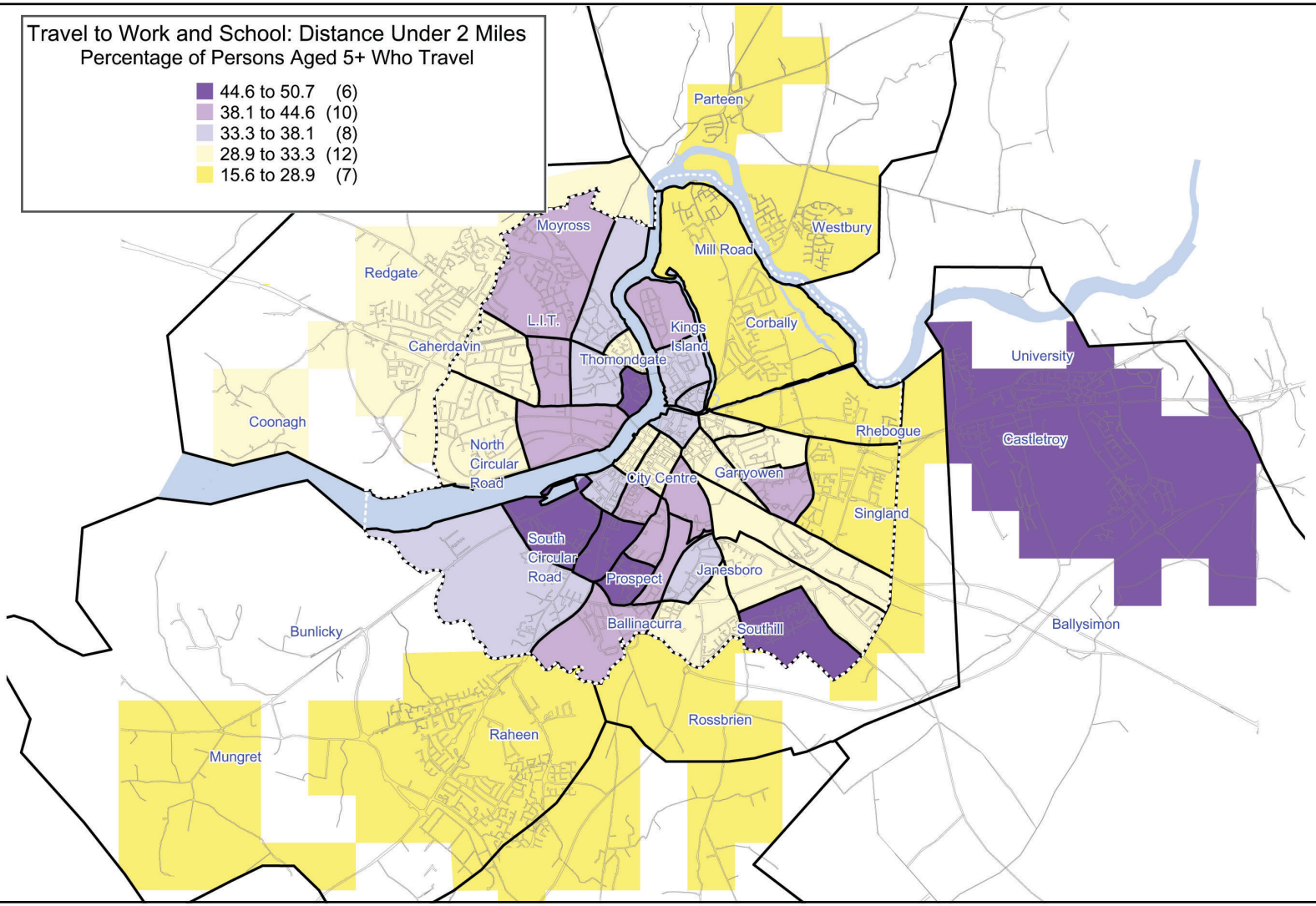
Figure 8: Travel Time to Work, School or College



Some indication of the variation in travel distance within the city can be obtained by focusing on the percentage travelling under two miles to work, school or college **(Map 39)**. Two miles is often considered critical in commuting studies, as it is the distance above which employment locations and other destinations for travel cannot be accessed easily on foot. The pattern revealed by the map is quite complex. There is a general tendency for the percentage travelling under two miles to increase towards the city centre, as would be expected given the high concentration of employment opportunities in this area. However, there are also exceptions to this pattern, such as the less central Southill and Castletroy areas where almost half of the commuting population travels less than two miles. Two factors explain lower commuting distances in these cases. The first of these is the availability of local employment opportunities – the Galvone and Tipperary Road industrial estates in the case of O'Malley Park, and the university and National Technological Park in the case of Castletroy. The second factor is that, as both areas have relatively low labour force participation rates (see Map 16), a high proportion of travel is not work-related, but involves third-level students in Castletroy, and, because of its demographic profile, school-children in O'Malley Park.

The map also reveals, somewhat surprisingly, that under one-third of commuters in the city centre EDs of Shannon A and B travel under two miles, implying that the majority of commuters in these areas travel to destinations located outside the centre.

Map 39:



The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.

SCALE 1:60,000
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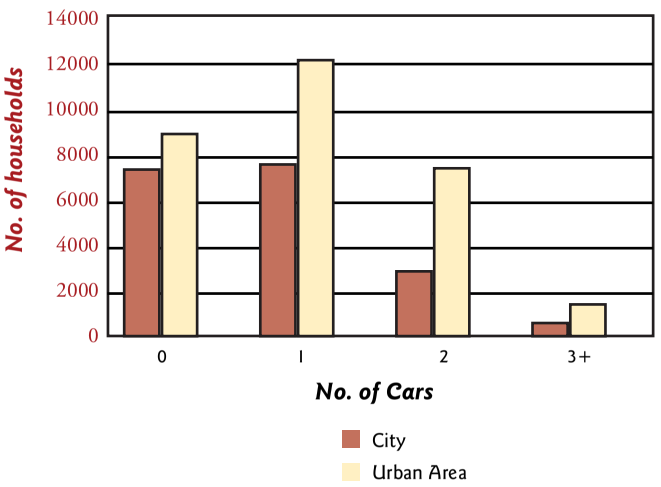
City Bounds
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

Commuting distance is one of two main factors influencing the mode of travel used: the other is the availability of various modes, and in particular private transportation. Nationwide and locally, levels of car ownership have increased steadily in recent years. However, access to private transportation in Limerick varies considerably between households and between areas. Altogether just less than 40 per cent of households in the City have no car, while 20 per cent have two or more cars. The corresponding figures for the suburbs are 14 per cent and 46 per cent respectively, indicating a considerably higher level of ownership in the outlying areas (Fig. 9).

Figure 9: Household Levels of Car Ownership

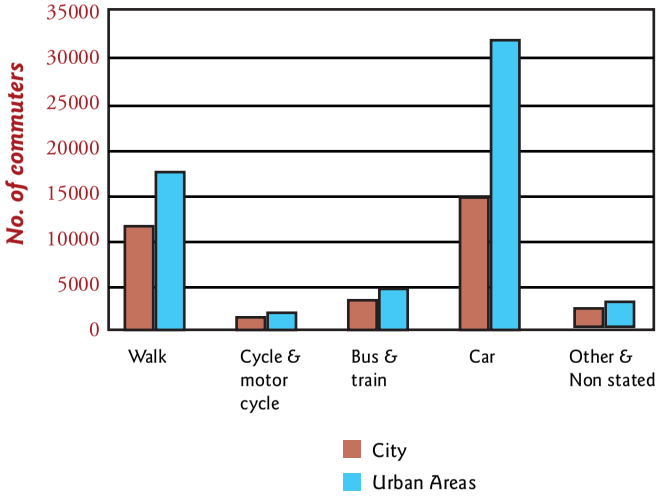


Households with no cars are relatively more numerous in the city centre, accounting for between one-half and three-quarters of all households **(Map 40)**. Low levels of car ownership here might be expected on the grounds that this is the area of greatest accessibility to employment and services: in other words, there is less need. However, given the fact that so many commuters from the centre travel over two miles, other factors must also be involved. These might include the fact that the city centre is the area best served by public transportation, and that, as indicated earlier, household sizes tend to be smaller here (other things being equal, larger households would be expected to have higher levels of car ownership). The rate of occurrence of car-less households is also high in the suburban areas of O'Malley Park and, to a lesser degree, Moyross / Ballynanty. In part, this reflects lower commuting distances and related factors, as noted above, but it is also a reflection of lower household income levels. According to the 2002 census, over two-thirds of households in the O'Malley Park area have no car.

The distribution of households with two or more cars is largely a mirror image of the previous variable **(Map 41)**. Four areas in particular stand out as having relatively high car ownership, where between approximately one-half and three-quarters of households have two or more cars. These are the suburbs of Westbury, Castletroy and Raheen / Ballyclough, as well as the North Circular Road area. Again the pattern is partly a reflection of need (lower accessibility levels leading to greater travel distances to work and to services) and partly due to higher household income levels in these areas. In the case of Castletroy, the high proportion of short commutes noted previously suggests that the latter factor is the more important of the two.

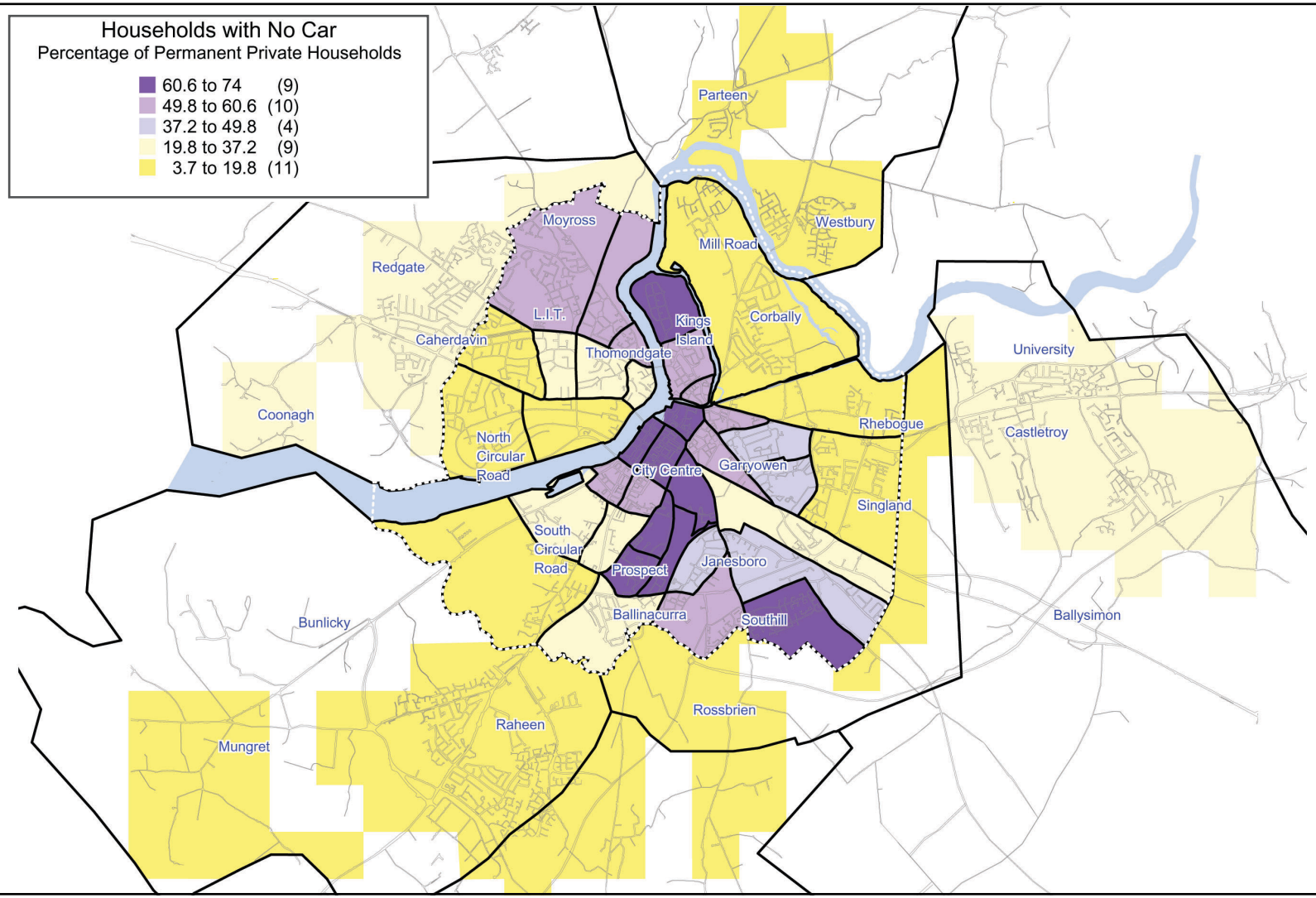
Given that approximately 60 per cent of households own at least one car, it is not surprising that this is the most popular mode of travel to work, school and college in Limerick (Fig. 10). Among commuters for whom information on mode of travel is available, over 56 per cent in the urban area, and 49 per cent in the City, travel to work, school or college by car. The highest levels of car usage are found in suburban areas with high levels of car ownership: in both the northern and southern suburbs usage levels are typically in excess of 70 per cent **(Map 42)**. These levels of usage are increasingly problematical. Taken in conjunction with the particular geography of employment in Limerick and the difficulties for travel created by the insufficiency of river crossings, they are giving rise to chronic levels of peak period congestion on the city's road network.

Figure 10: Mode of Travel to Work, School and College



Traffic congestion impacts negatively on public transport, which is used by only 8.5 per cent of commuters, the great majority of whom travel by bus. However, usage of public transport is in excess of twice this level in the Southill area and in the city centre **(Map 43)**. With an essentially radial bus network based on the city centre, the latter is the area best served by the bus service. Although the problems facing attempts to increase usage of public transport are complex and deep-rooted, there is some evidence here to suggest that supply side improvements in the bus service may help to induce a greater level of usage.

Map 40:



The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.

