Final Report

Locational advantage and disadvantage in public housing, Rent Assistance and Housing Loan Assistance in Perth

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EXECUTIVE SUMMARY

This study draws on the concept of locational disadvantage to evaluate three different housing assistance programs in relation to current trends in socio-economic restructuring and associated shifts in welfare provision. The housing assistance programs considered provide support for low and moderate-income households to access public rental housing (Public Housing), the private rental market (Rent Assistance) and homeownership (Keystart).

A comparative assessment of the social and physical qualities of localities in the Perth Metropolitan area has been undertaken to investigate the effectiveness of the programmes to provide for the locational needs of target recipients. The comparative analysis was undertaken at the scale of suburbs rather than Statistical Local Areas or Local Government Areas. This 'finer grained' analysis revealed a greater level of detail than previously obtained through national level studies.

This study is explicitly oriented towards evaluating the locational outcomes of housing assistance programs rather than individual localities or suburbs. The choice of criteria and the various weightings on each indicator are oriented to reflect the particular needs of housing assistance recipients, rather than with the explicit purpose of providing a locational assessment of particular areas. The amenity scores do however provide an indication of suburb amenity.

The research aims to:

1. Inform housing policy and program development initiatives in Western Australia by:
   - considering the spatial distribution of the recipients of different housing assistance programs within the context of current trends in socio-economic restructuring and contemporary social welfare reforms; and
   - developing a practical evaluative tool specific to the nature and spatial distribution of different housing assistance programs in metropolitan Perth but with potential to apply elsewhere.
2. Inform the application of the concept of locational advantage and disadvantage in national housing research and policy forums by:
   - critically reviewing national perspectives on locational advantage and disadvantage in relation to the Western Australian context; and
   - contributing to the national development of alternative methods and applications of the locational advantage and disadvantage concept in relation to broader urban research.

Key Research Outcomes

Nationally the study feeds into the developing dialogue on the applications of the concept of locational disadvantage in respect to both policy implications and methodological refinement.

For policy makers, the results provide a practical foundation for evaluating the local administration of housing assistance programs in respect to the locational needs of the people receiving the assistance.

The research should be viewed as a base query tool to be developed over time and as such provides indicative rather than conclusive results. Different criteria can be added to the tool and the relative weightings adjusted to reflect changes in urban settings and in housing assistance programs.

The approach in this study is to collect a range of indicators of locational advantages and disadvantages for each suburb, and then to assess these in terms of importance to particular household types. As this is a quantitative approach, the results will be necessarily indicative rather than conclusive. The issue of locational disadvantage is fraught with subjectivity in the sense that it stems from a combination of both people and place. In this study, the criteria for amenity were: access to schools, tertiary education/training, shops, health facilities, public transport, public open space, sports facilities, entertainnment/cultural facilities, community facilities, employment, distance to CBD, and also crime rates and property value growth – all of which were considered to be major factors influencing locational choice. These were assessed by suburb and then given a weighting for the housing group in that suburb, eg elderly people were considered to have less need for schools and more for health facilities.

The data showed that suburb amenity across the Perth Metropolitan area and within Local Government Areas varies considerably. The dominant feature is that amenity diminishes strongly with distance from the centre of the city. This is the case even considering weighting for various demographic groups who are not always seen as needing access to more urban amenities. The role of sub-centres in providing amenity is also apparent and needs to be expanded through focussed planning.

The locational outcomes for the three housing assistance programmes (Keystart, Public Housing and Rent Assistance) showed significant differences both across programmes and across target groups (Disabled Households, Aged Households, Households and Sole Parents with Young Children, Households and Sole Parents with Teenage Children).

Of the three programmes Public Housing provided the best access to amenity, closely followed by Rent Assistance with Keystart providing the least access to amenity by a considerable degree. Public Housing and Rent Assistance in general terms provided similar outcomes in locational amenity to Perth's general population. Both Programmes had a slightly lower representation within the lowest and highest amenity scores than the general population. Rent Assistance was less represented within the lowest amenity areas and within the highest amenity areas, whilst Public Housing was more concentrated within the above and below average amenity areas. People taking Keystart loans on the other hand were rarely found within the higher amenity areas and were 24 percent more likely than the general population to be located within low to below average amenity areas.

The groups most likely to be located within poorer amenity areas were Keystart, Sole Parent Households with Young Children and Households with Young Children. The target groups most likely to be located within higher amenity areas were Aged Households, Disabled Households and Households with Teenage Children.

1 INTRODUCTION

Public housing assistance is generally thought of as rental housing developed and managed by government housing agencies for low-income households. However, people on low incomes may also be eligible for assistance to access privately owned rental housing, or to purchase their own homes. This study considers the distribution of these different forms of public housing assistance in relation to the concept and the realities of locational advantage and disadvantage.

At its most basic, the concept of locational advantage and disadvantage considers housing in terms of its access to physical and social amenities. Within the literature, more complex interpretations have fostered some important insights (see for example the *Urban Policy & Research* - 'Forum Special', 1994), which were instructive in the development of a methodology for this study.

This is a concept-led inquiry that seeks to compare the locational advantages and disadvantages associated with different forms of government housing assistance. Metropolitan Perth is the setting for the analysis and, from a whole of government perspective, the study serves to test the larger policy concern that locational factors may undermine rather than improve the quality of life of people receiving housing assistance from the State.

The analysis is based on the creation of a dynamic and relative index from a range of indicators of locational advantage and disadvantage. These consider the presence of amenities such as transport, education, training, employment, health, recreation and retail facilities, as well as crime and other negative social indicators associated with a particular place. The index is dynamic in that it can be attuned to the different housing assistance programs under consideration, and to the different profiles of the target populations they serve. It is also a relative index in that it facilitates relative comparisons internal to each of the programs. This internal testing regime is informed by an appreciation of current policy debates and trends in socio-economic restructuring, thus enabling the study to contribute to broader research discussions.

The flexibility and utility of this policy and program evaluation tool is enhanced through the use of Geographical Information Systems (GIS). By collecting quantitative information on the distribution of services, amenities and various types of housing assistance, these issues can be understood in spatial terms. The resultant maps can also be overlayed with the mapped results of previous studies of locational advantage and disadvantage undertaken in metropolitan Perth. Importantly though, neither these maps nor the approach that underpin them are considered as final outputs. Rather, they should be understood as indicative of trends and as interim steps to be enhanced through more refined, qualitative methods and evaluative tools such as detailed interviews of the people involved.

Beyond its immediate policy relevance in Western Australia, the research also serves as a bottom-up response to several important top-down national studies covering different questions related to locational advantage and disadvantage. Together, these national studies offer useful empirical findings and conceptual clarity that both inform and contrast with this research. One of these studies, the program for Local Area Research Studies (LARS), created under the last Federal Labor Government, produced ten different area reports including one from Western Australia. More recently, Baum et al (1999) created a set of common criteria and used ABS census data to statistically identify clusters of opportunity and vulnerability throughout Australia. In a somewhat more reflective vein, the last thoughts from Chris Maher on locational advantage and disadvantage, published in his honour by AHURI (O'Connor ed.1999), also offers a comprehensive review of the main debates.

In contrast to these national studies, which focus on concentrations of advantage and disadvantage within and between Local Government Areas (LGAs), this study begins with a focus on the distribution of different forms of public housing assistance in metropolitan Perth. As such, it has more relevance for program evaluation by enabling comparisons within and between different housing assistance programs. While acknowledging the fact that different programs deliver different housing and non shelter benefits (see AHURI website for other studies on this topic), the use of consumer oriented locational preferences as a basis for assessment enables comparison between different types of housing programs.

Exploring the relationship between housing assistance and locational advantage and disadvantage feeds into several major policy debates. Considering the scale (see Thorpe, 2000) of ongoing publicly sponsored housing developments on the fringe of metropolitan Perth, there are direct implications in respect to the urban consolidation versus suburban development debate (see for example the *Urban Policy & Research* Forum Special, 1991). The study also has the capacity to provide insights into the question of the supply of appropriate affordable rental housing (public or private). Furthermore, given that 'mutual obligation' has become such a strong theme in current welfare reform, the degree to which public housing facilitates the 'required' level of social and economic participation is a highly pertinent policy question. The Final Report from the Reference Group on Welfare Reform (2000) stated:

> Central to our vision is a belief that the nation's social support system must be judged by its capacity to help people participate economically and socially as well as by the adequacy of its income support arrangements (p3).

In turn, this concern relates to the broader concept of 'social exclusion', which also includes political and cultural participation (Green 1997).

Within the context of contemporary trends in socio-economic restructuring, such policy concerns have increasing relevance. Fragmented patterns of employment, unstable family structures and the threat of increasing social-spatial polarisation are integral to what has been described as the emergence of a 'new urban poor' in the 'new geography of disadvantage' (Wilson 1997, Badcock 1997). This understanding not only provokes the question as to whether the location of public housing assistance serves to ameliorate or consolidate the 'new' patterns of social inequity, it also suggests that the literature on socio-economic restructuring is an appropriate source for giving direction to its investigation.

From a whole of government perspective, locational advantage and disadvantage is a potentially powerful concept in terms of evaluating housing assistance programs. However, the concept is not without its pitfalls in terms of its research applications. It is not just a simple question of social or physical barriers, but rather involves a complex matrix of social, psychological and physical factors. Ultimately, it amounts to comparatively assessing the social and physical benefits of a locality as it relates to the particular needs of its residents. Some of these pitfalls will persist in limiting the study's conclusions, but others can be avoided or mitigated.

One of the most confounding aspects of the concept comes with the understanding that one person's advantage is another's disadvantage. This issue is addressed in this case through the use of selective demographic profiles when assessing access to various amenities. For example, certain assumptions can be made regarding the locational needs of families with young children compared to, say, retired households. This however does not take into consideration cultural preferences or question whether a particular place should provide for diverse communities as they age and change.

Another important methodological aspect of the study is that the focus on one metropolitan area (Perth) facilitates a more detailed level of analysis. In contrast to most national level studies, which tend to use Local Government Areas (LGAs) as a unit of analysis, this study uses the 'suburb' wherever possible for a finer and more consistent scale of resolution. In addition to being considerably bigger than suburbs, LGAs vary considerably in their size: the largest LGA in metropolitan Perth comprises thirty-four suburbs, while the smallest encompasses just one.

As well as demonstrating locational diversity, which is obscured by the size of LGAs, we argue that the suburb is more closely aligned to the scale at which community amenities are distributed and experienced.

The concept of locational advantage and disadvantage has been the subject of considerable interest in both academic and policy circles since the mid 1980s. This paper argues that the combination of a significantly different policy environment, together with emergent trends in socio-economic restructuring, gives additional merit to locational advantage and disadvantage as an evaluative tool in relation to housing assistance interventions.

Furthermore, although the literature on locational disadvantage has laid a valuable foundation in conceptual understanding, the conclusions generated by this project will suggest that, in practice, these nationally applied perspectives on locational advantage and disadvantage are limited in two respects. Firstly, they have tended to use LGAs as a unit of analysis that, in the case of Western Australia at least, are inappropriate as they obscure the diversity of experiences across suburbs within local governments. Secondly such national perspectives, unless locally grounded, will invariably be misleading as they are unable to accurately reflect local dynamics.

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2 SOCIO-ECONOMIC RESTRUCTURING AND POLICY CONCERNS

Locational disadvantage became a focus of attention among urban researchers and policy makers during the 1980s. In general terms, it was an outgrowth of the social justice concerns that underpinned the Federal Labor Government policy initiatives (*Urban Policy & Research*, 1994, editorial). For most of that period Australia experienced very rapid growth, however, following global economic trends, that growth was uneven over time, across economic sectors and places (Stillwell 1993).

Since the mid 1990s, during a period of more subdued but prevailing uneven growth, the Federal Government has maintained a tighter focus on economic expansion with a stronger emphasis on competition policy. As a consequence the interest in locational advantage and disadvantage has been limited to the contrast between urban and regional Australia among policy makers and, perhaps to a lesser extent, among researchers.

We anticipate a revival in interest among policy makers in locational advantage and disadvantage and the implications that it has for developing appropriate social policy and program responses. This is likely to arise from awareness of the gathering inequalities associated with the new knowledge economy and the spatial implications of globally-oriented, information-based jobs (Newman and Kenworthy, 1999; Newman, 2001). On the one hand this outlook recognises that uneven patterns of development continue and that subsequent social-spatial polarisation has become more apparent in an increasingly fragmented housing market (Berry et al 1999). On the other hand, while Australia has only just begun to apply the concept of 'mutual obligation' to welfare, the use of this concept in the US has meant that locational disadvantage became a focus for program reviews and evaluations (U.S. Department of Transportation, 1998; U.S. General Accounting Office, 1998).

2.1 Socio-Economic Restructuring

One of the most consistent themes within the literature on socio-economic restructuring is the recognition of the increasing social-spatial polarisation brought as a result of the restructuring of employment markets, the deregulation of global finance, the loss of tariff protection and unstable commodity markets and the new knowledge-based economy. More specifically, the ongoing technological displacement of many jobs in manufacturing and in middle management has polarised income distributions into highly paid, full time professional elites, separate from lowly paid part time and casually employed labour and service personnel (Reich 1991). These trends are now being expressed geographically**:**

> The new spatial division of labour is forging a realignment of class relations which are increasingly being drawn on geographical lines resulting in a polarisation of social well being in large metropolitan cities (Knox 1995: 14).

Thus the concerns that stimulated the academic interest in locational advantage and disadvantage during the 1980s have not dissipated. Rather, the evidence presented in recent Australian research has largely confirmed the spatial dimension to be at the centre of the growing gap between the haves and the have-nots (Low 1995: Gregory and Hunter 1995).

As Stillwell (1993) suggested, the total volume of work may not have declined dramatically in the new economy, but the proportion of part time and casual employment significantly increased from 9% in 1966 to over 25% in 1996 (ABS 1996).

The average unemployment rate during the 1990s was 9%, which is almost eight times higher than the average for the 1960s (EPAC 1991; Gregory and Sheehan 1998). Moreover, considering the increasing casualisation of labour, it is likely that this high rate of unemployment hides an even higher rate of under-employment.

The uncertainty that comes with fluctuating incomes and job insecurity also impacts upon household consumption and saving patterns. The net effect of these trends is, as Lepani (1994) suggests, a squeeze on the middle class and, by association, a squeeze on the quintessential middle class product - the suburban house and land package. In reference to 25-35 year olds, Yates has suggested that:

> …their unwillingness to enter the housing market may reflect an increasing unwillingness to make the long term commitment required for home purchase because of the uncertainty they face, both about their future incomes and about the future demands on those incomes if they commit themselves to large mortgages (Yates 1997:274).

Given the findings by Berry et al (1999) which highlighted the links between labour market restructuring and escalating trends in mortgage arrears and defaults, the lack of confidence among potential first homebuyers is not surprising. While preliminary research conducted by Kupke and Marano (AHURI, 2001) suggests that confidence among potential homebuyers is a complex issue, their findings indicate that factors such as job security and relocation are indeed a concern to home buyers. Not only do these trends point to the 'falling out of homeownership' scenario but, as Yates and Wulff (1999) note, the prospect of more long-term renters also suggests a tightening of the private rental market, with those more capable squeezing out those less able to compete in terms of income and tenancy history.

This insecurity in employment and housing markets is compounded by several key demographic trends, particularly those associated with the break down of kinship networks, including the prevailing high rate of divorce and the corollary high rate of single headed households, the aging of the population, with the associated increasing health care expenses, and the rise of non-family households (Yates and Wulff eds, 1999).

In relation to the concept of locational advantage and disadvantage, the implications of these findings are that although there is broad agreement in respect to the depth and pervasiveness of social-spatial polarisation within Australian city regions, inequity does not necessarily give rise to large uniform and entirely separate clusters of rich and poor. Rather, the research suggests that these economic and social influences, together with the structural tendencies in the supply side of the housing market are, in combination, driving increasingly differentiated patterns of housing choices, constraints and outcomes. According to Wulff and Yates (1999) this complexity is creating a 'mosaic' of effects on homeownership and rental propensities across sub-groups in the population. Harvey describes this phenomena as:

> …a dissolution of the 'doughnut' urban form of inner-city decay surrounded by suburban affluence, and its replacement by a complex checkerboard of segregated and protected wealth in an urban soup of equally segregated impoverishment and decay. (1996:405)

The methodological implications of this understanding are the need for an appropriate scale to reflect diversity. Therefore a finer grained analysis of socio-spatial polarisation is needed in recognition of this inherent complexity.