SCALE 1:60,000
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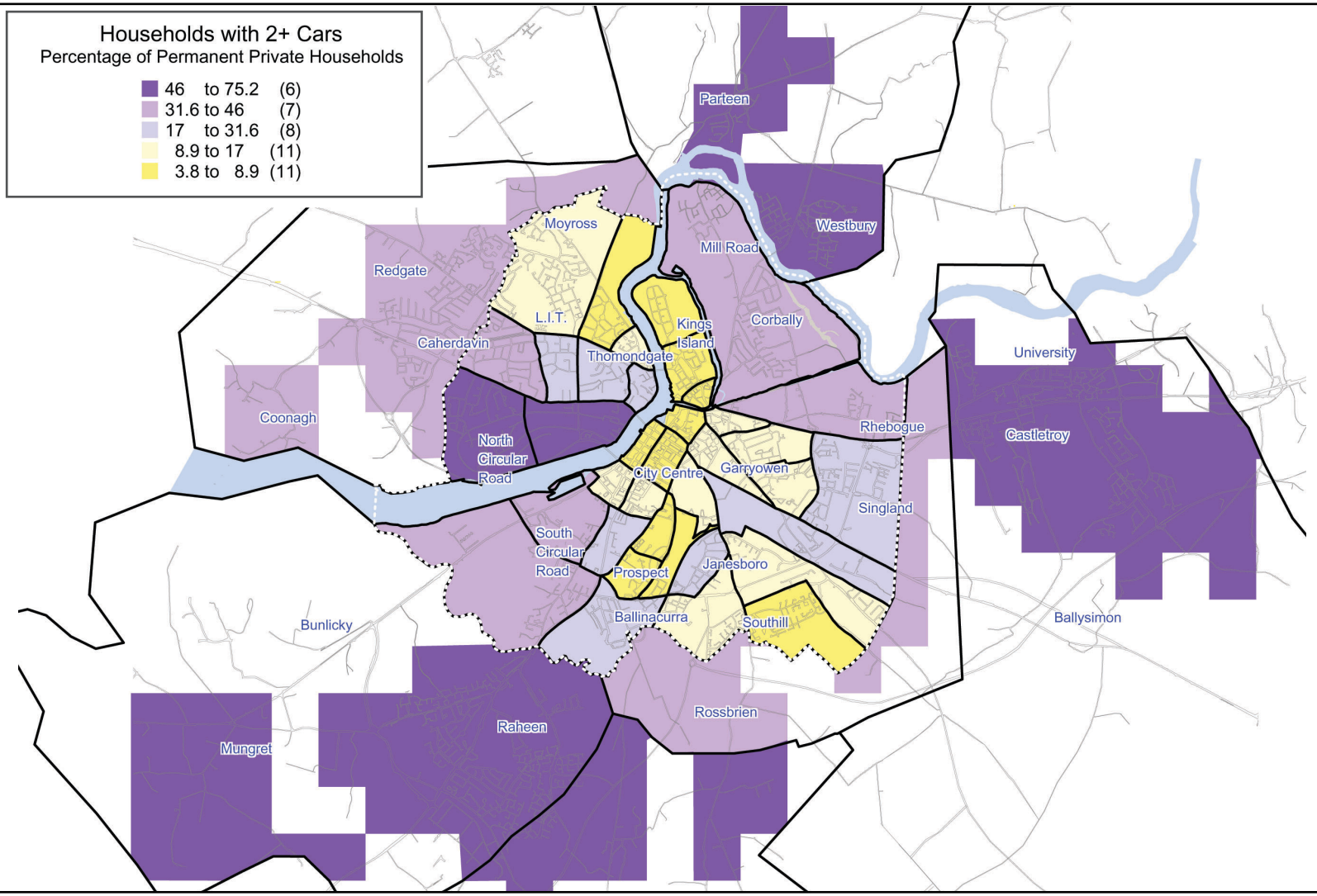
City Bounds
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

Map 41:



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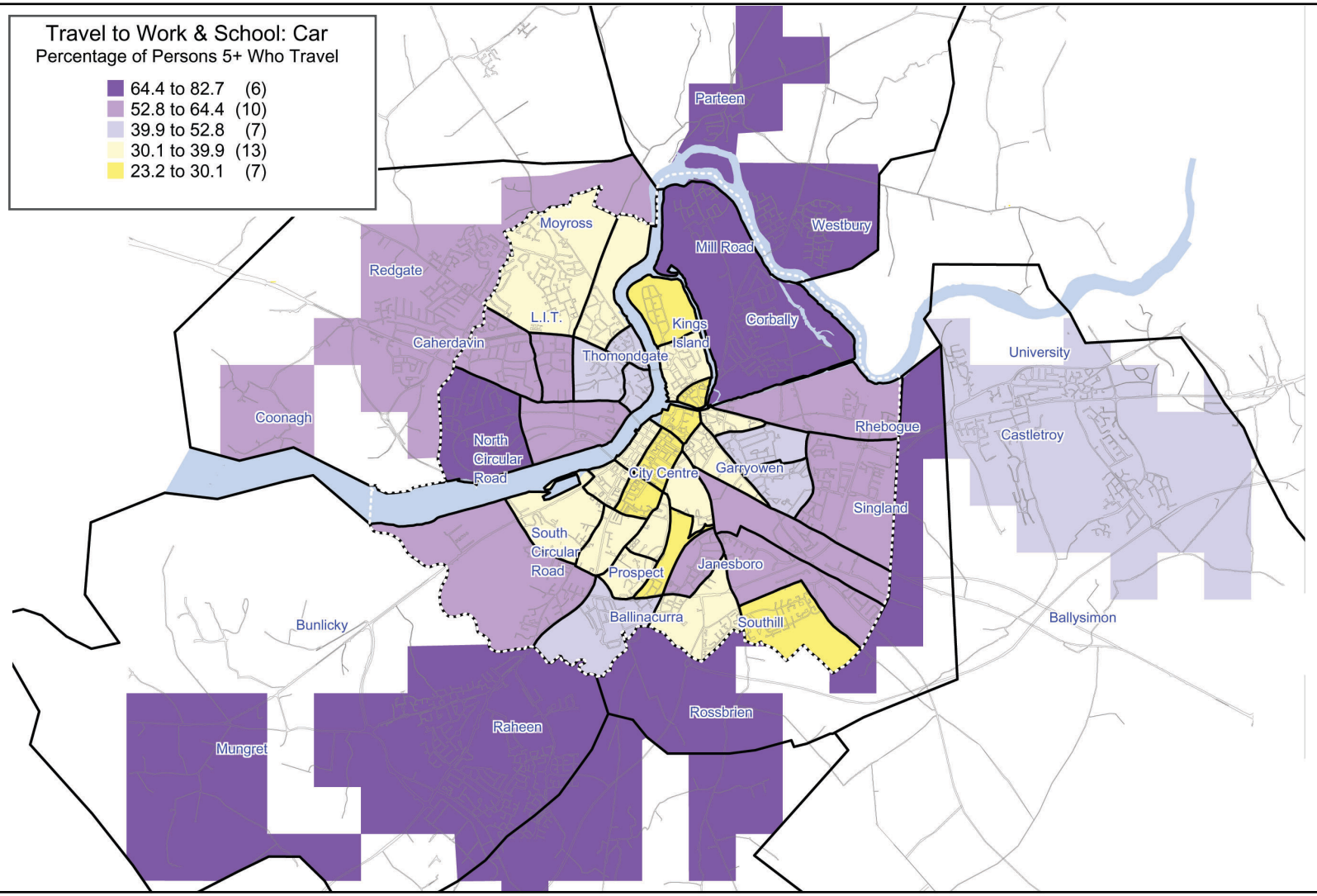
City Bounds
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

Map 42:



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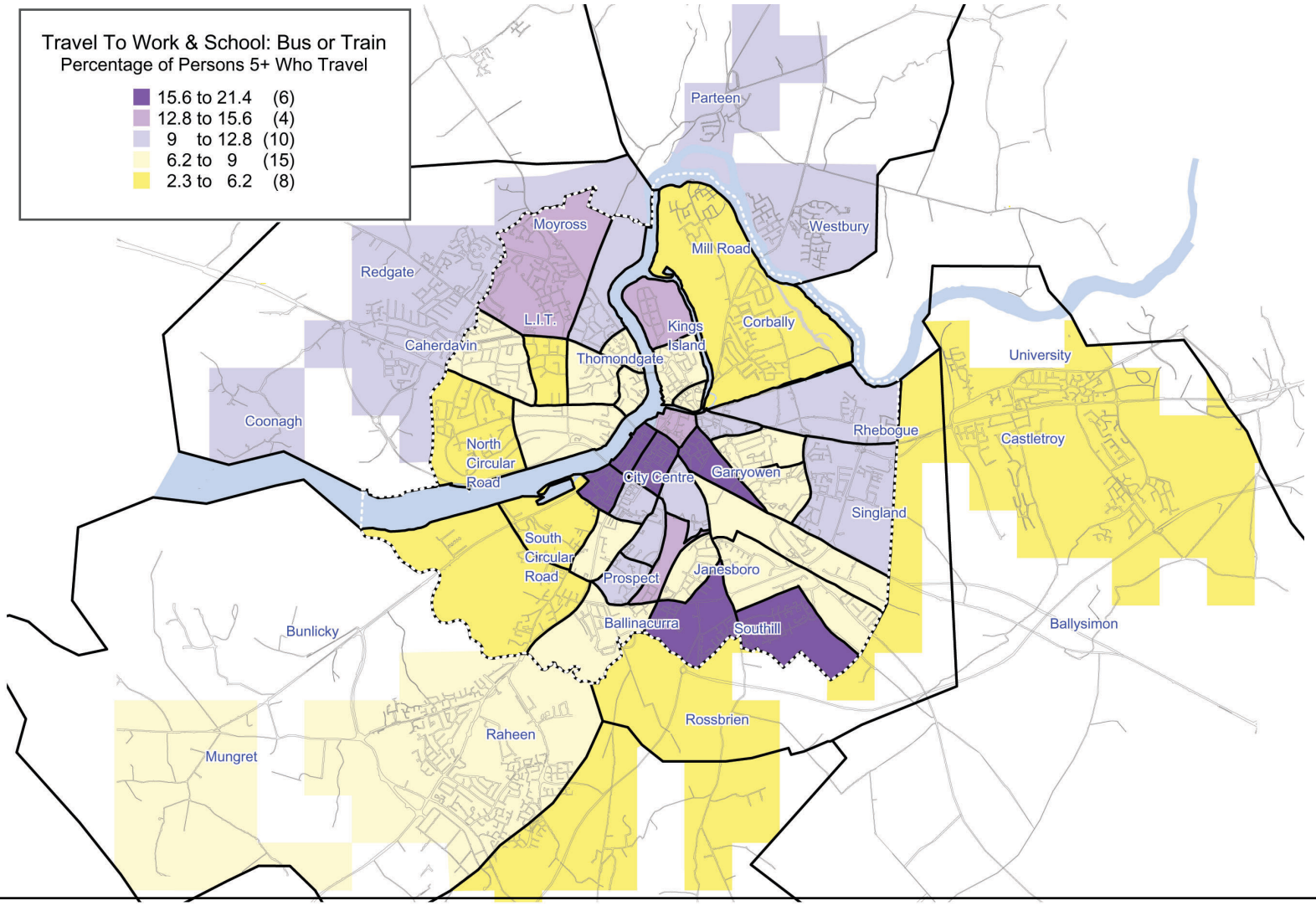
City Bounds
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

Map 43:



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City Bounds
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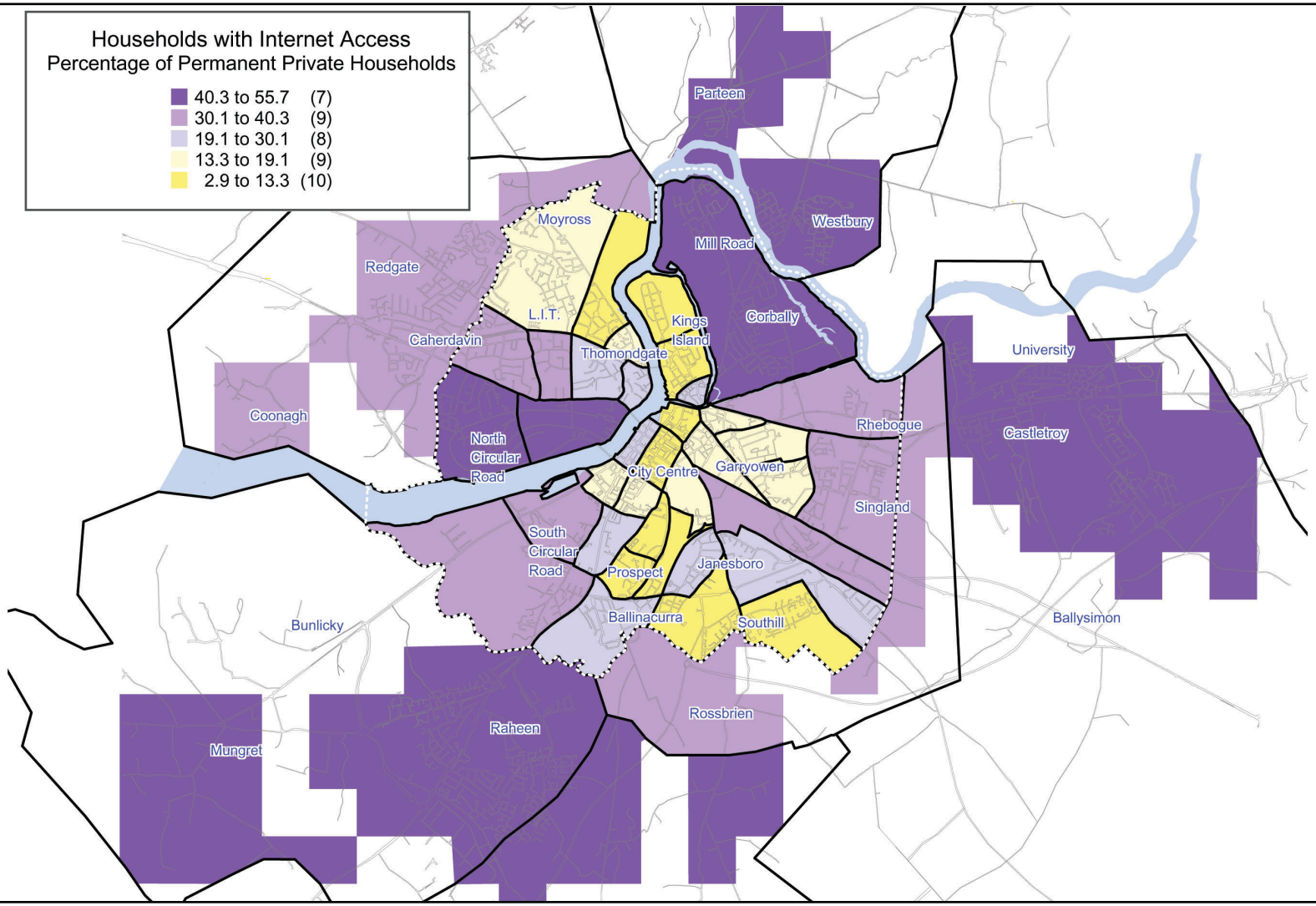
Redgate City Locations

Limerick City Council
Source: CSO 2002

The above discussion has highlighted some differences between areas in levels of accessibility. An increasingly important dimension of accessibility in its widest sense relates to digital communications and in particular the Internet, which provides access to a wide range of services, often on a discounted basis. With the advent of the so-called 'tele-cottage', increasing numbers are working from home, using the Internet to maintain contact with places of employment and / or clients and customers. Though there are many issues surrounding tele-working, one of the undoubted benefits for the individuals concerned, as well as for the wider society, is the potential to reduce the volume of commuting and thereby improve traffic conditions on the roads. The 2002 census included for the first time a question on household Internet access. Although still a relatively new medium of communication, almost one-third of households in the Limerick urban area (31 per cent) reported having Internet access in the home. The likelihood is that this level is currently even higher, as levels of PC ownership continue to increase, and the recent availability of broadband has improved connection speeds.

The geographical pattern of Internet access shows a high degree of variation. Between two-fifths and one-half (40 to 50 per cent) of households in areas such as the North Circular Road, the southern suburbs, Castletroy, and the northern suburbs (Corbally and Westbury) have home access to the Internet. This contrasts with less than 14 per cent in Kileely, St. Mary's Park, the older parts of the city centre, Prospect and Southill **(Map 44)**. The pattern is remarkably similar to that of social class (cf. Maps 27 and 28). Essentially the areas with the highest levels of Internet access are those with high proportions of the professional and managerial social classes; the areas with lowest access are almost identical to those with concentrations of the semi-skilled and unskilled social groups. This correspondence suggests that access at home to the Internet is largely determined by household income levels, and that it may be regarded as an indicator of relative disadvantage. It is to this issue that we turn next.