In metropolitan Perth, the dynamics behind the formation of this checkerboard become apparent in the process of inner city gentrification whereby expanding areas of affluence are displacing remnant pockets of poverty (Greive et al 1999). Similarly, on the peri-urban fringe, new estates being developed by Homeswest (and various private developments with mixed markets) in some cases lie adjacent to the 'lifestyle seekers' who earlier had paid a premium for relatively large holdings, with what was once an appealing rural aspect on the edge of the city.

Researchers such as Fincher (1991) have long recognised this complication in respect to the practical application of the concept of locational advantage and disadvantage. The key point Fincher makes is that locational advantage and disadvantage is not necessarily spatially confined but it is spatially expressed (Fincher 1991:134). This problem can be mitigated to some extent by adopting finer grained statistical analysis (ie suburb rather than LGA) and by supplementing the results of quantitative analysis with qualitative research.

2.2 Policy Environment

A significant policy development in recent times was the release of the McClure Report. This report was commissioned to rationalise a major restructuring of the nation's welfare system. Importantly, the report emphasised that:

> Obligations are reciprocal and they extend across the whole community not just between government [on behalf of the community] and the individual in receipt of income support (Reference Group on Welfare Reform, 2000).

The experience in the United States is insightful in this regard by virtue of their earlier implementation of welfare-to-work reforms. In the US, there is growing recognition that the success or failure of the welfare-to-work reforms now largely rests on the ability of policy makers to address housing, land use and transport related barriers to economic and social participation (see for example Coulton et al, 1997; U.S. Department of Labour, Employment and Training Administration, 1997; U.S. Department of Transportation, 1998; U.S. General Accounting Office, 1998). As a response, the U.S. Department of Housing and Urban Development, along with agencies such as the U.S. Department of Transport and the Federal Transit Authority are now playing a prominent role in the implementation of welfare reforms. Housing initiatives such as the 'Bridges to Work' and 'Moving to Opportunity' programs have been implemented to address the housing-jobs spatial mismatches that often act as barriers for welfare recipients trying to make the transition to work.

The extent to which government land development has been used to seed and cross subsidise new developments on the metropolitan fringe is important when considering the emerging whole of government perspective in respect to housing assistance (Thorpe, 2000). Supporting new housing development and the growth of the metropolitan area has been seen by policy-makers as beneficial in encouraging construction jobs and leveraging private investment in housing and infrastructure – as exemplified by the introduction of the first homeowners grant to stimulate general economic growth. Equity problems are exacerbated, however, when such benefits are not shared by those who are already socially and economically disadvantaged.

This issue is particularly relevant in WA where, compared to other states, the state public housing provider (relative to other Australian states) has unusually strong land development commitments permeating its various policy and program initiatives. In recent years approximately 30% of all new housing starts in Metropolitan Perth have been on newly subdivided lots developed through Homeswest, often in conjunction with private sector partners (UDIA, 2001). As a result of major Joint Venture Developments such as Ellenbrook, as much as 40% of all new housing starts have been publicly sponsored in particular periods (UDIA, 1999). Yet across Perth the urban development market shifted (at least in the era before the first home owners grant) to being 45% focussed on Inner and Middle suburban redevelopment and small lot subdivision. Thus a substantial part of the Fringe market is based on government-backed projects.

Ellenbrook, one of Perth's newest and largest public sponsored land and housing developments, is located 35 km north east of Perth. Once completed it will have a population of some 50,000 (Lumsden, 1998). It is characterised by a majority of first time homebuyers on low and moderate incomes, and one in twelve households will be a public rental. Currently, the nearest sub regional employment centre is 15 km away, but in the absence of local employment opportunities, very many of Ellenbrook's working population could well face daily commutes of more than 60 km (Armstrong and Ruane, 2002). A bus service is provided by the Ellenbrook Estate though the car dependence of this area remains a major issue.

The mismatch between housing and jobs in relation to the trends within the 'new global economy' were highlighted by Derek Kemp (WAPC, 1998). Kemp's analysis focused on the casualisation of labour, the new skill sets required, and the contrasting rise and decline of different economic sectors. Similar studies have been undertaken earlier elsewhere in Australia, notably in Brisbane, but the application of this methodology in Perth was the first to highlight the relevance of these issues to local policy makers. The key finding in Kemp's report was that, even by Australian standards, Perth is very mono-centric in terms of the distribution of employment opportunities. Despite this, state housing development continues to occur in isolated locations such as Ellenbrook. Amarillo, 60 km south-east of Perth, is another government owned site earmarked for future public housing.

Just as the implications of the casualisation of labour in respect to concentrations of assisted homeowners on the outer fringe were slow to be recognised by Australian policy makers, the issue of stagnant property values has had less public discussion than the need to maintain a constant supply of cheap land for development (Newman, 2002)s. A recent publication by the Western Australian Planning Commission was the first local high profile policy document to acknowledge that 'many of the people now on the outer fringes of metropolitan Perth are in negative equity situations' (WAPC 2000:61).

In Melbourne, Burbridge and Winter (1995) found that prices for dwellings in inner areas increased by more than $40,000 over an eight year period, compared with only $20-30,000 for dwellings in outer areas. This research illustrated how families who buy into areas of low capital appreciation increasingly fall behind families who buy into areas that appreciate rapidly. Over time, such families become less and less able to move into areas more advantaged in locational terms. Alexander and Greive (1997) drew similar conclusions in metropolitan Perth, and as with Burbridge and Winter they found that homeowners in certain suburbs faced net financial costs from their housing decisions.

While his more recent articles consider the impact of stagnant and depreciating property values (O'Connor, 1999), the delay in the recognition of these issues is highlighted by comments made as late as 1994 by Chris Maher:

A concern with the possible impact on locational disadvantage focuses predominantly on the low-income home purchaser. There is some irony in the situation that lower income groups purchasing tend to move toward the periphery because of the incentives to seek home ownership, and because considerable public effort has been applied to keeping this housing affordable, while at the same time there is a concern that households moving to the periphery may be disadvantaged in terms of their lesser ability to overcome some associated burdens of lower access. But lower income buyers are already the recipients of rather favourable treatment. The very nature of home ownership entails, for the vast majority, the acquisition of an appreciating asset, the real cost of which will fall over time. Those who have been identified as disadvantaged on the outskirts in this sense are likely to be better off in the long run. (Maher 1994:190). The majority of evidence shows that eventually housing does become an appreciating and valuable asset. The future value of housing on the urban fringe has been discussed by Newman and Kenworthy (1999) in terms of the Marchesi Constant in cities whereby dysfunction begins to set in after a city has more than an average half hour for the journey to work. Many car-dependent outer suburbs are showing such problems and unless there is a change in work patterns (still largely centralised, especially in the new economy jobs) then such suburbs may struggle to maintain their relative value. The possibility is there that limits to city sprawl may be approaching and governments will have to re-examine the extent of their subsidies for housing on the fringe. Rather than providing an 'appreciating asset' that can be traded off against their locational disadvantage, Australian housing assistance may be entering an era where it is contributing to a growing 'poverty trap'.

3 HOUSING ASSISTANCE AND PROGRAM EVALUATION

The three housing assistance programs evaluated through this study are the Keystart homeownership assistance program, public rental housing (Public Housing), and the rent assistance supplement (Rent Assistance) (formally known as Commonwealth Rent Assistance (CRA)) received by welfare recipients on unemployment and disability benefits. Keystart and the public rental housing programs are formulated and administered through Western Australia's public housing provider – the Department of Housing and Works (and its agencies Keystart and Homeswest). The original source of the funding is the Commonwealth State Housing Agreement (CSHA), however, funds are increasingly generated through various land development and financing initiatives, often as joint ventures with private sector partners. By contrast, Rent Assistance is administered by the Commonwealth Department of Family and Community Services. It is tied to income levels in recognition of the costs associated with private renting, and varies according to the particular form of welfare payments (unemployment, disability, pension) in line with national standards and with the family situation and number of children.

Each program produces different housing outcomes, is distributed differently across the metropolitan area and has significantly different institutional structures and client bases. As such, a host of different measures may be applied to evaluate these programs. Ultimately though, they are federally supported housing assistance programs with targeted recipients who must meet strict income and other eligibility criteria. A comparative assessment is thus possible and, in keeping with the aims and objectives of this study, has been undertaken to consider the social and physical qualities of a locality as it relates to the needs of the target recipients in each of the programs. Key features of each program that are considered in this assessment are outlined in the following sections.

3.1 Public Housing

A comprehensive geographical overview of public housing in metropolitan Perth is provided by the doctoral thesis of John Selwood (1981) for the post war period through to the end of the 1970s. As well as describing and mapping the stock, his analysis went some way to explaining the main policy shifts and institutional developments of the State Housing Commission (SHC). Recent updates to this work are presented in the respective honours theses of Adams (1999) and Thorpe (2000). The two main trends that emerge from this research are that in recent years the stock has stabilised and, over a longer period, the stock has become more dispersed as would be expected in a growing city.

Federal and State policies have promoted substantial sales of government-owned properties partly as a way of achieving improvements to those areas that were mostly public housing. Rebuilding has enabled the total stock to remain relatively stable (though the maintenance level has reduced due to improved buildings) whilst the general population of Perth has grown substantially. As a consequence, the proportion of public housing as part of the total housing stock in Perth has dropped from around 14% in 1966 to below 5% (Adams 1999). This in turn has resulted in a significant increase in the number of people waiting to access public rental housing. In 2001 there were some 15, 500 households in the State waiting for public rental housing (this declined to 14,200 in 2002), and in some desirable areas such as Fremantle, the wait can be more than five years though most people are placed within one year (Homeswest, 2001).

Housing policy in WA has focussed on increasing the number of households able to move into home ownership. Existing tenants in public housing are encouraged to purchase their homes, and potential tenants are encouraged to build or buy houses through Keystart. In concert with Federal and State Government subsidies for private market rents through income supplements for welfare recipients (Rent Assistance), the result of this has been a reduction in the state's capital investment commitments (Newman, 2002). Wulff and Evans (1999) provide a national perspective on these policies.

The increasingly dispersed pattern of public housing, as mapped by Thorpe (2000), is the result of several shifts in policy (SHC, 1944 – 1945; Homeswest 1986-2001, Homeswest 1988-1992). From the 1950s through to the 1970s, the major emphasis was on meeting the demand for low cost housing. In doing this, the State Housing Commission (SHC) took advantage of economies of scale wherever possible, so that whole suburbs were pioneered through the SHC in this period.

By the 1980s a range of social problems had been attributed to the concentration of public housing in certain areas (National Housing Strategy, 1991). To address these, efforts were made to increase the distribution of public rental housing, including 'spot purchases' of established dwellings in suburbs with little or no public housing. This policy shift was symbolised in the early 1990s by the Better Cities Program where high profile inner city and middle suburb housing developments were created with more social mix and with advantageous locations for jobs and services.

A policy of no more than 1 in 9 public housing in any area was adopted by the WA government in this period. Following the change of government in 1993 this policy was modified to focus on increasing social mix by selling off large parts of older estates. In addition to providing for a 'desirable' ratio of 1 public rental property for every 12 houses, these sales enabled the State to capitalise on increasing land values in its older estates.

The redevelopment of older estates is now a major part of the Department of Housing and Works' activity. These publicly sponsored redevelopments ('New Living') are undertaken in partnership with private companies, and are currently replacing some of the oldest and most centrally located public rental houses (see http://www.dhw.wa.gov.au).

These policies have been successful in achieving a more even spread of public housing across the metropolitan area, in rehabilitating older housing stock and indeed raising the value of the whole suburb in which the housing exists. The question remains as to whether the public housing stock is better or worse in terms of locational amenity than the average Perth householder. This research was designed to provide answers to this question. Suburb-by-suburb comparisons of locational advantages and disadvantages can be used to test whether such initiatives as New Living improve the lives of housing assistance recipients. Given that the housing is either new or totally refurbished, 'origin suburbs' can be directly and fairly compared with 'destination suburbs' to reveal any significant net amenity loss or gain for the recipient. Furthermore, this evaluation has added significance considering that the 'refuse and lose' policy (where tenants who reject accommodation offered to them are relegated to the end of the waiting list) virtually forces tenants to accept the housing assigned to them despite issues of concern to tenants over location (Adams 1999).

With reference to the one in twelve 'salt and pepper' policy, it is worth noting that these displaced tenants become the 'pepper' added one part in twelve to the 'salt' who are very likely to be Keystart recipients (see below) under first home buyer schemes. Under these conditions, the concern is that the socio-economic distinction between assisted homeowners and tenants is marginal and that the net result creates concentrations of people on low and moderate incomes on the outer fringe. According to the criteria advanced by Baum et al (1999:11) such concentrations are characteristic of vulnerable communities.

3.2 Keystart - Homeownership Program

In its first ten years (1989-1999), the Keystart program assisted over 30,000 families into homeownership and continues to provide assistance to over 3,000 families a year (Homeswest, 2000). As with earlier government-backed finance schemes, the program was designed to assist households on incomes too high to be eligible for public housing, but too low to be considered for private mortgage financing, especially those without sufficient savings for a normal deposit. Keystart works by providing access to loans on generous terms including flexible eligibility criteria and very low deposit requirements. In recent years, following Federal and State Government policies, targeted schemes have been introduced to encourage particular groups that are more likely to not meet the Keystart criteria – such as Australians of Aboriginal and Torres Straight Islander decent and people with disabilities – to enter into homeownership.

Although Keystart relies upon private financing, its ability to borrow is based on the government's credit rating and its ability to underwrite the risk. In this capacity, Keystart works with public and private land development activities, to attract private corporate investment, together with individual savings and mortgage investment (though Keystart never becomes more than 10% of a development).

The use of private finance has meant that Keystart has been particularly significant in the context of declining CSHA funding. As a result, Western Australia's share of government-supported home loans has increased from around 8% to more than 50% of the National total (Housing Assistance Act Annual Report 1996-97). As Thorpe (2000) suggests, a key mechanism in this growth lies in the program's uncompetitive interest rates, so that once the loan has been secured, borrowers are implicitly encouraged to repackage the loan opting for the lower interest rates found among private lenders. This in turn frees up Keystart loans that can then be used to assist new households to enter into homeownership.

The other aspect of the program that has important consequences in terms of both its growth and distribution is that private land developers and builders undertake much of the marketing and promotion. These are local firms and many of them are small. Their advertisements highlight the prospect of attracting government assistance in financing new home construction (even more so after the Commonwealth's First Home Owners Scheme) but in so doing they implicitly link this assistance to new housing, generally on the fringe of the metropolitan area. As Thorpe (2000) has argued, the distribution of this housing assistance is largely a reflection of entrenched housing construction and land development practices. She notes, for example, that although there are some older homes in established suburbs available at similar prices, these are not promoted. Moreover, given that the Department of Housing and Works, together with various consortiums of land developers, is involved in sales of land on the outer fringe the focus is more likely to be on this land than on redevelopment. Keystart is a nationally significant innovation in "social" housing. It has enabled a broader range of households on increasingly marginal incomes and circumstances to become homeowners. Furthermore, in terms of the growing number of recipients

being assisted into homeownership, the massive amount of private funds leveraged and the numbers of businesses and employees engaged in land development and construction, it is arguably a highly efficient program.

However, given the distribution of Keystart purchases, the use of locational advantage and disadvantage as an evaluative concept may yield different results. This is not as simple as it might seem, however. As Chris Maher (1994; 1999) consistently argued, people may be quite happy to trade-off locational disadvantage for the opportunity to enter into homeownership.

Previous research has indeed shown that the desire for homeownership is very strong, and that first home buyers in particular, are willing to compromise on location so that they can afford to buy a house (NHS 1992, Kupke & Marano, 2001). As such, it would seem appropriate that any measurement of locational advantages and disadvantages in respect to the Keystart program acknowledge this desire for homeownership. Accordingly, this study includes along with the other amenities and services a comparative assessment of the property values for each suburb in respect to trends in property appreciation/depreciation over time.

However, it is important to consider the locational aspects of this program. As the Housing and Location Choice Survey revealed, 'access difficulties appear related to lifestyle stage, exacerbated by location and means of transport used to access services' (National Housing Strategy No11 1992:xiv). As Keystart recipients are generally young couples - with children (60%) and without children (12%), the issues of location may not be obvious unless negative equity sets in. When children get older and other work-related changes occur, however, location may become a more pressing issue, as employment opportunities are not evenly spread around the metropolitan area (data provided by the Department of Planning and Infrastructure).