Map 44:



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SCALE 1:60,000
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City Bounds
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

3.10 Social Exclusion

Several of the variables discussed above have suggested the existence of considerable disparities between communities and areas in Limerick, in terms of access to employment opportunities and levels of income and consumption. These disparities have led to the development of a number of initiatives, both local and national, that are focused on various aspects of social exclusion. Social exclusion occurs when individuals or households are unable to enjoy the benefits of social and economic life to the full, because of factors or processes that are beyond their control. In the 1980s and early 1990s, much of the concern over social exclusion was focused on the problem of unemployment, and so this review of the problem begins with a consideration of recent trends in the labour market.

The rapid growth in employment in the local labour market in the late 1990s was largely absorbed by the expansion of the labour force in the same period. Of the total increase of 7,323 jobs in the urban area between 1996 and 2002, over 6,000 was accounted for by labour force growth, with the balance of almost 1,300 jobs contributing to a reduction in the level of unemployment. As a result, the unemployment rate decreased by over 5 percentage points, from 16.1 per cent to 10.6 per cent. The pattern of change at ED level has already been illustrated in terms of the change in the employment rate, which is just the inverse of the unemployment rate (cf. Map 19). The main feature of the change was that the decrease in the unemployment rate tended to be larger in areas of traditionally high unemployment, so that there was some degree of convergence between areas in terms of employment / unemployment. For example the largest decrease in the unemployment rate, a drop of almost 20 percentage points, was recorded in the Galvone B area of Southill, which in 1996 had the second highest rate of unemployment (46.7 per cent).

Despite this tendency towards convergence, there still remain significant differences between areas in the rate of unemployment, which ranged in 2002 from a low of 4.2 per cent to a high of 37.7 per cent. The geographical pattern, which was remarkably stable from 1996 to 2002, closely mirrors the patterns already described for educational attainment, social class and housing tenure. Thus the areas worst affected by unemployment are those with relatively low levels of educational attainment, high proportions of the unskilled and semi-skilled social classes, and of local authority renting. These extend from Moyross in the northwest of the city, through Ballynanty, Kileely and Thomondgate into King's Island, and south through Prospect, Weston and Rathbane into Southill **(Map 45)**.

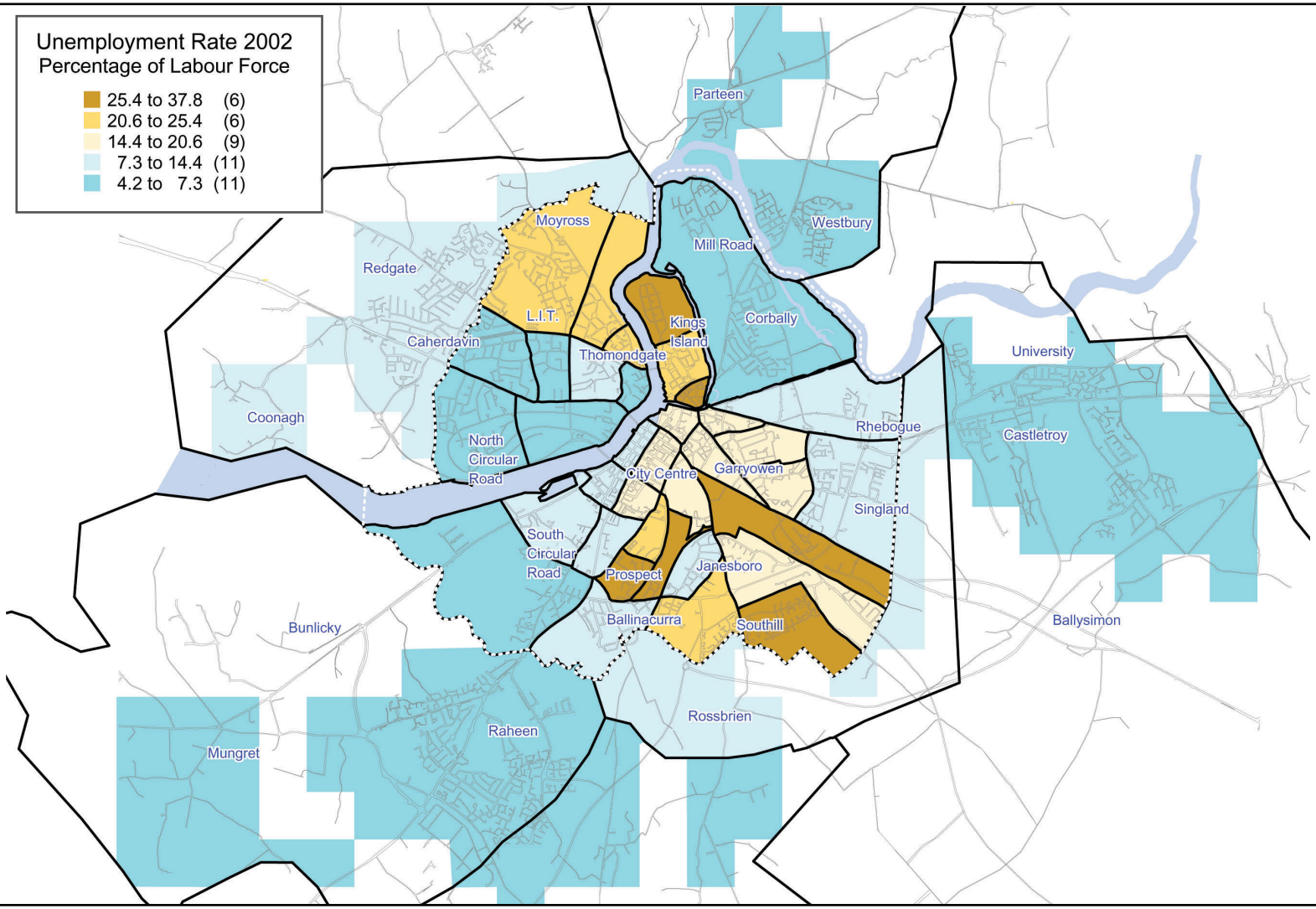
Apart from its social and psychological consequences for the unemployed themselves, unemployment has long been recognised as one of the main risk factors for household poverty. The income effects of high levels of unemployment in a locality are generally exacerbated when the demographic dependency rate is high and the labour force participation rate is low. The combined effect of all three conditions is measured by a ratio known as the Economic Dependency Ratio (EDR) which is simply the ratio of the number not at work (including child dependants, the elderly, others not in the labour force, and the unemployed) to those at work. For Limerick as a whole the EDR in 2002 was 1.5, but at ED level the value ranged from 0.57 to 3.35. The spatial pattern closely approximates that of the unemployment rate, with highest values evident in St. Mary's Park, the O'Malley Park area, and Weston **(Map 46)**. The Castletroy area also shows a relatively high EDR, but this is easily explained by the extremely low labour force participation rate of the area, as noted earlier, which in turn is due to the large student population. The most favourable (i.e., lowest) values of the EDR are found in the city centre and the outer southern suburbs.

Besides the unemployed, the census of population provides information about other population groups that are generally considered as disadvantaged. These include lone parent families, elderly persons living alone, and persons with a disability. Even where income poverty is not a problem, these groups may experience other forms of exclusion related to difficulties such as restricted mobility, which can negatively impact on their ability to participate fully in society.

The rate of occurrence of lone parent families in Limerick is significantly above the national average. These families make up almost one in four (24 per cent) of all families in Limerick City, and one in five (20 per cent) of all families in the urban area, as compared to one in six (17 per cent) of all families in the State. Amongst lone parent families, it is those with young children that have the highest relative risk of poverty.[17] These families constitute 26 per cent of all young families in Limerick urban area, as compared to 17 per cent nationally. The highest relative concentrations occur in the O'Malley Park area and in Prospect / Weston (where rates are above 70 per cent) as well as in the Moyross / Ballynanty area, St. Mary's Park, and the EDs of Custom House (which contains the Watergate Flats) and Shannon B in the city centre **(Map 47)**. This map too shows a close correspondence with that of unemployment, which may reflect in part the difficulties that lone parents with young families face in accessing employment opportunities. It also provides evidence of the existence of multiple deprivation in several of the local authority estates.

The level of elderly people (i.e. aged 65 years and over) living alone in Limerick is relatively low at 25 persons per thousand population, as compared to a national rate of 30 per thousand. However, this is a phenomenon that is likely to increase in the future, given the evidence of population ageing discussed earlier. Moreover, the rate in certain areas is close to three times the average for the urban area. Reflecting the distribution of the elderly population, the rate of elderly living alone is highest in residential areas close to the city centre. These include the Clancy's Strand area, the Nicholas Street – Island Road area that includes Assumpta Park and Lee Estate, and the area around Pery Square **(Map 48)**. Rates of elderly alone are also relatively high in the Garryowen, Janesboro and Ballinacurra Weston areas as well as the Ennis Road area. It is notable that this indicator follows an entirely different geography from those discussed above: elderly persons living alone are found in areas at different ends of the social class spectrum.

Map 45:



The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.

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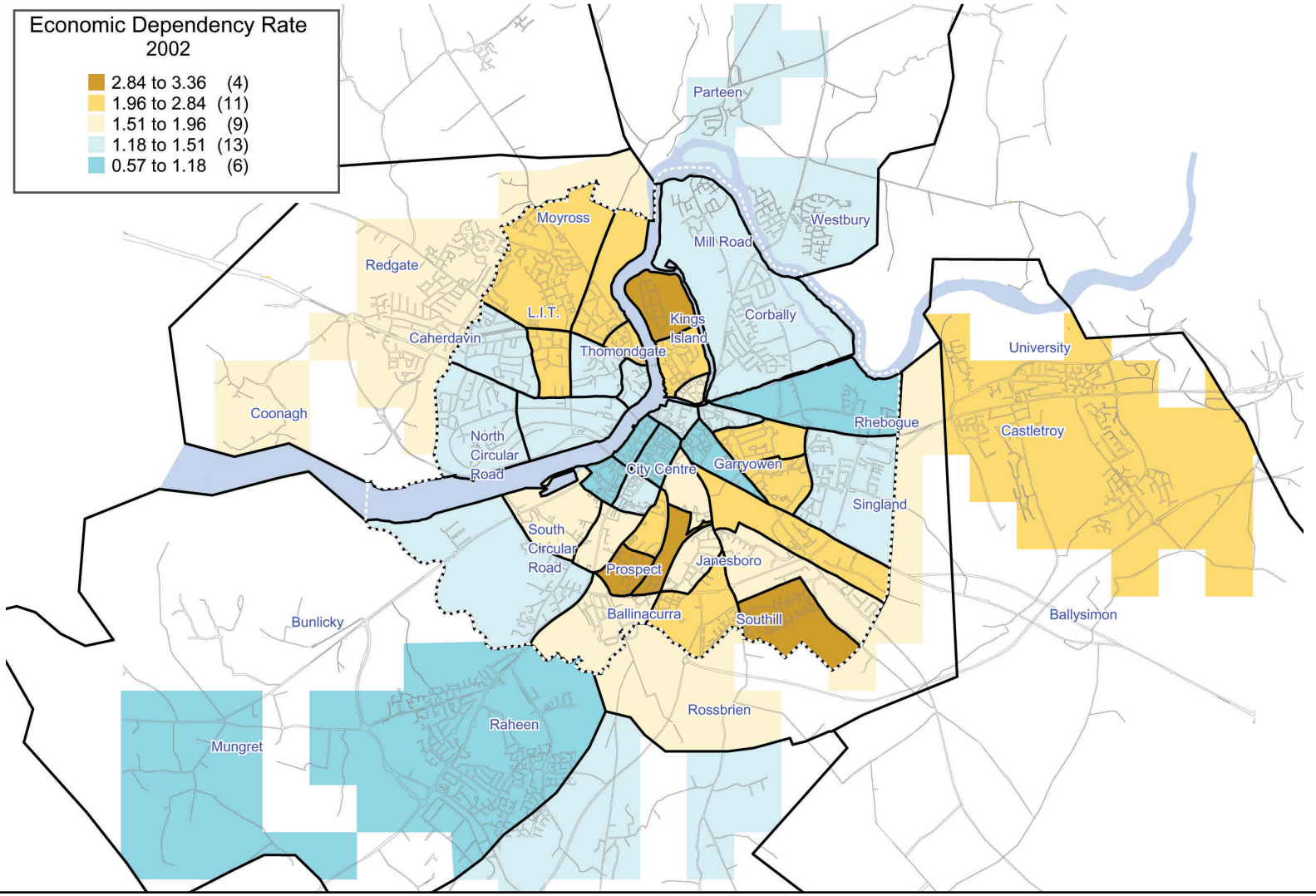
City Bounds
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

Map 46:



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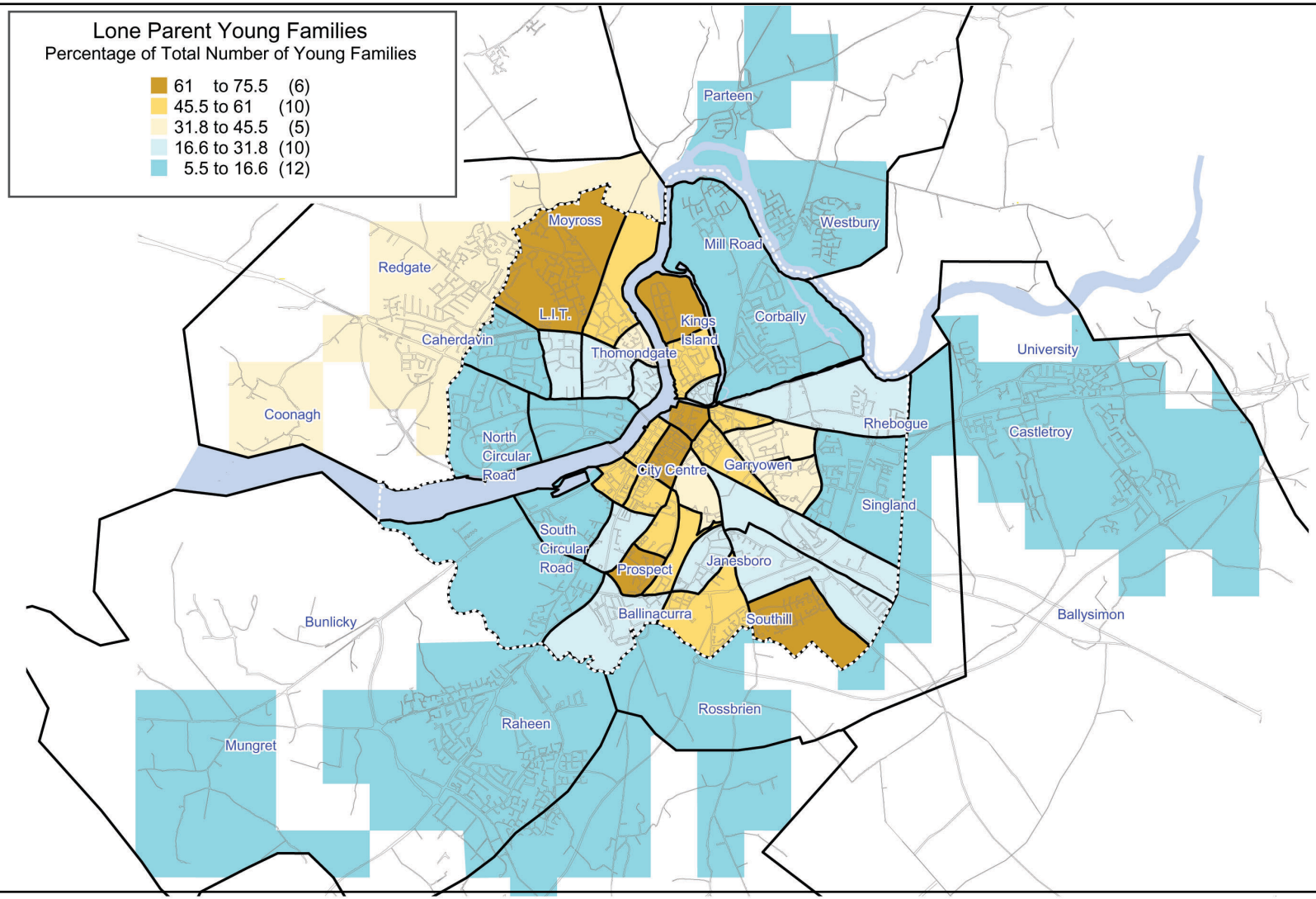
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