To some extent this complexity can be considered through indexing and weighting systems. While there can be no claims of a fully inclusive or definitive evaluative system, the relative importance of the various indicators of locational advantages and disadvantages can be weighted to reflect their particular significance for home purchasers (eg trends in property values over time can be attributed particular importance).

3.3 Rent Assistance

In terms of housing affordability, it has been recognised since the early 1990s that Australian social security recipients receiving rent assistance are significantly worse off than those living in public rental housing (Industry Commission 1993). As Wulff and Evans (1999:101) argue, this finding has a growing significance given that 'eligible households requiring housing assistance are now more likely to be renting from a private landlord rather than a State Housing Authority'.

The shift from public sector rental housing to subsidised private rental housing has received critical reviews on several fronts (see Harloe 1993; Badcock 1999). In this study, the metropolitan spatial distribution of rent assistance (CRA) is assessed in relation to locational advantages and disadvantages. Importantly, in conducting this assessment the implications of current property investment trends will be considered in speculating on how these distributions may change over time.

Nationally, the static supply of public rental housing has been overwhelmed by the rapid increase in the number of people needing assistance. In Western Australia the sale of former public housing, together with lower production rates has resulted in significant declines in rental stock together with longer waiting lists (Homeswest, 2001). As a consequence of these National and State level policies Australia together

with the USA have the smallest social housing sector among the OECD group of countries (Badcock 1999:81). The excess demand is accommodated by the private rental sector, with corresponding impacts in respect to both affordability and housing quality (Wulff & Evans 1999).

Given this context it is hardly surprising that the cost of financing rental housing assistance has soared from some $907 million in 1991/2 to more than $1.6 billion in 1997/8 though this also included a rate increase. The rationale for the policy shift is that it costs significantly more to house a public tenant than to provide an income supplement to offset higher private market rents. In 1993 the figures were around $4,000/year to house a public tenant, compared to $1,600 for CRA (Industry Commission 1993). While criticism in respect to the longer term implications of this policy shift have been articulated on several fronts, the trends are still unfolding and there is no definitive understanding of the implications.

Although several studies pose the question, the work by Wulff and Evans (1999) is one of the few that has examined the spatial dimension. Focusing on Melbourne, Wulff and Evans showed that the distribution of rent assistance was much more dispersed than other programs. They also demonstrated that the distribution of rent assistance is aligned with different social security programs: those receiving unemployment benefits are clustered in the inner and middle suburbs, while those receiving family income supplements tend to be concentrated in the middle and outer suburbs. These patterns reflect a combination of factors related to housing structure and household composition. For example, younger unemployed singles tend to live in flats or shared housing in inner urban areas, while households with dependent children tend to live in larger houses located further from the CBD.

Similar results can be anticipated for metropolitan Perth (ABS Social Atlas 1997; Alexander & Greive 1998). By mapping the data that has been provided by the Commonwealth Department of Family and Community Services, this study has the capacity to confirm the current distributional patterns of rent assistance in Metropolitan Perth and to see what they mean in terms of amenity.

On the surface, the prospect of a broad distribution is aligned with the progressive ideals that have accompanied the rent assistance policy thrust. However, there are several important socio-economic and property development trends that need to be considered for a fuller appreciation of how these distributional trends are likely to evolve over time.

By integrating the distribution of different forms of rent assistance with an assessment of locational advantages and disadvantages, the study provides a suitable base-line for examining changes over time. As Winter and Stone (1999:68) point out, ‘longitudinal analysis is needed to accurately map the extent to which housing markets are or are not becoming more polarised’. Processes such as gentrification, which displace affordable housing opportunities in many high amenity inner-city areas could also be monitored using such a format.

4 METHODOLOGY

4.1 Approach

The concept of locational advantage and disadvantage has been used in a variety of ways to consider the notion of spatial inequity as it relates to housing and life chances. A common understanding is that a person's real standard of living is closely related to where he or she lives (Fincher & Nieuwenhuysen, 1998). Beyond the physical determinism that equates disadvantage with distance, more contemporary interpretations recognise a much more complex interrelationship between people and place (O'Connor, 1999). In this part of the discussion, some of the pitfalls and potentials of the concept are considered in relation to the development of a suitably informed methodological approach.

4.2 Local Grounding

In respect to socio-economic restructuring, broad demographic shifts and trends in housing market analysis, much of the national housing research agenda has demonstrated its relevance for the Western Australian context. However, while the national dialogue on the concept of locational advantage and disadvantage has generally been instructive, there have been several prominent nationally applied research initiatives that have not. This may be because of some unusual Western Australian characteristic or, more likely, may stem from the inherent difficulty in attempting to analyse local dynamics from a national level.

Specifically, both the Local Area Research Studies (LARS) project and *Community Opportunity and Vulnerability in Australian Cities and Towns* (Baum et al 1999) generated results that were at odds with the local Western Australian experience. While both studies did acknowledge these limitations and were explicitly oriented to the national policy dialogue, their results were hard to apply for the local housing policy and research community.

These studies illustrated the need for local ground-truthing of national, top-down studies into locational advantage and disadvantage. For example, the Shire of Gingin was profiled as a 'vulnerable peri-urban extractive-industry-based cluster' because of three main factors: increasing youth unemployment; low level of household earnings; and a high proportion of owner-occupiers purchasing their homes (Baum et al 1999:56). Interpreted from afar, these trends suggest that 'Gingin has above average numbers facing household financial stress'.

With more local (quantitative or qualitative) information, the same few statistical criteria can be interpreted to produce quite different results. Locals would recognise that Gingin is less a peri-urban extension of metropolitan Perth than an agriculturally-based town which has recently been the focus of lifestyle led development. From this perspective, the youth unemployment scenario would be on par with rural rather than metropolitan unemployment norms and, in particular, many of those buying their homes on low incomes would be recognised as early retirees buying their second or third homes, perhaps with considerable savings in the bank**.** Baum et al (1999:iv) acknowledge this need for local ground-truthing in cautioning their readers in interpreting their results based on statistical averages.

To reduce the extent to which the study's conclusions are drawn from data analysis conducted nationally, the output from this research project were grounded by local housing assisted household post-occupancy surveys and similar evaluations. While beyond the scope of this project, observations and opinions from future fieldwork would provide verification, clarification and facilitate further refinements to the

modelling process. In particular, a follow-up study incorporating more qualitative approaches to research to indicate why some people choose certain locations would add significant value to this project. In this manner, this study is positioned to provide an important 'middle' level contribution to the dialogue on locational advantage and disadvantage.

Locally oriented research initiatives in other States have yielded important findings that were used to inform this study. In particular, the Housing and Location Choice Survey (HALCS) surveyed 8,500 households in Melbourne and Sydney regarding their access to services and amenities (Burgess & Skeltys, 1992). A similar study was conducted among the residents of Adelaide (Stevens et al 1996).

The findings of these studies were informative for this project. Specifically, respondents' views regarding the importance of services and amenities were important in the selection and weighting of services and amenities for analysis of the locational advantages and disadvantages of various areas. These amenities and the weighting system used to assess them are discussed in Section 5.4.

4.3 Scale

Both the Local Area Research Studies (LARS) project and the study by Baum et al (1999) were based on nationally applied modelling of census data. Importantly, both studies used Local Government Areas (LGAs, or the equivalent census-derived Statistical Local Areas (SLAs)) as the areal unit of analysis. While this scale of inquiry may be appropriate in other cities, the large size of LGAs in Perth means that an analysis at this level tends to 'smooth out' the extremes of advantage and disadvantage that these studies seek to reveal.

In reviewing the LARS project, Maher (1999) highlighted several problems associated with top-down methodological approaches. He drew attention to the prospect of pockets of acute poverty in LGAs exhibiting generally low socio-economic characteristics. He also recognised the need for longitudinal analysis in respect to determining whether a community was improving or in decline and for more refined comparative analysis between different areas. Baum et al (1999) addressed most of these concerns, acknowledging that it was still compromised by its top-down national perspective.

The LARS project included the Shire of Swan and the Shire of Tennant Creek. Researchers familiar with Tennant Creek make the point that the difference between European and Indigenous populations is so great in terms of access to amenities and services that it makes no sense to consider the town as one community. Similarly, the LARS project results in respect to the Shire of Swan were not helpful for local policy makers. On the ground, the amenity-rich townsites of Guildford and Midland in the south-west corner of the Shire are simply not comparable to the Ellenbrook estate, 20 Km away on the north-eastern fringe.

Contrary to the view that LGAs 'might be seen as something akin to a local community' (Baum et al 1999:15), this study seeks to demonstrate that locational advantages and disadvantages are expressed at a more detailed level than the LGA. This is done by examining the diversity of amenity rankings assigned to each of the constituent suburbs within the different LGAs in metropolitan Perth. A high degree of diversity within LGAs would indicate the need to reconsider how Census-based longitudinal studies can be better developed to accommodate a finer grained level of analysis. In this light, this study may be viewed as a locally oriented response to the national perspective, in terms of both the anticipated findings and the methodological approach.

4.4 Data collection: Programme Distribution and Demographics

Given that certain amenities are important to some people and yet unimportant to others, a list of key demographic groups with particular needs was determined to allow weighting of the various amenities available in each locality. The demographic groups of particular interest for this study were:

- People with disabilities;
- Seniors; and
- Families (particularly sole parent and those with young children).

These groups were identified with various staff at the Ministry of Housing. While it is arguable that indigenous people also have particular needs, these households were not studied as data identifying them could not be obtained. The way in which children were considered was also shaped by data availability: while studies such as the NHS have suggested that 10 years is a critical age, it was only possible to count children as either over or under 13.

4.4.1 Public housing

Data was obtained from the Department of Housing and Works for tenants in public housing as at December 31, 2000. This data included the suburb in which the household was located and the number of residents in each household. For each resident, their age, sex, date of birth, details of any disabilities (intellectual, physical, psychological, sensory or other), and their relationship to other members of the household was also included.

4.4.2 Keystart

Data was obtained from the Department of Housing and Works for households purchasing homes under the Keystart scheme as at January 1, 2001, i.e. it does include those who have used a Keystart loan and then transferred to other loan schemes. Thus 'Keystart' means those who have accessed a Keystart loan since 1989. It is not therefore a snapshot of current Keystart holders but those who have accessed the system. This ensures that the study is focussed on those in the community who have been in some kind of comparative housing stress and where they have located using this scheme. The data gave only the suburb in which each household was located.

As only limited demographic information was available for individual Keystart households, a general profile of the programme was provided by the Department of Housing and Works. This was based on a survey of a random sample of over 600 Keystart households conducted in October 1999[1], and indicated that households purchasing homes through Keystart tend to be fairly similar. This is supported by discussions with Keystart staff. Income requirements and the time required to repay the loan means that there are virtually no people over 65. Income requirements mean that unemployed or sole parent households are more likely to purchase a home through a shared equity program such as Goodstart, and people with disabilities are more likely to apply under the more targeted Access loan scheme. It was not possible to analyse Keystart households within target groups, Keystart is therefore considered both as a programme and a target group itself.

[1] Demographic characteristics of Keystart households were discussed with Gerry Costigan, Keystart, on a number of occasions during the study. See Appendix 2 for details of the profile.

4.4.3 Rent Assistance

Data for Rent Assistance recipients was obtained from the Department of Family and Community Services as at January 1, 2000. This data included the location and number of residents for each household and, for each member, their date of birth, whether they have a disability and their relationship to other members of the household.

4.4.4 Formatting for Analysis

Each data set was initially corrected for spelling mistakes associated with suburb names and inconsistencies between suburb names and postcodes. The total number of households in each suburb was then counted for each programme.

For Rent Assistance recipients and public housing tenants, the number of particular household types (based on the three target groups described earlier) were then counted separately. This count covered the following household types:

- Disabled Households: households with at least one member with a disability
- Aged Households: households with at least one member aged 65 or over
- Households with Young Children: households with at least one child aged under 13, and more than one adult.
- Sole Parent Households with Young Children: sole parent households with at least one child aged under 13
- Households with Teenage Children: households with at least one child aged between 13 and 17, no younger children, and more than one adult
- Sole Parent Households with Teenage Children: sole parent households with at least one child aged between 13 and 17, and no younger children

These categories were developed to give a basic picture of the distribution of the target groups identified. While many more combinations could be counted, more complex analysis was beyond the scope of this study. This means that some households have been counted in more than one target group as is the reality in many households; the categories are still real.

For households with children, double-counting was avoided by prioritising by age. Households with young children were identified in as having similar, but more acute needs to those with teenage children, so the youngest child was used to determine in which group a household should be counted in. No distinction was made between households with both young and teenage children and those with only young children.

The approach uses a scoring system to measure amenity (see below). As it was not possible to prioritise between the needs of families, people with disabilities and seniors, double-counting was addressed though the use of average scores as a basis for analysis. Total scores were divided by the number of scores (rather than the actual number of households in a particular program) to give an average score for the suburb.

For Keystart households, detailed counting to distinguish between different target groups was not possible. As discussed in 4.2, however, Keystart households are generally similar in terms of demographics, so the inability to perform more detailed household categorisation was not considered a significant issue for this study.

4.5 Data Collection: Suburb Amenity

Based on the findings of studies such as HALCS, discussions with WA's housing providers and data availability, a list of amenities was determined to enable a comparison of locational advantages and disadvantages between suburbs for housing assistance recipients. These amenities are schools, tertiary education/training, shops, health facilities, public transport, public open space, sports facilities, entertainment/cultural facilities, community facilities, employment, distance from the Perth central business district, crime rates and growth in property values. The Perth central business district was noted as a useful facility in itself, particularly in terms of the higher specialised functions of commerce and government which in general are found in the CBD and which would not be included in general factors listing numbers of jobs or shops.. . A system of scores was developed for each type of amenity, the scores were then weighted differently for each target group.

4.5.1 Schools

A list of all schools in Western Australia as at January 1, 2000 was provided by the Education Department. As some schools are located in a different suburb to the one in their name (Applecross Senior High School, for example, is actually located in Ardross), this list was cross-checked against *Streetsmart 2001* to determine the actual locations of all schools.

Pre-primary, primary, secondary, private and 'other' schools were all counted separately. Two points were allocated for each different type of school in a suburb (with the exception of private schools which were allocated one point), and one point was given for each additional school of a particular type. For example, if a suburb had two pre-primary schools, one private school and one high school it would get a score of 6 (3 + 1 + 2).

Data from the Education Department published in *The West Australian* on percentage of potential graduates from school and percentage of students enrolled in 4 or more Tertiary Entrance Examination subjects was used to divide the schools into three categories of academic performance. If a suburb had a high school in the best-performing third (i.e. a high proportion of students intending to graduate, and a high proportion of students take four or more TEE subjects) it would be allocated 2 points, if it had one in the bottom third it would lose a point. If the high school fell into the middle category, no points were given. (So if the high school in the above example was in the top category the score would be 8, if it was in the middle category the score would stay at 6, and if it was in the bottom category the score would be 5.)

4.5.2 Tertiary education

TAFE and University campuses were identified using *Streetsmart 2001*. One point was allocated for the presence of each in a suburb.

4.5.3 Shops

The only comprehensive surveys of land use in Perth are the Commercial and Industrial Land Use Surveys conducted by the Ministry for Planning (now the Department for Planning and Infrastructure). The most recent of these were conducted in 1997 and 1998. Detailed information was provided by the Ministry for Planning from these, giving the name, floor area, land use code and suburb of all establishments on land zoned for commercial or industrial use in the Perth Metropolitan Area.

Checks through this data have shown it to contain numerous inaccuracies and inconsistencies, however, so initial plans to determine the amount and variety of shopping in each suburb using this data were not followed through. Instead, the total floor space in each suburb was counted, along with the number of basic food stores per suburb (defined as shops selling milk). One point was given for basic food stores, with the exception of service stations which were allocated half a point each. Floor space was counted in hectares.

4.5.4 Crime

Statistics on crime in Western Australia are compiled and published by the Crime Research Centre at the University of WA, based on crimes reported to the police (Ferrante,A. Fernandez, J and Loh,N 1999). Statistics on the total number of offences per 1000 people and the number of offences against the person (that is, violent crimes) per 1000 people were used together to give a measure of safety for suburbs in the Perth Metropolitan Area[2]. (For each measure, suburbs were allocated between 1 and 5 points, depending on the number of crimes relative to other suburbs, and the average of the two scores was used.)