Map 47:



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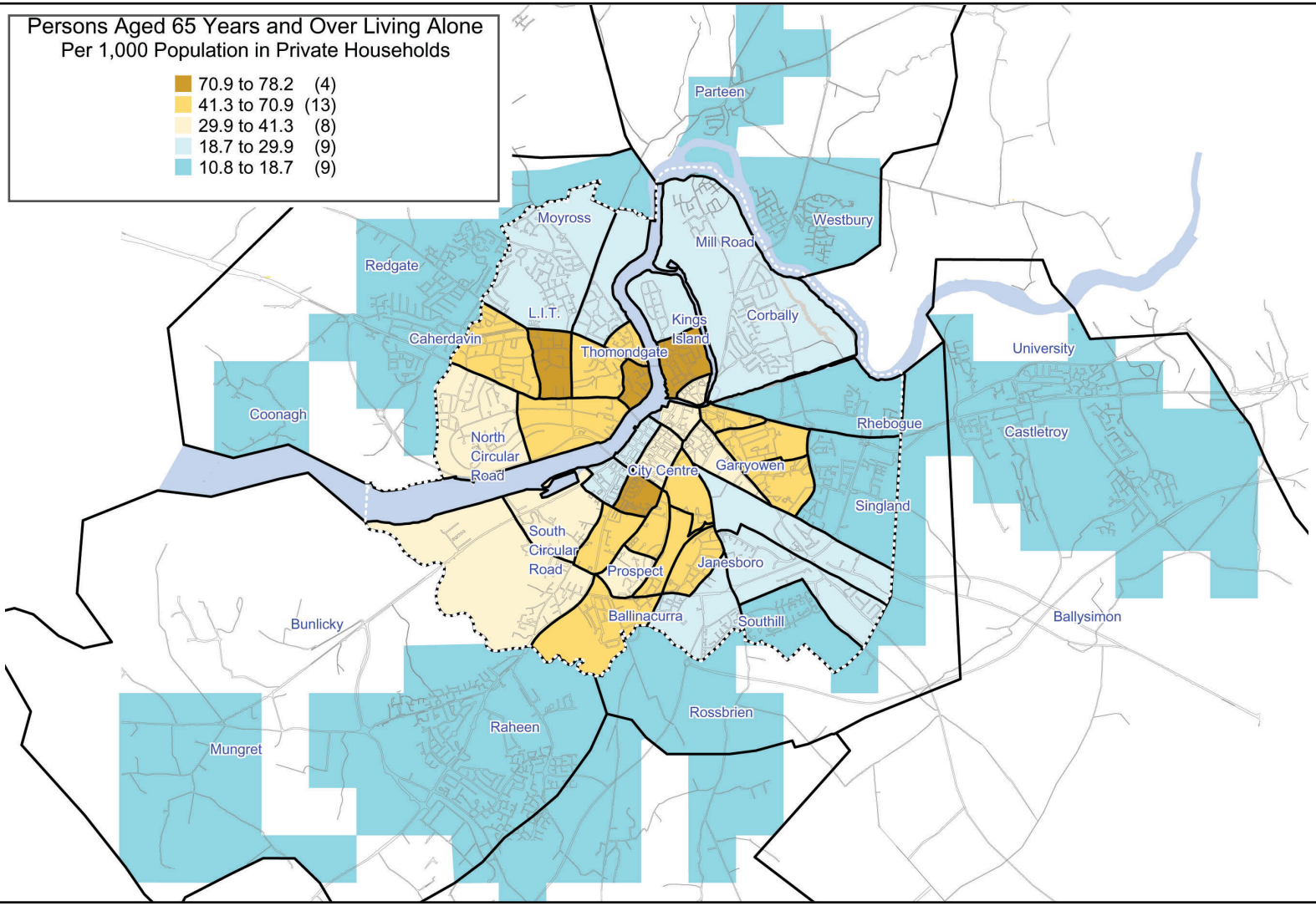
City Bounds
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

Map 48:



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City Bounds
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

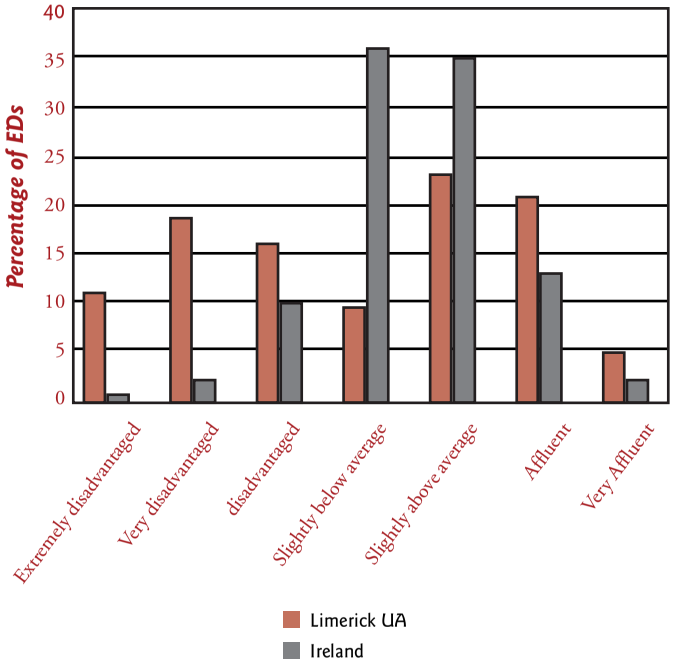
Information on disability levels (both physical and mental) was collected for the first time in the 2002 census. Levels of this variable, again expressed per thousand population, are considerably higher than those for elderly people living alone. In the urban area as a whole there were 93 persons with a disability per thousand population in 2002, as compared to a national rate of 82.6. The highest rates of disability were recorded in the EDs of Farranshone, Limerick South Rural, and St. Lawrence, but in all cases this is due mainly to the presence of institutional populations in hospitals or homes. However, there were also relatively high rates in areas such as Kileely, Thomondgate, Assumpta Park / Lee Estate, Killalee and Garryowen, Carey's Road, Prospect and Janesboro **(Map 49)**.

As the maps discussed in this section show, social exclusion is a complex, multi-faceted, phenomenon, and different indicators show different geographical patterns in the city. In order to try to reflect this complexity, the next two maps are based on a new composite measure of deprivation that has been developed at national level.[18] This takes into account three different dimensions of the problem, namely social class disadvantage, labour market deprivation and demographic decline. In turn, these dimensions are measured with respect to ten underlying census variables, including variables related to social class, educational attainment, unemployment, lone parenthood and age dependency. The deprivation index is intended for use at national level to guide area-based planning and policy interventions, and is capable of tracking changes in deprivation levels over time.

The depth and extent of the problem of deprivation in Limerick is revealed by the fact that, since 1991, Limerick City has consistently ranked as the second most disadvantaged of the 34 local authority areas (i.e., cities and counties) in Ireland. Moreover, the single most disadvantaged census tract in the country, based on the 2002 census, is the ED of John's A in Limerick. The high level of disadvantage in the urban area as a whole is reflected in the distribution of EDs across the affluence/ disadvantage scale, which shows relatively high proportions of areas near the lower end of the scale, i.e. in the categories that represent varying levels of disadvantage (Fig. 11).[19]

What is most striking, however, is the fact that the Limerick distribution is considerably 'flatter' than that for the rest of the country, with proportionally fewer areas in the centre, and more at the extremes of the scale. Thus, whereas 71 per cent of EDs nationally are described as slightly above or below the average, in Limerick just 33 per cent of EDs occupy this middle ground. On the other hand, one-quarter of EDs in the local area are either very or extremely disadvantaged, and a further one-quarter are described as affluent or very affluent. The corresponding national levels of these two categories are 3.5 per cent and 15.4 per cent respectively. In short, there is a very strong degree of polarisation evident with respect to disadvantage and affluence in Limerick urban area.

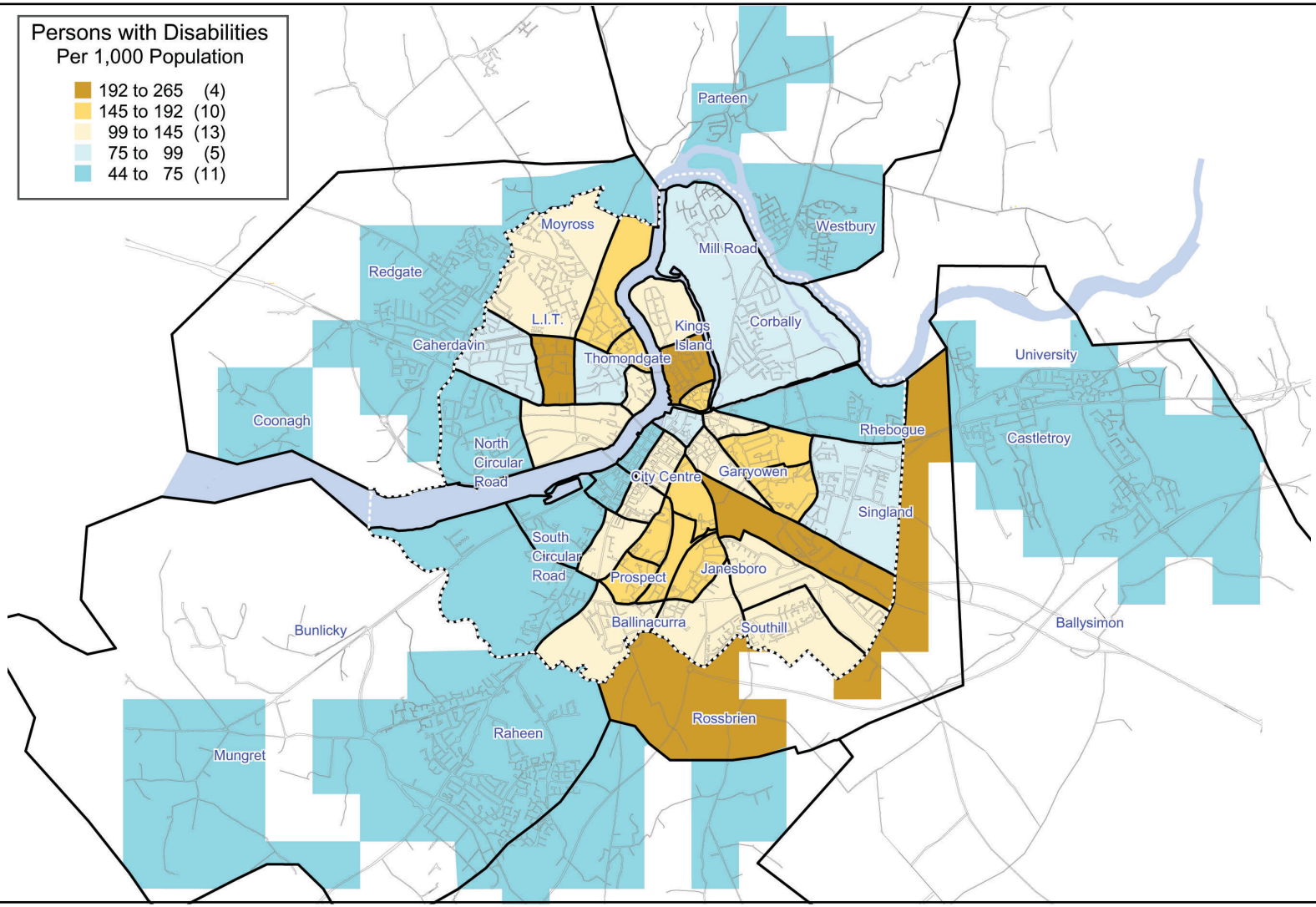
Figure 11: Relative Deprivation Index



This socio-economic polarisation has a strong geographical expression. All the EDs that experience some level of disadvantage are located in a sharply defined 'corridor of disadvantage', which extends from Moyross in the northwest of the urban area, through King's Island in the centre, to Garryowen, Prospect / Weston and Southill on the south side **(Map 50)**. The areas in question correspond in large measure with the local authority housing estates. At the other end of the scale, two Limerick EDs rank in the very affluent category. These are Castle D, extending from the Ennis Road to the North Circular Road, and Ballinacurra A, which is centred on the South Circular Road. The geography of deprivation has remained relatively stable in recent years, despite the high level of growth in the national and regional economies. All EDs in Limerick urban area showed an improvement in their absolute scores on the affluence/ deprivation scale between 1991 and 2002. However, levels of improvement tended to lag behind the average improvement nationwide, so that most EDs disimproved in terms of their relative deprivation scores.[20] The areas that showed the highest levels of improvement include Moyross / Ballynanty, Thomondgate, the areas both north and south of Baal's Bridge in the city centre (including Watergate Flats), Rhebogue and the ED of Dock A **(Map 51)**.

On the other hand, in areas such as the North Circular Road / Ennis Road and Castletroy, progress was below the national average, with the result that these areas showed a disimprovement in relative terms. In so far as the latter areas are among the most affluent in the city, while several of the former rank among the most disadvantaged, the gap between areas can be said to have narrowed somewhat in this period.[21] However, improvement was neither sufficiently strong, nor sufficiently focused on the more deprived areas – some of which marginally disimproved – to have wrought any significant change in the geography of deprivation.

Map 49:



The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.