This data was not available for all suburbs in Perth. Those suburbs for which data was not available are the newest, generally at the outskirts of the metropolitan area. This was a matter of concern, particularly for the analysis of the Keystart program where many households are located in these new areas. This limitation was unable to be avoided and should be addressed in future studies though crime is not a major factor in housing choice and the findings are consistent with it being a minor component of amenity.

4.5.5 Health facilities

Locations of hospitals and child health centres were determined using *Streetsmart 2001*. For hospitals, those with emergency facilities were counted separately, as were private hospitals (with and without emergency facilities). A list of all medical practitioners registered in WA as at April 1, 2001 was provided by the Medical Board of Western Australia. It should be noted that registration addresses do not always match the address of the doctor's practice, however discussion with the Medical Board indicated that this provides a fairly accurate approximation of the spread of General Practitioners[3]. One point was allocated for each medical facility located in a suburb, and half a point for each doctor registered in a suburb.

4.5.6 Public open space

Areas of public open space were identified using *Streetsmart 2001*. As there is considerable variation in the quality of parks around Perth, only significant public open spaces were included in this count (such as beaches, river foreshore, lakes and major bushland reserves and ovals/ playing fields). One point was allocated for each 'significant' area of public open space located in a suburb. It should be noted that this provides a crude indication of proximity to significant public open spaces, accessibility, useability and safety of significant open spaces were not undertaken and small public open space omitted due to the limitations of this study.

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[2] It should be noted that only reported crimes are included in these figures, and that the number of crimes occurring in a suburb does not necessarily indicate safety levels for residents of that suburb (the location of the offence rather than the address of the perpetrator or the victim of the crime is used – an area with a high level of crime by this measure may actually be quite safe for its residents).

[3] Personal communication with Anthea McGrath, Medical Board of WA.

4.5.7 Sports facilities

Swimming pools, bowling/croquet clubs, golf courses, ovals, squash/tennis courts, rowing/sailing clubs and basketball/netball courts were identified using *Streetsmart 2001*. Two points were allocated for each different facility located in a suburb, and one point for each additional facility of a particular type. Private clubs were allocated half a point.

4.5.8 Entertainment/ cultural facilities

Sports stadiums and cinemas/theatres were identified using *Streetsmart 2001*, restaurants/cafes/hotels were identified through Commercial and Industrial Land Use Surveys (see 5.5.3), and museums/art galleries were identified using a local guide 'Gallery Circuit'. Two points were allocated for the first instance of each facility in a suburb, and one point thereafter.

4.5.9 Community facilities

Libraries, family centres, child care and community centres were identified using *Streetsmart 2001*. One point was allocated for each facility located in a suburb.

4.5.10 Employment

The number of people employed in each suburb was provided by the Department for Planning and Infrastructure. Unlike census data, which gives the number of people living in a suburb who are employed, regardless of where their jobs are located, this measures the number of people whose place of employment is located in that suburb. This was derived from destinations of journeys to work recorded in the 1996 census, and cross-checked with various surveys. The data gives a breakdown of employment sectors, but does not distinguish between full time and other types of employment. The total number of jobs located in each suburb was used for this study.

4.5.11 Public Transport

Using a map of routes and service frequencies provided by the Department of Transport (now the Department for Planning and Infrastructure), services available in each suburb were counted to allow comparison of the level of service. Points were allocated for each facility present in a suburb (as shown below) to give a relative transit score for each suburb.

Services available		**Points**
Train	Interchange with bus	10
	Interchange one suburb away	8
	Station	9
	Station one suburb away	7
Bus	Station	8
	Station one suburb away	6
	High frequency route	8
	Medium frequency route	6
	Low frequency route	4
Ferry	Terminal	5
	Terminal one suburb away	3

As public transport services are highly dependent on the quality of the local road network, measuring the availability of public transport services in this manner also gives an indication of access to major roads, such as freeways.

4.5.12 Property values

Data was obtained from the Real Estate Institute of Western Australia giving the median house price and the percentage change in house price over the past 5 years for each suburb for the December quarter, 1999, the period covering most of the other data.

While desirable, lack of data regarding newer suburbs meant that longer term changes in property values were not included in this analysis. Limiting the analysis to 5 year change and current values meant that data was available for the majority of suburbs. However, for some very new suburbs, generally located on the outskirts of the metropolitan area, even this data was not available. This was a matter of concern, particularly for the analysis of the Keystart program where many households are located in these new areas, and where changes in property values have a major impact on the success of the program. As with the analysis of crime statistics, however, this could not be avoided in this study, but should be considered in future work.

4.6 Analysis

4.6.1 Formatting for analysis

To avoid distortions resulting from size differences between suburbs (for example, two shops in a small suburb may offer a reasonable level of service, while this number in a large suburb may mean that access is difficult for many residents), scores were divided by the area of the suburb. The exceptions to this were property values, where distribution is not an issue, and crime, where land area was already built into the data used.

Scores for individual amenities were scaled so that in all cases the highest and lowest scores were always the same.

4.6.2 Weighting of Suburb Amenities

The importance of each amenity for each household type was determined through the literature review and common sense. The findings of the HALCS study (as set out in 5.5) were particularly instructive. From this, weighting factors were developed for each household type, with which the amenity score (0 to 5) was scaled by a particular factor (0 to 3) to indicate its importance to that particular household. Key weightings were:

- Schools were scaled by 3 (high importance) for households with children, and by 0 (unimportant) for other households;
- Employment and higher education were scaled by 3 for households with no special needs (which generally indicates low income or unemployment), and by 0 for people over 65;
- Growth in real estate value was scaled by 5 for Keystart households (as capital growth is seen as the major benefit of the scheme) and 1 for other households (while capital growth is not important to renters, it does however provide some indication of the suburb's desirability);
- Although proximity to shopping is important for all households, concerns about the reliability of available data meant that the factor used for shops was 2 for all households.

A complete list of weighting factors used is shown in Table 1 below.

In computing the combined variable, the totals of the weighting factors were scaled so that for each household type, the highest and lowest possible scores were the same.

Table 1: Suburb amenity weightings

These numbers indicate the amount by which the score for each facility will be multiplied to tailor it to a particular households needs.

	Facility													
Household Type includes:	Employment	Distance from CBD	Transport	Open Space	Sports	Entertainment	Community	Schools	Higher Education	Crime	Shops	Health	RE Growth	RE Value
A member over 65	0	1	3	2	1	2	1	0	0	2	2	3	1	2
A member with a disability	1	1	3	2	1	2	1	0	2	1	2	3	1	2
Sole Parent with children under 13	2	1	3	2	3	1	2	3	1	2	2	2	1	2
Couple with children under 13	2	1	3	2	3	1	2	3	1	2	2	2	1	2
Sole Parent with children 13 or over	2	1	3	2	3	2	2	3	1	1	2	2	1	2
Couple with children 13 or over	3	1	3	2	3	2	2	3	1	1	2	2	1	2
Keystart	3	1	3	2	2	2	1	1	1	1	2	1	5	2

For example:

Suburb X has a score of 2 for employment, 3 for transport, 2 for open space, 3 for sports facilities, 2 for entertainment facilities, 3 for community facilities, 4 for schools, 0 for higher education, 4 for crime, 2 for shops, 3 for health facilities, 1 for real estate growth, and 2 for property values.

For households with a member over 65, suburb X would get a score of:

2x0 + 3x3 + 2x2 + 3x1 + 2x 2 + 3x1 + 4x0 + 0x0 + 4x2 + 2x2 + 3x3 + 1x1 + 2x2

For sole parent households with young children, suburb X would get a score of:

2x2 + 3x3 + 2x2 + 3x3 + 2x 2 + 3x2 + 4x3 + 0x1 + 4x1 + 2x2 + 3x2 + 1x1 + 2x2

4.6.3 Programme Evaluation and Target Group Comparisons

Using the Australian Bureau of Statistics Census Data 2001 (ABS 2001) the total number of households within each Perth Suburb was obtained. These data were used to determine a base line of amenity, i.e. each target group in the study were compared against the Perth general population in each suburb for each amenity factor.