SCALE 1:60,000
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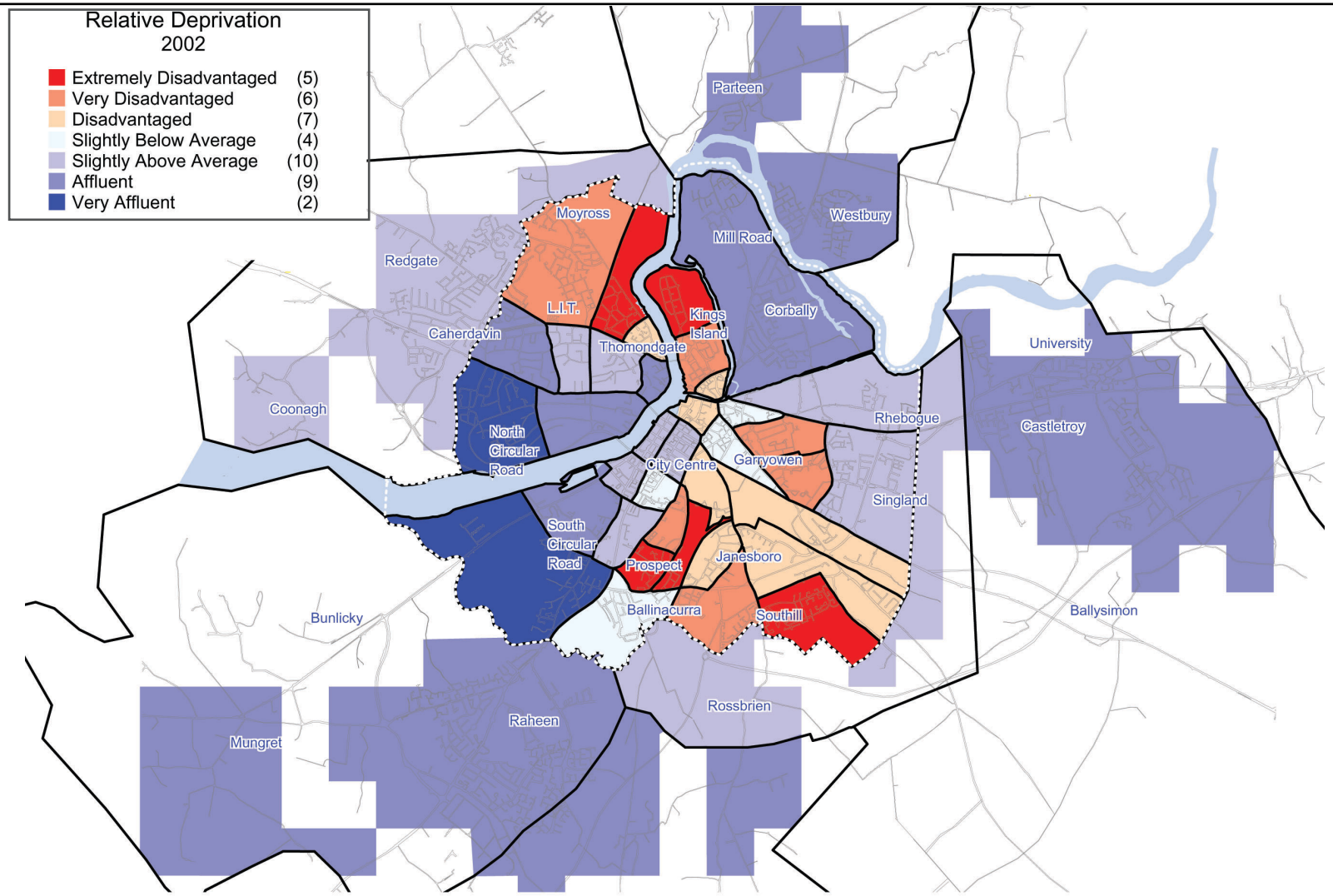
City Bounds
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

Map 50:



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City Bounds

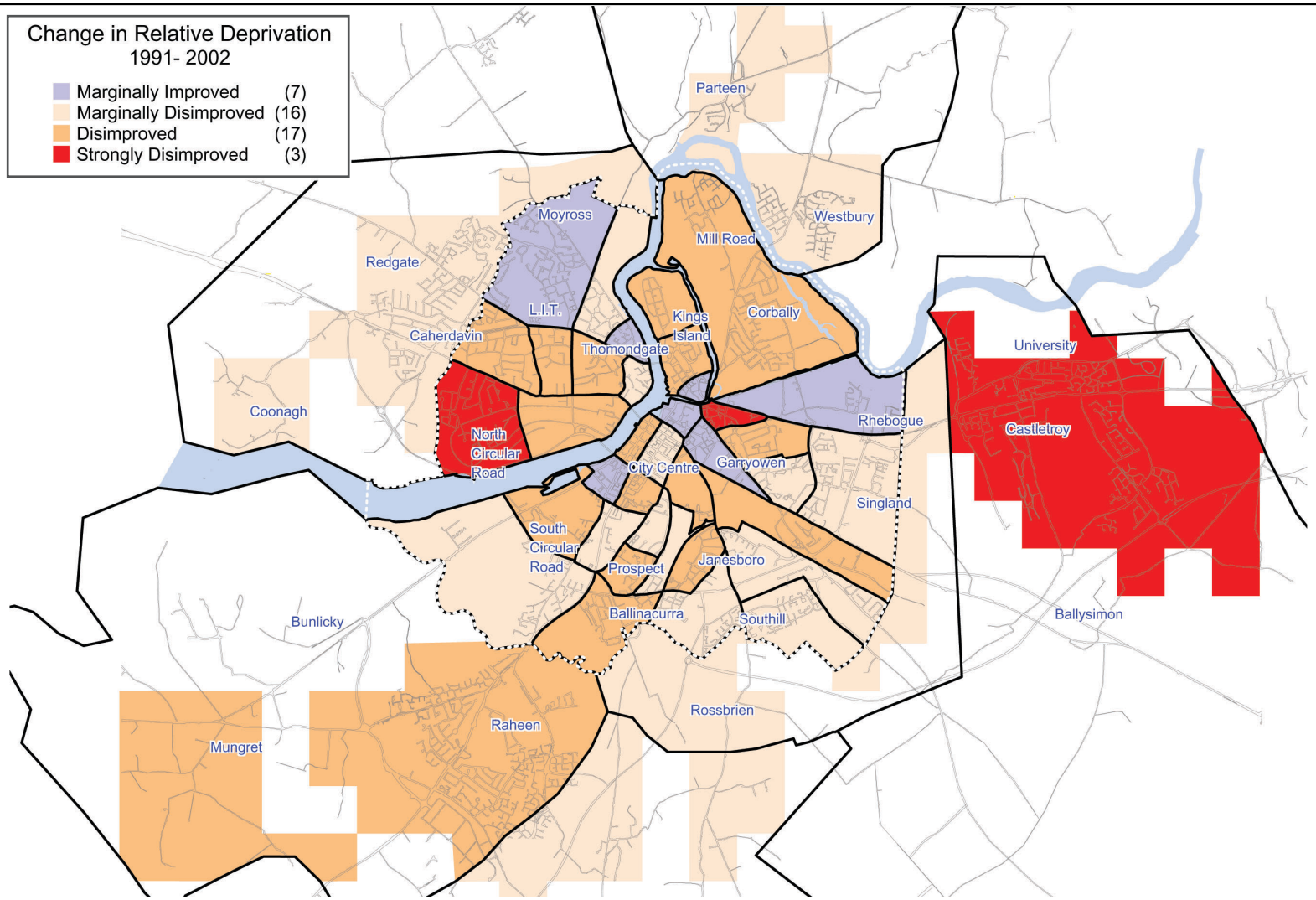
Electoral Division Bounds

Redgate City Locations

Limerick City Council

Source: CSO 2002

Map 51:



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SCALE 1:60,000

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Kilometer

City Bounds

Electoral Division Bounds

Redgate City Locations

Limerick City Council

Source: CSO 2002

6. *The city's other major third-level institution, Limerick Institute of Technology, does not generate a similar local effect, due in part to a proportionately larger non-student population in the ED which contains the main LIT campus at Moylish (Ballynanty ED).*
7. *The highest concentration is in the Upper Shelbourne Road area but this is mainly due to the presence of St. Camillus's Hospital (formerly the City Home) in this area.*
8. *Operationally, an adult family is defined as one where the oldest child is aged 20 years and over.*
9. *The area includes a large part of the Holy Rosary Parish.*
10. *The respective (unweighted) coefficients of variation are 8.48 (males) and 15.06 (females).*
11. *The four are Ballysimon, which contains the university, St. Laurence ED, which includes Limerick Prison and St. Joseph's Hospital, John's C and Abbey C, both of which contain accommodation for asylum seekers.*
12. *The coefficient of variation declined from 15.9 to 10.2.*
13. *In order to exclude temporary visitors, this section focuses throughout on enumerated persons who are usually resident in the city.*
14. *'Non-Irish born' is defined in the census as those born outside the State.*
15. *Owner-occupiers, as defined here, do not include those on tenant purchase schemes.*
16. *There is some evidence of bi-modality in the distribution of travel distances in the suburbs, with a smaller secondary peak for travel distances in the range of 3 to 5 miles.*
17. *Lone parent young families are operationally defined as families headed by a lone parent where all children are aged less than 15 years of age.*
18. *For details on the development, structure and composition of this measure of deprivation see Haase, T. and Pratschke, J. (2004) Deprivation and its Spatial Articulation in the Republic of Ireland. Dublin: Trutz Haase Social and Economic Consultant.*
19. *The allocation of EDs to nominal categories ("extremely disadvantaged" etc.) is based on the categorisation of relative deprivation scores given in Haase and Pratschke p. 31.*
20. *Change is measured by the 2002 relative deprivation score minus the 1991 score. Again, the categorisation of values is taken from Haase and Pratschke (2004).*
21. *A modest degree of convergence or progressivity in the pattern of change is indicated by a negative correlation (r = -0.38) between 1991 deprivation score and the change in deprivation score 1991-2002.*

4. an analysis of social areas in limerick

The patterns described above point to a number of important demographic and socio-economic contrasts within the urban area. While each of the maps is unique, it is clear that several of the variables on which they are based bear close similarity to each other, and appear to measure different aspects of the same phenomenon. By examining these similarities further, it is possible to group variables together, on the basis of their inter-relationships, into a small number of composite variables or 'factors'. Once factors have been extracted in this way, the census tracts in turn can be grouped together (or clustered) into areas of similar social character, thereby summarising the complex social geography of the urban area.

4.1 The Dimensions of Social Variation in Limerick

For the factor analysis, 34 variables were chosen from among those already mapped. The variables omitted included those that are essentially synthetic summaries of the others (e.g., the young and old dependency ratios), as well as some of the more purely economic variables (such as those relating to sector of employment and travel to work patterns). In addition, the variable relating to the Travelling Community (Map 33) was omitted, because it describes a social dimension that is quite different from those to which the other variables relate, and yet it refers to a relatively small section of the total population. The full list of variables included in the factor analysis is given in the Appendix (Table 1).

The analysis reveals that the 34 variables can be reduced to just four factors.[22] Table 2 in the Appendix gives the associations, or similarities, between the variables and the factors: the closer to either plus 1 or minus 1 these measures of association are, the stronger the relationship in question.[23] It is these associations or 'factor loadings' that are used to interpret the factors. As well as indicating the relationships between the underlying variables and the factors, the factor analysis generates a score for each ED on each factor. These scores indicate the strength of the particular factor in each area: the higher or lower the score, the more the area resembles one of the two ends of the factor continuum. Interpretations of the factors, and the geographical patterns of factor scores, are set out below.

Factor 1: Urbanism

The first factor accounts for almost one-third of the total variance present in the 34 variables input to the analysis. This factor differentiates between, on the one hand, those areas of the city populated by households living in private rented accommodation, usually in the form of flats or apartments, and, on the other hand, areas where householders are more likely to be owner-occupiers. In the former areas there is a high turnover of population, as indicated by high levels of recent mobility. Relatively high proportions of the new residents were born outside the State and are non-Irish nationals. Non-family households and single person households predominate, and rates of population growth tend to be higher than average. The areas at the opposite pole of this factor have more traditional, family-based households, and higher proportions of the population are children (aged 0-14 years). However, families at later stages of the family cycle are also more common. Lying behind these differences in housing tenure, mobility and household structures are lifestyle differences as between what sociologists refer to as 'urbanistic' or 'cosmopolitan' ways of life, and 'familistic' ways of life. Urban social geographers use the term 'urbanism' to refer to this dimension of social differentiation.

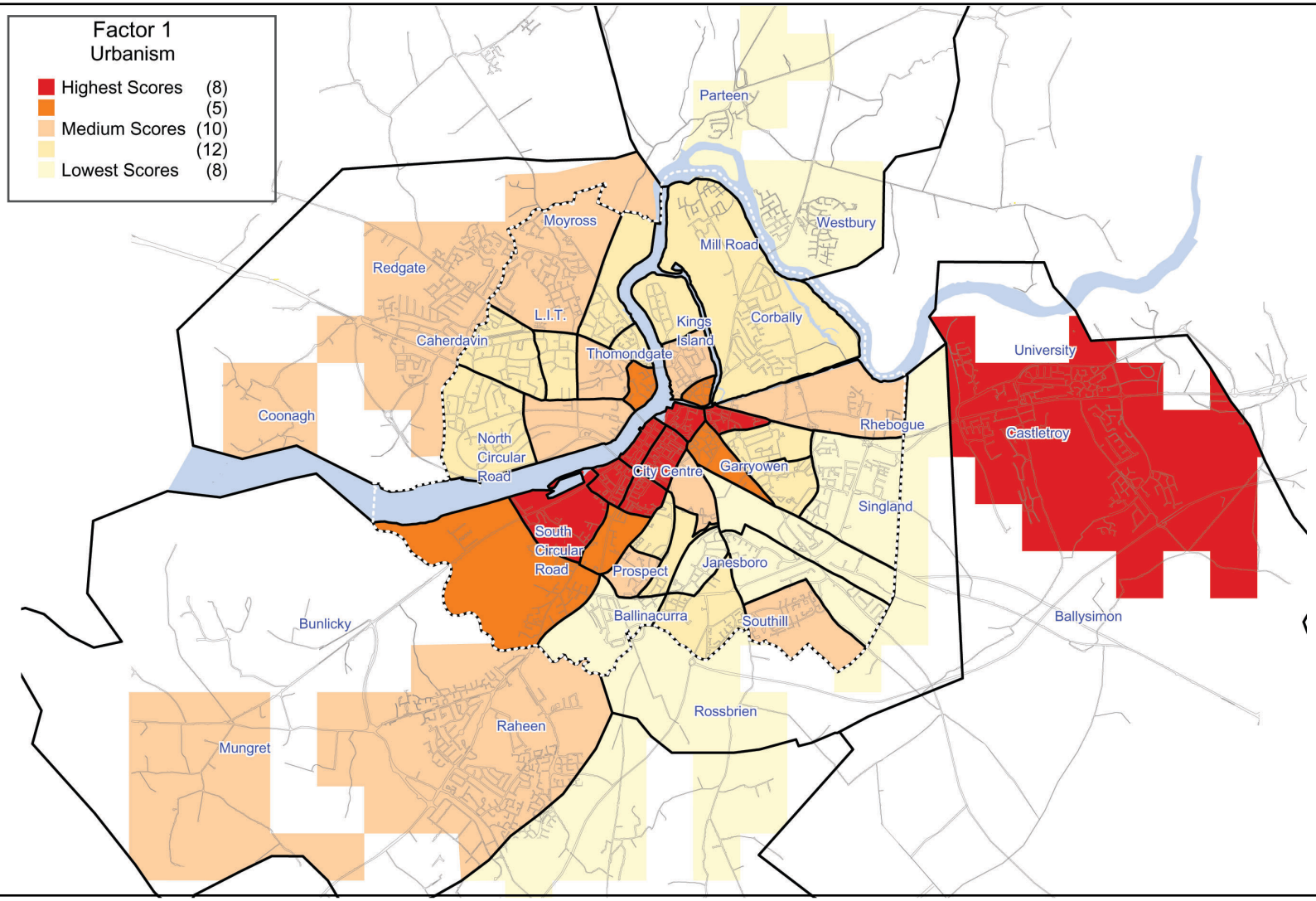
The geographical distribution of scores on Factor 1 shows a strong contrast between the city centre (high factor scores) and some, but not all, of the suburban areas (low factor scores) **(Map 52)**. The city centre is the domain of a younger, more mobile, 'footloose' and now also more culturally diverse population. By contrast, suburban areas such as Westbury, Singland, Janesboro and Ballyclough are characterised more by settled, culturally homogeneous and family-based households. However the Castletroy area represents a suburban location with a social profile (in terms of household type, tenure status and age group) that is more akin to the city centre. Once again this reflects the large student population of the area.

Factor 2: Socio-Economic Status

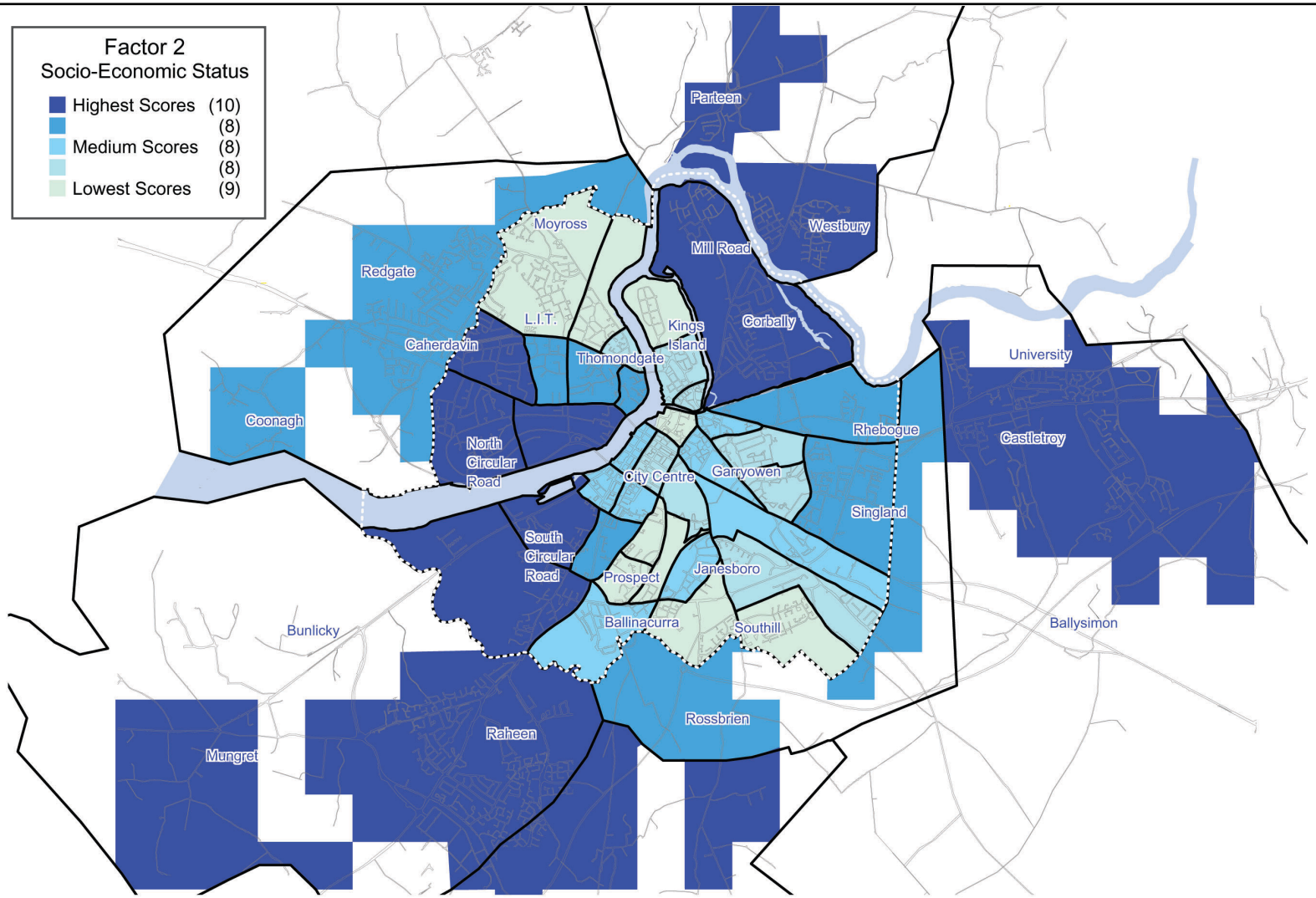
The second factor extracted by the analysis can be interpreted as a measure of socio-economic status, having strong associations with variables such as social class, standards of educational attainment, and levels of consumption (here measured by car ownership). Overall this factor accounts for 29 per cent of the total variance. It is positively correlated with higher proportions of social classes 1 and 2 (professional, managerial and technical workers and their dependants), higher levels of post-graduate educational qualification, car ownership, and Internet access. Conversely, it is negatively correlated with high proportions of unskilled and semi-skilled manual workers, persons with lower secondary education only and low levels of car ownership. This factor also shows a strong negative association with local authority renting, and with measures of social exclusion such as unemployment and lone parenthood. Not surprisingly, therefore, the factor shows a high correlation with the area affluence/ deprivation score.

The spatial pattern of socio-economic status **(Map 53)** reveals that the areas of highest status are the suburban EDs, and, within the City, the Corbally area and the western inner suburbs stretching from the Ennis Road / North Circular Road across the river to the South Circular Road. At the other end of the spectrum are the EDs that contain large local authority housing estates in areas such as Moyross, Ballynanty, Kileely, St. Mary's Park, Prospect and Southill. As noted earlier, the latter areas exhibit high levels of disadvantage. The city centre emerges as a mixed or intermediate zone, except for Custom House ED, which is also an area of relatively low socio-economic status.

Map 52:


Factor 1
Urbanism
Highest Scores (8)
(5)
Medium Scores (10)
(12)
Lowest Scores (8)
Parteen
Moyross
Westbury
Mill Road
Redgate
L.I.T.
Kings Island
Corbally
Caherdavin
Thomondgate
University
Coonagh
Rhebogue
Castletroy
North Circular Road
City Centre
Garryowen
Singland
South Circular Road
Prospect
Janesboro
Bunlicky
Ballinacurra
Southill
Ballysimon
Rossbrien
Raheen
Mungret
The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.
SCALE 1:60,000
0 .5 1
Kilometer
N
City Bounds
Electoral Division Bounds
Redgate City Locations
Based on Ordnance Survey Ireland. Permit No. 7793
Copyright Ordnance Survey Ireland & Government of Ireland
Limerick City Council
Source: CSO 2002

Map 53:


Factor 2
Socio-Economic Status
Highest Scores (10)
(8)
Medium Scores (8)
(8)
Lowest Scores (9)
Parteen
Moyross
Westbury
Mill Road
Redgate
L.I.T.
Kings Island
Corbally
Caherdavin
Thomondgate
University
Coonagh
North Circular Road
Rhebogue
Castletroy
City Centre
Garryowen
Singland
South Circular Road
Prospect
Janesboro
Bunlicky
Ballinacurra
Southill
Ballysimon
Rossbrien
Raheen
Mungret
The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.
SCALE 1:60,000
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Kilometer
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City Bounds
Electoral Division Bounds
Redgate City Locations
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Limerick City Council
Source: CSO 2002

Factor 3: Labour Market Status

Factor 3, which accounts for just 12 per cent of the overall variance, is associated with a relatively narrow range of attributes. It has highest scores in areas with a high rate of labour force participation, and of female participation. High activity rates in these areas are in turn related to high proportions of population aged 25-44 years. Conversely, this factor is negatively associated with large numbers of part-time workers. As the latter group often operates outside the formal labour market, this negative association is consistent with an interpretation of Factor 3 as essentially a measure of labour market engagement or status.

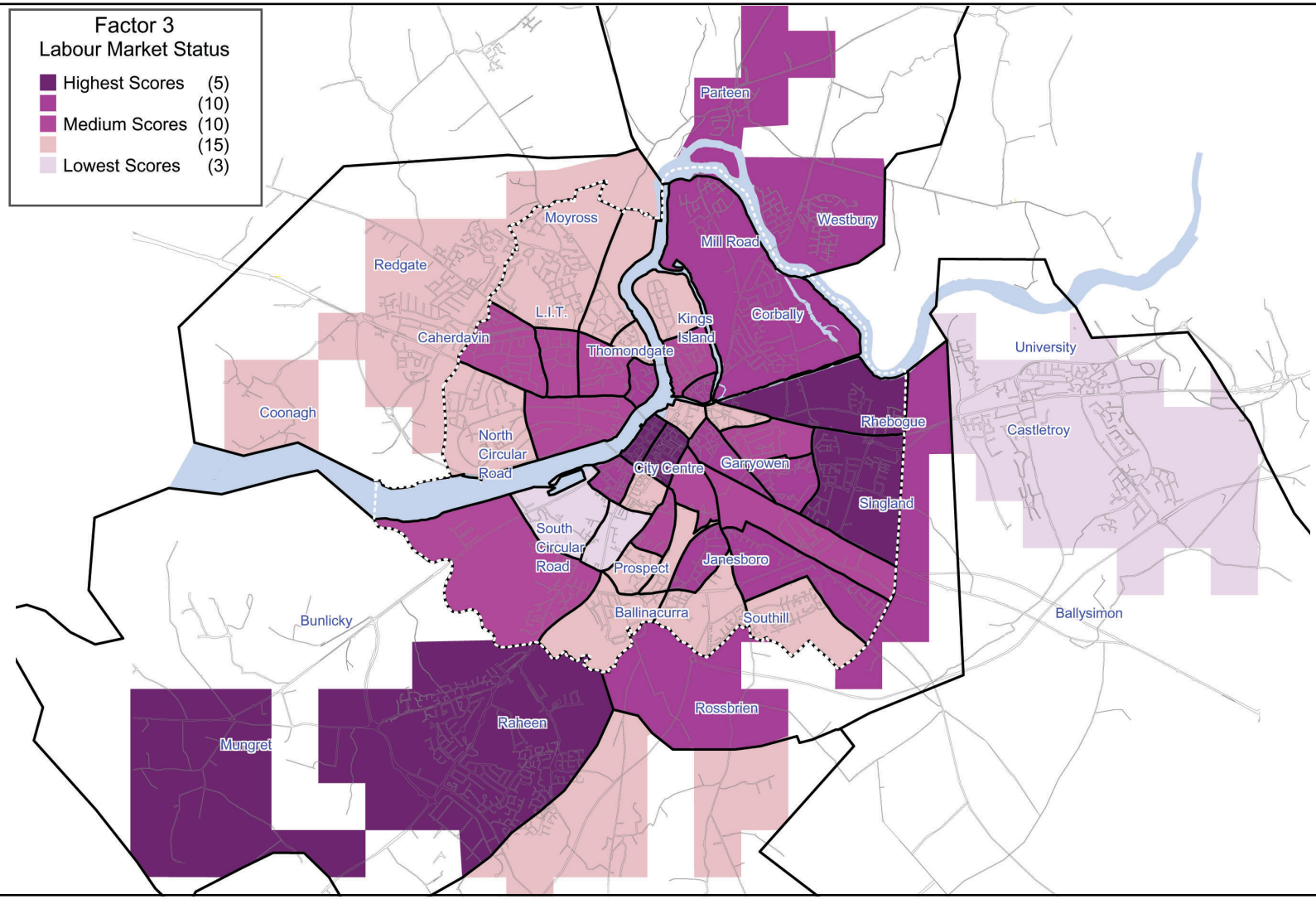
Areas with high scores on this factor include the city centre, specifically the EDs of Shannon A and B that correspond to the city's central business district **(Map 54)**. Also included are the Rhebogue and Singland areas on either side of the Dublin Road, and the southern ED of Ballycummin, which, as noted earlier, contains a concentration of employment opportunities, including those geared towards female workers. These areas contrast with the Dock D and Ballysimon EDs, where there are particularly low levels of labour force participation. This has already been attributed to the large student populations resident in both of these areas.

Factor 4: Elderly Populations

The final factor extracted in the analysis accounts for 11 per cent of the variance, and, like Factor 3, relates to a relatively narrow range of variables. This factor distinguishes areas that have high proportions of elderly persons, and, specifically, elderly persons living alone. As might be expected, there is also a strong association with one-person households. In addition, areas with high scores on this factor tend to have larger proportions of population with a disability. There are relatively few children (population aged 0-14 years) and comparatively little of the housing stock in these areas has been constructed in recent years. There are also negative associations with family-based households and with population growth.

The geographical pattern of this factor, more than that of any of the other factors, is based on a contrast between the City area and the surrounding suburbs **(Map 55)**. All of the EDs with high scores (i.e. high percentages of elderly, elderly alone, single person households, disabled persons etc.) are contained within the City. Particularly high scores obtain in the areas containing Clancy's Strand, Pery Square, Carey's Road and Bishop Street / Island Road/ Lee Estate, as well as in the Shelbourne Road area. All of the outer suburban EDs have low scores on this factor, reflecting the younger population structures of these areas, and the importance of new housing and of family-based households.

Map 54:


Factor 3
Labour Market Status
Highest Scores (5)
(10)
Medium Scores (10)
(15)
Lowest Scores (3)
Parteen
Moyross
Westbury
Mill Road
Redgate
L.I.T.
Kings Island
Corbally
Caherdavin
Thomondgate
University
Coonagh
Rhebogue
Castletroy
North Circular Road
City Centre
Garryowen
Singland
South Circular Road
Prospect
Janesboro
Bunlicky
Ballinacurra
Southill
Ballysimon
Rossbrien
Raheen
Mungret
The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.
SCALE 1:60,000
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Kilometer
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City Bounds
Electoral Division Bounds
Redgate
City Locations
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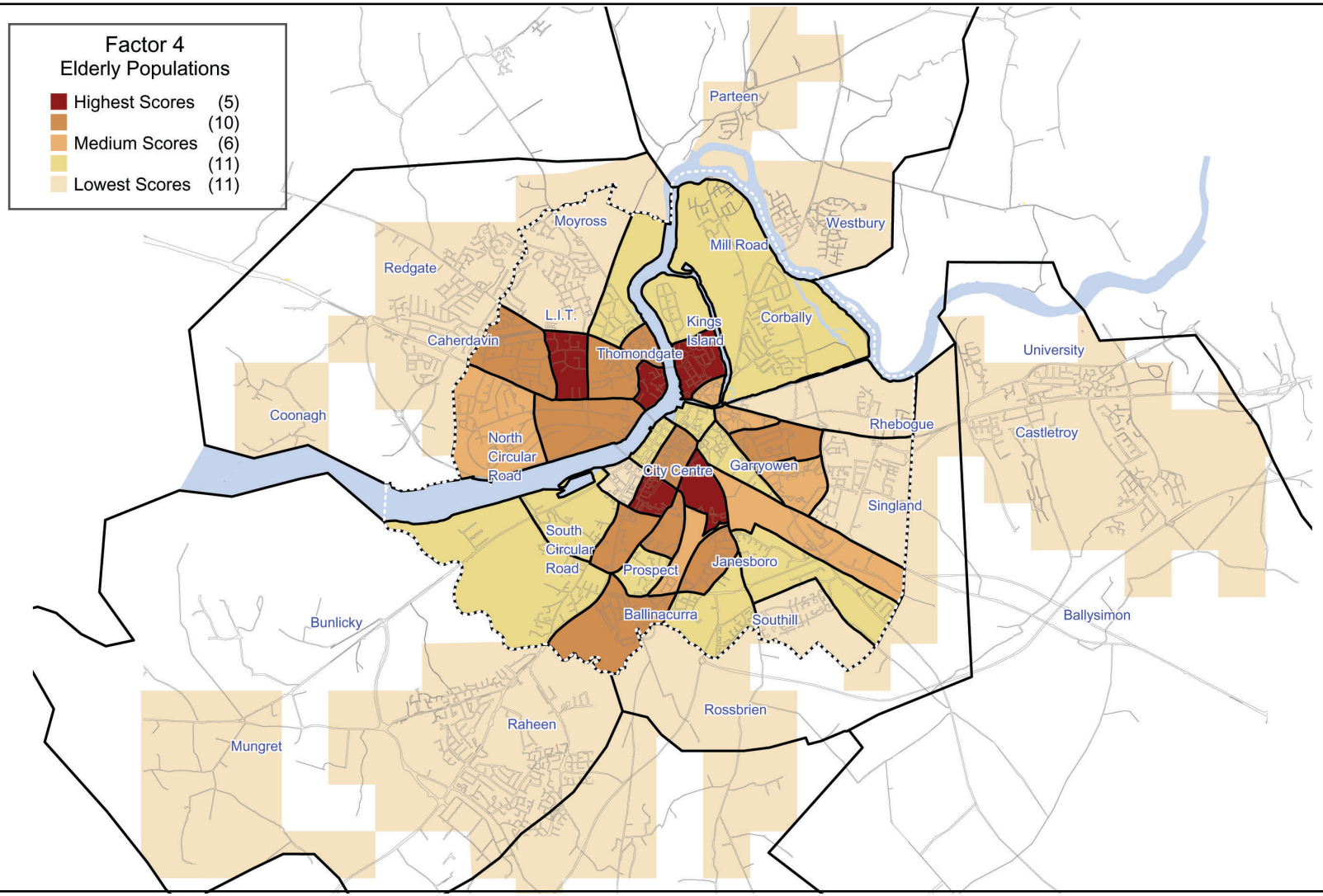
Limerick City Council
Source: CSO 2002

Map 55:


Factor 4
Elderly Populations
Highest Scores (5)
(10)
Medium Scores (6)
(11)
Lowest Scores (11)
Parteen
Moyross
Westbury
Mill Road
Redgate
L.I.T.
Kings Island
Corbally
Caherdavin
Thomondgate
University
Coonagh
Rhebogue
Castletroy
North Circular Road
City Centre
Garryowen
Singland
South Circular Road
Prospect
Janesboro
Bunlicky
Ballinacurra
Southill
Ballysimon
Rossbrien
Raheen
Mungret
The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.
SCALE 1:60,000
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Kilometer
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1
City Bounds
Electoral Division Bounds
Redgate
City Locations
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Limerick City Council
Source: CSO 2002

4.2 A Typology of Social Areas

The factor analysis suggests that, varied and complex though the social geography of Limerick urban area is, it can nevertheless be substantially understood in terms of four fundamental ways in which areas differ from each other. Taking account of their scores on all four composite variables, it is possible to group EDs together by means of a procedure known as cluster analysis. This involves measuring the similarity of EDs across all four factors. Based on these similarities, areas are grouped together into clusters, so that like areas are grouped with like, and the differences between the clusters are maximised. Six clusters, or social area types, emerge from this procedure, and the composition and distribution of these is illustrated by **Map 56**.

For each cluster, the average value of constituent EDs on each of the original variables can be compared with the average value for all EDs on that variable (Appendix, Table 3). On the basis of these comparisons, the six clusters can be characterised as follows.

Cluster 1: The Suburbs

This is the largest cluster in terms of both area and population, containing 41 per cent of the total population of the urban area in 2002. It includes all of the EDs outside the City, apart from Ballysimon ED. Within the City, it includes the EDs containing Corbally, Rhebogue and Singland.

These areas are characterised by above average rates of population growth and relatively high percentages of children. Family households predominate, and, compared to the average, a high proportion of these are at the pre-school stage of the family cycle. A large proportion of the housing has been built relatively recently, and is owner occupied. Levels of household car ownership are above the average, as is access to the Internet. The rates of unemployment, lone parent young families, elderly persons, and elderly persons living alone are all below average. The average affluence/ deprivation score is also well above the urban area average, i.e. the communities resident in these EDs enjoy relatively high standards of living.

Cluster 2: Urban Renewal Areas in the City Centre

This cluster contains eight EDs in the city centre, stretching from the southern tip of King's Island through the central business district to St. Alphonsus Street / Wolfe Tone Street. The population of the cluster is quite small – just 7 per cent of the total – but the average population growth rate is higher than for any of the other social area types.

All of these areas have received significant new investment in recent years, dating back to the introduction of the original urban renewal scheme in 1986, and this has been expressed in a radical transformation of the built fabric. The defining characteristic of the cluster is the predominance of private rented accommodation, mainly in the form of flats and apartments occupied by a young adult population. Having experienced a very high level of recent in-migration, areas in this cluster now have relatively high proportions of non-Irish born population and non-Irish nationals. There is also a high rate of lone parent young families, and low levels of car ownership. However, rather than being indicative of social deprivation, the latter are most likely due to the high levels of accessibility in the area, which derive from its centrality. This conclusion is supported by the fact that levels of educational attainment are high, as is labour force participation.

These areas have the social structure typical of city centre areas that have undergone recent renewal. While the demographic dynamism that has returned to the urban core is to be welcomed, it is possible that many of these households will join the suburbanisation trend at a later stage, moving to areas such as those in Cluster 1.

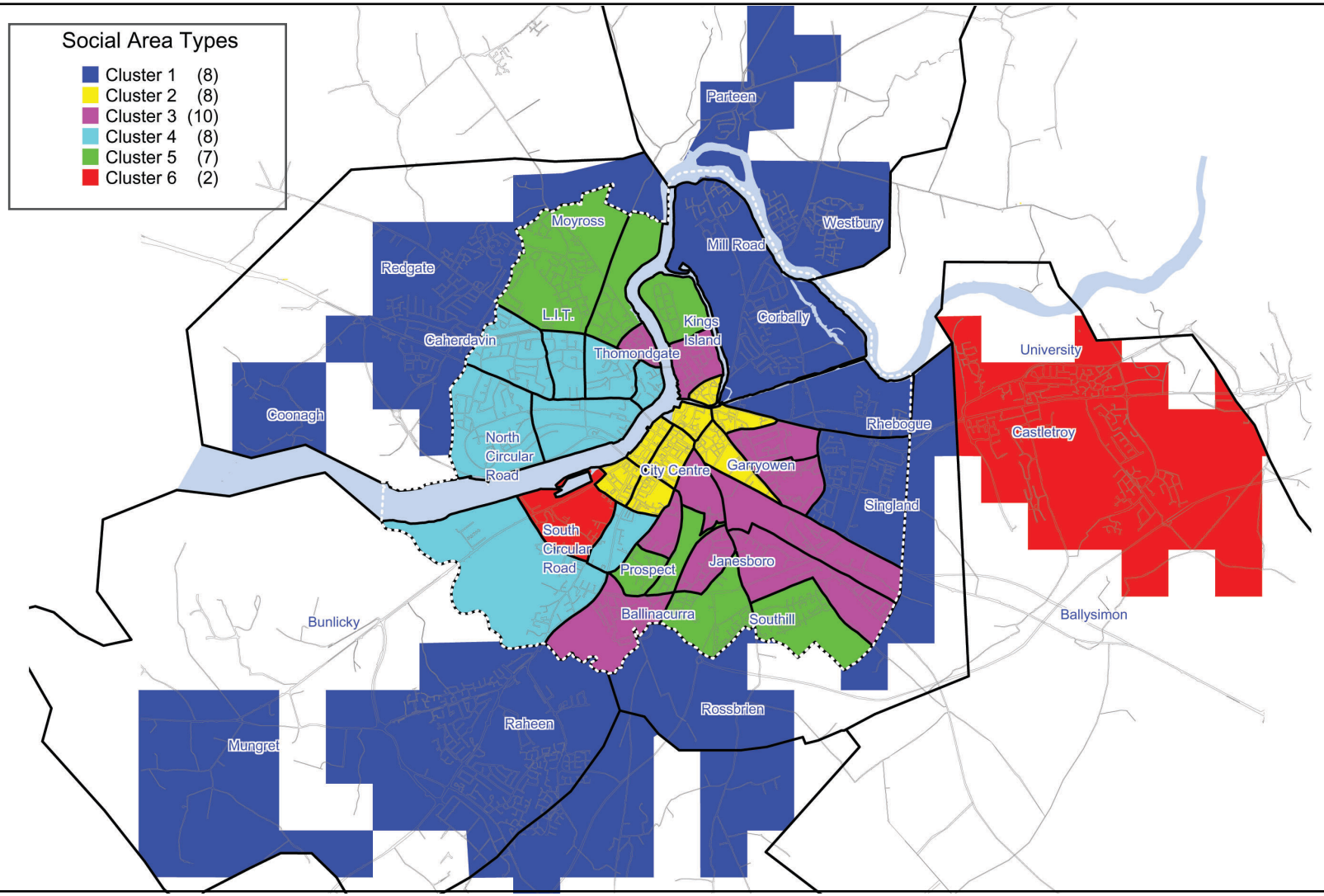
Cluster 3: Mature Working Class Areas

This is the second most populous group (just ahead of Cluster 5), consisting of 10 EDs that together contain 14 per cent of the urban area population. The areas belonging to this group all contain large amounts of housing that was originally built by the local authority, but much of which has since been privatised. As a result, levels of owner occupation are now relatively high. The estates in Garryowen, Janesboro, Kennedy Park, Upper Carey's Road, Thomondgate, the central part of King's Island, and Prospect are all included.

EDs in this cluster are mainly distinguished from those in Clusters 1 and 2 by their more mature age profile. This is reflected in high proportions of middle aged, elderly, and disabled persons, as well as families at the later stages of the family cycle. In addition to these characteristics, educational attainment is relatively low, and the occupational structure is weighted towards unskilled and semi-skilled manual occupations. Unemployment rates are above the average, and car ownership is below average. Levels of inward mobility are also low, and the proportions of non-Irish born population and non-Irish nationals are the lowest of any social area type. All but one of the EDs in this cluster (the exception being John's B) lost population between 1996 and 2002. Much of this population loss is due to the older age profile of these areas, which results in lower birth rates and out-migration when children reach adulthood and move elsewhere to establish their own households.

These EDs are typical of mature working class areas. While ranking relatively low on the affluence / deprivation scale, most are nevertheless relatively stable, settled, communities that often enjoy high levels of social cohesion and social capital.

Map 56:



The shaded areas outside the city boundary represent the urbanised sections of the 6 rural Electoral Divisions.

SCALE 1:60,000
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Kilometer

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City Bounds
Electoral Division Bounds
Redgate City Locations

Limerick City Council
Source: CSO 2002

Cluster 4: Prosperous Older Areas

Like Cluster 3, this group of EDs is located within the City. It includes the six EDs adjoining the Ennis Road on the north side, as well as the EDs of Dock C and Ballinacurra A to the south of the city centre. Also like Cluster 3, though to an even higher degree, there is evidence of an older age profile: the percentage of population aged 65 years and over averages 19.6 per cent, as compared to just 11.9 per cent across all areas. The average rate of elderly persons living on their own is also the highest among the six social area types, and there is a large proportion of empty-nest families. There are comparatively few new houses, and the average rate of population change in the most recent inter-censal period was relatively low, though still positive. Altogether, areas in this cluster account for 12 per cent of the urban area population.

While similar to Cluster 3 in its age profile, this cluster is radically different in terms of affluence. The average affluence / deprivation score is amongst the highest for all social area types. In turn, this is related to high levels of educational attainment, and a social class profile that is dominated by the managerial, professional and technical social classes. Levels of owner occupation are consistently high, and the average ED unemployment rate is the lowest of all clusters.

Cluster 5: The Local Authority Estates

This cluster consists of 7 EDs located to the north and south of the city centre that together contain 14 per cent of the urban area population. The EDs in question include the housing estates of Moyross, Ballynanty, Kileely and St. Mary's Park, on the north side, and Weston plus the Southill estates on the south side.

The most characteristic feature of this cluster is the high average percentage of households renting their accommodation from the local authority. Areas in this cluster are also characterised by low levels of educational attainment and by high percentages of the unskilled and semi-skilled social classes. Average unemployment rates and levels of lone parent young families are the highest among the six social area types. Car ownership is relatively low, as is household Internet access. Given these aspects of the cluster profile, it is not surprising that the average affluence / deprivation score for EDs in the cluster is the lowest of all six clusters.

While broadly similar to Cluster 3 in respect of social class composition and educational levels, this group of EDs is distinguished from the latter by considerably higher levels of unemployment and of lone parent young families, as well as much lower levels of owner occupation. Also, these areas have a relatively youthful population profile, and the average percentage aged less than 15 years is the highest of all clusters. Like Cluster 3, the average rate of population change between 1996 and 2002 was negative, but here the rates of decline were considerably higher. Moreover, unlike the mature working class areas, population decline cannot be attributed to population ageing. Rather it reflects a level of out-migration well in excess of what could be considered to be demographically generated. It is likely that many of the out-migrants are among those who have transferred from local authority to private rental tenure. As noted earlier, the question of whether geographical mobility is the cause, or the consequence, of the change in tenure status remains open.

Cluster 6: Student Limerick

Though it contains 12 per cent of the urban population, this cluster consists of just two EDs, Ballysimon and Dock D, which are distinguished from all the others by their unusually high percentages of population aged 15-24 years. These, of course, are largely student populations, centred around the University of Limerick, in Ballysimon ED, and Mary Immaculate College, in Dock D. Following on from the high percentages of students, these areas are also exceptional with respect to their low rates of labour force participation, though levels of part-time working are very high. There are, of course, high levels of educational attainment, and, like Cluster 2, high levels of recent in-migration and of private rented accommodation.

While the student populations obscure many of the features of the 'background' populations of these two areas, nevertheless some of these can still be discerned. In particular, it is notable that this cluster has the highest average affluence / deprivation score of all, reflecting the fact that Ballysimon ED (containing Milford, Castletroy and Monaleen) and Dock D rank as the third and the seventh most prosperous EDs respectively in Limerick urban area.

This analysis has demonstrated that, within the confines of a small to medium sized city, a very wide range of social conditions is encountered. While some of this variation is simply a reflection of the increasing diversity to be expected, indeed welcomed, in a growing urban centre, some of it is clearly problematical. Three of the six social area types, namely Clusters 1, 4 and 5, are defined largely with respect to the socio-economic status dimension, and there are huge disparities in affluence levels between the suburbs and prosperous older areas on the one hand, and the local authority estates on the other. This polarisation represents one of the major challenges for policy makers and public service providers both at national and local levels, because it raises serious questions about the sustainability of urban growth. This and other issues are addressed in the final section.

22. *Together the four factors account for 84 per cent of the total variance of areas across the original 50 mapped variables.*
23. *The associations are, in effect, correlation coefficients.*

BALLYGLASS
BALLYNANTY
KILLEELY A
ABBEY A
JOHN'S A
LIMERICK NORTH RURAL
COOLRAINE
KILLEELY B
FARRANSHONE
JOHN'S B
CASTLE A
CASTLE B
JOHN'S C
ABBEY B
CASTLE D
CUSTOM HOUSE
ABBEY C
CASTLE C
SHANNON A
ABBEY D
SHANNON B
MARKET
DOCK A
SINGLAND A
GLENTWORTH A
SINGLAND B
DOCK B
DOCK D
PROSPECT A
DOCK C
BALLYSIMON
GLENTWORTH C
ST. LAURENCE
GLENTWORTH B
BALLINACURRA A
PROSPECT B
GALVONE A
RATHBANE
BALLINACURRA B
GALVONE B
LIMERICK SOUTH RURAL
BALLYCUMMIN
ROXBOROUGH

5. a city for the twenty-first century?

Limerick has undergone profound transformation in the last decade, economically, socially, and in terms of the physical fabric of the city. It has consolidated its position as the capital of the Mid-West Region, through its success in attracting modern manufacturing and internationally traded services, and through the on-going development of its retail base. The city centre has been extensively redeveloped and after a prolonged period of decline in the core, population growth has now returned. The small but growing presence of a non-national community in the city has added an international dimension that was previously absent, and has given the city a more cosmopolitan ambience. Together with a number of major infrastructural and environmental projects, the renewal of the built fabric has greatly improved amenity levels in the city. The multi-million euro Riverside City project, which aims to upgrade the river and canal-side area from the docks to the university at Plassey, represents an exciting prospect for the future.

At the same time, there are grounds for concern about the sustainability of recent developments. With regard to the economy, concerns include comparatively low levels of productivity in manufacturing and the heavy reliance for industrial employment on a small number of large, foreign-owned companies. On the social side, while recent economic growth has alleviated the chronic unemployment problem that prevailed throughout the 1970s and 1980s, there remain major disparities between social groups in their ability to access worthwhile employment opportunities. Moreover, these disparities are deeply entrenched in the geography of the city.

Arising from the analysis of the city's external and internal relationships in the preceding sections, a number of significant issues that will require attention over the medium term can be identified. Some of these issues affect all six types of social area equally; others are of greater importance for certain types. However, all of the issues are closely interlinked, and for progress to be made, these linkages must be explicitly taken into account. This in turn demands a strategic and integrated approach to development.

The Future Regional and National Role of the City

The current thrust of spatial development policy, as set out in the National Spatial Strategy, confers a key role on the medium sized urban centres of Ireland, including Limerick. For the city to fulfil this role, it must develop and diversify its industrial base considerably. The current dependence on foreign owned firms in the manufacturing sector needs to be reduced by the development of indigenous manufacturing and internationally traded services. For this to happen, the city needs to improve the level and range of attractive factors for business. One of the key factors for modern manufacturing and services firms is the availability of abundant reserves of skilled labour. In order to maximise the city's labour pool, and the market for services, it will be necessary to improve access to and from the city. To date, most of the attention in this respect has been given to road development, but the requirements of sustainable and socially inclusive development demand that more emphasis be given to public transport. At present, the public transport system in the area covered by the daily urban system (the daily circulation area for commuters, shoppers, goods and services) is poorly developed and in need of investment. The viability of public transport depends on the density and degree of nucleation of settlement, and so the planning of future residential development will be of crucial importance.

City Governance

One of the major problems facing comprehensive land use and transportation planning in the city region is the fact that Limerick City is currently severely under-bounded, with over one in every three persons in the contiguous built-up urban area resident outside the City boundary. Even if demographic recovery continues in the city centre, the balance of population is likely to continue to shift towards the suburbs in the years ahead, as most of the land available for residential development is available there. The result is that governance of the urban area is fragmented, with three different authorities responsible for public services and planning. The potential for mismatch between the objectives of these authorities is obvious, with deleterious consequences for the city. In this context, the introduction of Regional Planning Guidelines in conjunction with a Regional Economic Strategy is a welcome development, but it is vital that the particular problems of the urban region be sufficiently recognised and addressed in the planning guidelines. Failing the granting of a significant boundary extension, there will be a need for much greater, and possibly more formally structured, co-ordination of land use and transportation planning in the urban region. It should also be recognised that, leaving aside physical planning considerations, the under-bounding of the City has also had socially regressive effects over the past several decades.

Maintaining Demographic Vitality and Balanced Residential Communities

Urban renewal has transformed the city centre over the last decade, and though there has been considerable success in terms of property development and the elimination of dereliction, there are grounds for concern regarding the demographic and social aspects of renewal. While population recovery has occurred, the age profile of the new residents in the centre is heavily weighted towards the young adult age groups, with a predominance of single person and non-family households. Tenure status is heavily weighted toward renting rather than owning. Given this fact, plus the unsuitability of a large part of the new housing stock for family accommodation, the likelihood is that there will be some movement of population out of the city centre in the years ahead. In this context, it is desirable that measures be taken at planning stage to ensure that future residential developments in this area are likely to promote a more balanced social and demographic profile.

There are also grounds for concern with regard to demographic trends in areas of the City that lie outside the core. There is clear evidence now of population ageing in some of the older inner suburbs, which is expressed in the form of low vitality rates, few pre-school or early-school families, and a high proportion of post-family households. As yet, the proportion of population aged over 65 years of age is relatively low, but this will increase considerably in the next 10 to 20 years. Both on grounds of community development considerations, and also to prevent the possibility of deterioration in the built fabric, it is desirable that a more balanced demographic profile emerges in these areas also. Population ageing has led to a decrease in numbers in many parts of the City, but in some of the local authority housing areas this decrease is of a greater order of magnitude than can be explained by ageing processes alone. Instead, elevated levels of out-migration appear to be responsible, and these in turn point to a high level of social distress in the areas affected. In many of these areas differential out-migration of the middle aged and older populations is having the effect of artificially arresting the normal maturing of the age profile.

Combating Social Exclusion

Economic growth has reduced the aggregate level of unemployment in Limerick, but localised concentrations still remain, especially in the local authority estates. At the same time, the nature of social exclusion has undoubtedly changed. It is no longer just about the unemployed, as new problems and 'at risk' groups have emerged, including lone parent families, refugees and asylum seekers, persons with disabilities and the elderly, especially those living alone. The latter group will become increasingly prominent in future, as the population continues to age. Clearly, there is a need both for enhanced measures to combat exclusion in existing target areas, as well as new responses to deal with those groups that may be more dispersed throughout the city.

The rapid economic growth of recent years notwithstanding, the level of socio-economic polarisation in the city remains high. Such polarisation is by no means unique to Limerick; rather it has been widely identified in cities throughout the world as a product of economic growth and increasing globalisation. What is unusual about Limerick is the extent to which social polarisation is delineated in geographical terms. Limerick is a highly segregated

city, in which communities living in different areas enjoy very different lifestyles and standards of living. The reduction of socio-spatial polarisation is not just desirable on grounds of social equity: the problem represents a major constraint on the city's ability to fully realise its potential, and as such it must be of concern to all involved in the city's development. Many of the exciting new developments of the last decade or so will ultimately amount to very little if Limerick cannot progress towards being a city of greater equality of opportunity.

BALLYBRIMON
BALLYGLASS
ABBEY A
ABBEY B
ABBEY C
ABBEY D
SINGLAND A
SINGLAND B
ST. LAURENCE
GALVONE A
GALVONE B
LIMERICK SOUTH RURAL
MARKET
JOHN'S A
JOHN'S B
JOHN'S C
KILLEELY A
KILLEELY B
CASTLE A
CASTLE B
CUSTOM HOUSE
SHANNON A
SHANNON B
GLENTWORTH A
GLENTWORTH B
GLENTWORTH C
DOCK B
DOCK C
PROSPECT A
PROSPECT B
RATHBANE
BALLINACURRA B
ROXBOROUGH
DOCK A
DOCK D
CASTLE C
CASTLE D
BALLYNANTY
COOLRAINE
FARRANSHONE
BALLINACURRA A
BALLYCUMMIN
LIMERICK NORTH RURAL

6. appendix: details of the social area analysis

Table 1: Variables Used in the Factor Analysis

No.	Variable Full Name	Variable Short Name
1	Percentage population change 1996 to 2002	Population Change
2	Percentage population aged 0-14 years	Population 0-14
3	Percentage population aged 15-24 years	Population 15-24
4	Percentage population aged 25-44 years	Population 24-44
5	Percentage population aged 45-64 years	Population 45-64
6	Percentage population aged 65 years and over	Population 65+
7	Family based households as percentage of private households	Family Households
8	Single-person households as percentage of private households	1 Person Households
9	Pre-school families as percentage of all families	Pre-School Families
10	Adult families as percentage of all families	Adult Families
11	Empty-nest families as percentage of all families	Empty Nest Families
12	Labour Force Participation Rate	LFPR
13	Female Labour Force Participation Rate	Female LFPR
14	Part-time workers (under 20 hours per week) as percentage of total employed (ILO)	Part-time Working
15	Persons with education to lower secondary level as percentage of those who have ceased education	Lower Secondary Education
16	Persons with postgraduate education as percentage of those who have ceased education	Post Graduate Education
17	Social classes 1 & 2 as percentage of population	Social Classes 1 & 2
18	Social classes 5 & 6 as percentage of population	Social Classes 5 & 6
19	Percentage of usually resident population at a different address one year ago	One Year Migration
20	Non-Irish born as percentage of usually resident population	Non-Irish Born

Table 1: Variables Used in the Factor Analysis

No.	Variable Full Name	Variable Short Name
21	Non-Irish nationals as percentage of usually resident population	Non-Irish Nationals
22	Households in housing built since 1995 as percentage of permanent private households	Post 1995 Housing
23	Households in flats and apartments as percentage of permanent private households	Flats & Apartments
24	Percentage of permanent private households who are owner occupiers	Owner-Occupiers
25	Percentage of permanent private households renting from the local authority	Local Authority Rentals
26	Percentage of permanent private households renting privately	Private Renting
27	Households with no car as percentage of permanent private households	No Car Households
28	Households with 2 or more cars as percentage of permanent private households	Two Car Households
29	Households with internet access as percentage of permanent private households	Internet Access
30	Unemployment Rate	Unemployment Rate
31	Lone parent young families as percentage of all young families	Lone Parent Young Families
32	Persons aged 65 years and over living alone per 1,000 population in private households	Alone Aged 65+
33	Persons with disabilities per 1,000 population	Disability
34	Deprivation Index 2002	Deprivation Index

Table 2: Factor Loadings

	Factor 1	Factor 2	Factor 3	Factor 4
Variable (Short name):				
Private Renting	0.96852	0.04681	0.18847	0.05983
One Year Migration	0.95183	0.17987	0.14568	-0.01071
Family Households	-0.89398	0.09831	-0.0459	-0.38551
Population 15-24	0.89151	0.06887	-0.31427	-0.16225
Flats & Apartments	0.87264	-0.14169	0.29815	0.03579
Non-Irish Born	0.82689	0.1144	0.33228	-0.1133
Non-Irish Nationals	0.79522	-0.00383	0.31432	-0.05963
Population 45-64	-0.77575	-0.02471	-0.20573	0.15294
Owner-Occupiers	-0.75249	0.61591	0.0117	0.04636
Adult Families	-0.74121	-0.16369	-0.40578	0.26168
Population 0-14	-0.69066	-0.34088	-0.12415	-0.48987
Pre-School Families	0.68452	0.03187	0.27545	-0.32227
1 Person Households	0.65115	-0.32685	0.08048	0.59471
Empty Nest Families	-0.60562	0.37495	-0.29946	0.306
Population Change	0.5627	0.18504	0.33106	-0.33288
Deprivation Score	0.27488	0.94883	0.13413	-0.03214
Social Classes 1&2	0.08517	0.93775	0.07593	-0.0333
Social Classes 5&6	-0.20488	-0.92684	-0.00766	-0.03151
Internet Access	-0.23031	0.92609	0.03752	-0.19961

Table 2: Factor Loadings

	Factor 1	Factor 2	Factor 3	Factor 4
Variable (Short name):				
Two Car Households	-0.23456	0.89205	-0.06589	-0.24944
No Car Households	0.40054	-0.8855	-0.04083	0.17726
Lone Parent Young Families	0.33291	-0.8631	-0.03834	-0.01457
Unemployment Rate	-0.08982	-0.86293	-0.16548	-0.00517
Lower Secondary Education	-0.47592	-0.85547	-0.15201	0.00484
Local Authority Rentals	-0.07659	-0.83902	-0.25669	-0.14193
Post Graduate Education	0.52569	0.75427	-0.07521	-0.10121
LFPR	0.22708	0.09571	0.92071	0.0673
Female LFPR	0.28854	0.1573	0.84796	0.11632
Part-time working	-0.14814	-0.06535	-0.81003	0.06663
Population 25-44	0.53953	0.15376	0.67261	-0.30166
Alone aged 65+	0.06054	-0.12129	0.01768	0.94115
Population 65+	-0.23777	0.14231	-0.03213	0.87963
Post 1995 Housing	0.36569	0.32462	0.36166	-0.50674
Disability	-0.34062	-0.4372	0.03644	0.49379
Percentage of variance	**32.5438**	**28.9754**	**11.5396**	**10.6860**

Table 3: Cluster Profiles

		Average Value of Variable:[24]						
No.	Variable Short Name	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	All Areas
	Population Change	20.77	39.09	-4.83	1.67	-7.79	26.96	10.31
	Population 0-14	22.26	9.45	18.09	14.35	27.80	12.08	17.86
	Population 15-24	16.80	30.46	16.57	17.88	17.26	38.44	20.57
	Population 24-44	34.59	38.24	26.86	27.94	25.19	27.75	30.39
	Population 45-64	19.64	13.42	22.57	20.25	21.56	13.32	19.29
	Population 65+	6.71	8.44	15.91	19.59	8.19	8.42	11.89
	Family Households	77.98	38.87	67.45	61.47	71.63	51.53	62.921
	One Person Households	14.21	38.41	26.37	26.76	23.05	23.20	25.73
	Pre-School Families	12.50	16.81	6.13	8.53	9.26	12.74	10.56
	Adult Families	25.57	16.65	36.00	28.82	32.96	25.51	28.14
	Empty Nest Families	8.84	5.86	9.86	12.81	9.07	8.90	9.30
	LFPR	67.25	70.32	63.30	65.31	58.81	46.28	64.19
	Female LFPR	57.38	62.09	52.92	55.88	45.79	36.11	54.06
	Part-time Working	10.19	9.52	11.83	12.48	14.69	18.99	12.01
	Lower Secondary Education	34.96	33.76	61.63	26.97	76.76	19.68	45.55
	Post Graduate Education	2.69	3.29	0.45	3.89	0.22	6.08	2.26
	Social Classes 1 & 2	36.42	22.45	13.17	43.21	7.43	35.86	24.93
	Social Classes 5 & 6	12.85	19.24	26.78	8.89	36.18	5.58	20.00
	One Year Migration	8.77	27.83	6.60	12.13	4.10	26.62	12.51

Table 3: Cluster Profiles

		Average Value of Variable:						
No.	Variable Short Name	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	All Areas
	Non-Irish Born	8.13	18.98	4.34	7.73	4.56	11.62	8.77
	Non-Irish Nationals	4.79	16.26	3.24	5.10	3.49	8.89	6.60
	Post 1995 Housing	23.94	19.45	5.44	8.27	4.44	21.14	12.58
	Flats & Apartments	3.64	64.89	6.34	10.47	4.21	11.33	17.39
	Owner-Occupiers	83.32	22.68	66.84	78.34	44.26	60.69	59.87
	Local Authority Rentals	2.53	11.57	13.28	0.83	31.78	0.46	11.06
	Private Renting	10.15	56.47	7.56	16.95	4.63	34.75	19.68
	No Car Households	12.47	60.16	45.09	20.85	59.60	23.70	38.68
	Two Car Households	42.73	9.15	13.17	33.92	6.49	40.99	21.99
	Internet Access	40.77	15.43	18.41	34.53	9.39	37.07	24.41
	Unemployment Rate	6.75	16.31	17.76	5.76	27.61	7.35	14.33
	Lone Parent Young Families	14.53	52.44	34.52	14.26	60.32	11.13	33.48
	Alone Aged 65+	13.99	38.94	46.62	50.34	27.00	20.43	35.40
	Disability	85.06	99.12	158.73	113.12	138.49	58.23	117.48
	Deprivation Index	9.53	-2.33	-25.59	13.00	-35.68	17.59	-5.54

24. In all cases the average is calculated as the arithmetic mean of the values for all EDs in the group. This is not the same as the value for the area as a whole, which is equivalent to the population-weighted mean.

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