To evaluate the three programs against each other at a suburb level, suburb amenity (for each target group or program) was grouped in deciles on the basis of the total number of all Perth Metropolitan households including those not receiving housing assistance. This provided a base line from which to compare the programmes against each other. Without doing this it is not possible to compare the target groups. By breaking into deciles, 10 amenity groupings were created with around 10% of all Perth Metropolitan households being located within each grouping. The proportion of the total number of Perth households within each decile ranged from 9% to 11% due to the difference in the number of households within a particular amenity. **The first amenity grouping represents 10% of all Perth Metropolitan households with the lowest range of amenity scores and the tenth amenity grouping the highest range. This was done for all amenity scores for the different target groups.**

From this basis amenity groupings 1 and 2 were considered to have relatively low amenity, 3 and 4 below average, 5 and 6 average, 7 and 8 above average and 9 and 10 relatively high amenity. It is worth pointing out that whilst these grouping show relative difference that the scores in the lower amenity groupings 1-4 are closer together than in the higher groupings though the differences are still quite clear. For example, for the Sole Parent Households with Teenage Children target group, the range of amenity applied is set out in Table 2. Also notable is that in comparison to the highest possible score (19.7) average amenity for this target group was quite low (4.4-5.7)

Table 2: Sole Parent Households Amenity Grouping and Amenity Score Range.

Amenity Grouping	1	2	3	4	5	6	7	8	9	10
Min Amenity Score	0.0355	2.1123	2.6563	3.7302	4.4706	5.2006	5.7546	6.6030	7.4362	9.1547
Max Amenity Score	2.0859	2.6556	3.6914	4.4593	5.1838	5.7363	6.5925	7.4087	9.0937	19.7314

This shows that half of all Perth Metropolitan households lived in amenity scores ranging from 0.0355 to 5.1838 whilst the upper half was from 5.2006 to 19.73. The actual amenity experience in deciles 1-4 for households may be only marginally different but the difference remains observable. The range of amenity scores for each grouping is provided below in Table 3.

Table 3: Target Group Amenity Scores

		Amenity Groupings									
Target Group	**Score**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Keystart	Minimum	0.03	1.74	2.40	3.13	4.11	5.25	6.00	7.06	8.23	9.60
	Maximum	1.71	2.37	3.12	4.04	5.11	5.97	7.05	8.17	9.36	23.90
Disabled Households	Minimum	0.00	1.574	2.13	2.833	3.60	4.17	4.77	5.509	6.25	7.89
	Maximum	1.572	2.08	2.832	3.558	4.16	4.75	5.507	6.24	7.79	25.90
Aged Households	Minimum	0.05	2.24	2.98	3.87	4.66	5.35	5.95	6.88	7.82	9.608
	Maximum	2.21	2.96	3.84	4.65	5.33	5.92	6.81	7.77	9.607	28.28
Households with Young	Minimum	0.04	1.75	2.51	3.51	4.25	5.17	5.52	6.40	7.34	9.30
Children	Maximum	1.72	2.48	3.44	4.19	5.15	5.49	6.39	7.27	9.10	25.83
Sole Parent Households with	Minimum	0.03	1.75	2.51	3.51	4.25	5.17	5.52	6.40	7.34	9.30
Young Children	Maximum	1.72	2.48	3.44	4.19	5.15	5.49	6.39	7.27	9.10	25.83
Households with Teenage	Minimum	0.03	1.80	2.42	3.40	4.09	5.00	5.32	6.18	7.23	9.00
Children	Maximum	1.72	2.39	3.38	4.04	4.99	5.29	6.17	7.11	8.80	25.14
Sole Parent Households with	Maximum	0.04	2.11	2.656	3.73	4.47	5.20	5.75	6.60	7.44	9.15
Teenage Children	Maximum	2.09	2.656	3.69	4.46	5.18	5.74	6.59	7.41	9.09	19.73

(Amenity Groupings Based on Target Group Scores)

This method allowed for a more relative comparison between programs. A lower representation within low to below average amenity scores than another programme (or the general population) was considered a good outcome or better performance than the comparative programmes. Like wise a higher representation with above average to high amenity areas was also a good outcome or better performance than the comparative programmes. Without doing this it was possible to misconceive that the programs were over represented within the lower range of all amenity scores due to most scores falling within this lower range. This method has been used throughout these results including for target group profiles. All graphs showing the distribution of programme assisted households against amenity groupings include a straight blue line, which highlights the ten percent distribution of all Perth Metropolitan households within each grouping. All programmes and target groups are also represented spatially prior to discussing the distribution of housing assisted households within amenity groupings.

An average amenity score for describing amenity across the Perth Metropolitan areas was also used. The average of all target groups scores was used for this purpose.

4.6.4 Missing Data

Data for crime, employment and property values and the total number of households was not available for all suburbs. In cases where one or two of these data sets was not available for a particular suburb, these figures were excluded from the analysis. Suburbs for which all four data sets were not available or did not have the total number of Perth Households available were excluded altogether. Excluded suburbs are included in Appendix 3: Perth Suburbs Excluded from Research.

Taking an average of nearby suburbs was investigated as a way to replace these missing variables, however nearby suburbs tended to have similar gaps in information. Only the weights and values for which data was available were included, and this set of weights was scaled to match the range for the other complete data sets.

4.6.5 Scale

To test use of suburb as unit of analysis compared with the more commonly used LGA (or SLA), amenity scores were produced for both suburbs and LGAs. In this way, the level of diversity within each LGA was determined.

4.6.6 Proximity to Amenities in Other Suburbs

To take into account the benefits of amenities located in nearby suburbs, neighbouring suburbs (defined as those with at least part falling within a 1.25 kilometre radius of the suburb in question) were identified for all suburbs. The weighted scores of neighbouring suburbs were averaged, divided by two and then added to the score of the suburb in question to give a fuller picture of the amenities accessible to residents of a particular suburb.

4.6.7 Data Analysis

For each suburb, the number of housing assisted households, means, standard deviations and standard errors were calculated for each household type. This was done both for the overall composite of weighted variables (arrived at by taking the average of the weights for all categories), and for each individual variable. Statistical analyses were not performed for this study, as it was assumed that dealing with populations of such large sizes would make all results significant. This assumption was confirmed by the small size of the standard errors.

4.6.8 Spatial Analysis

Using base maps provided by the Department for Planning and Infrastructure, the total number of programme assisted households in each suburb were mapped for each program.

For Public Housing and Rent Assistance, comparative maps showing distribution by suburb were produced for each of the following household types:

- Disabled Households
- Aged Households
- Households with Young Children
- Sole Parent Households with Young Children
- Households with Teenage Children
- Sole Parent Households with Teenage Children

To facilitate comparison between two quite different sample sizes, households in receipt of Rent Assistance were plotted at a larger scale than those in public rental accommodation. These maps illustrate the relative, rather than absolute, distribution of each programme.

For each household type, three maps were produced. One showed number of households in Public Housing, another the number of households in receipt of Rent Assistance, and a third the amenity rankings for each suburb. These maps illustrate the correlation (or lack of) between high amenity suburbs and the relative distribution of households in each program.

For Keystart, where no demographic breakdown was available, two maps were produced. One showed suburb amenity rankings, the other overall program distribution. When mapping Keystart to facilitate a comparison of the three programmes as a whole, Public Housing and Keystart were mapped at the same scale due to a similar number of households in each.

5 RESULTS

5.1 Amenity in Perth: the suburb as a more appropriate scale for locational advantage and disadvantage assessment

Across the Perth Metropolitan area amenity scores for suburbs ranged from 0.03 to 28.29 with an average score of 5.81 for local government areas across all targeted amenity scores. The following table shows the amenity scores for local government areas for each target group. Amenity scores for all suburbs investigated are included in Appendix 1. The highest and lowest scores for the composite suburbs in that LGA have also been given.

Figure 1: Targeted amenity scores for suburbs and Local Government Areas in the Perth Metropolitan Region

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Average, Maximum and Minimum Amenity scores for Local Government Areas

LGA	Sole Parent, Child <13			Sole Parent, Child 13+			>1 adult, Child <13			>1 adult, Child 13+			Over 65			Disability			Keystart		
	Average	Maximum	Minimum	Average	Maximum	Minimum	Average	Maximum	Minimum	Average	Maximum	Minimum	Average	Maximum	Minimum	Average	Maximum	Minimum	Average	Maximum	Minimum
Armadale	1.72	2.47	0.73	1.72	2.47	0.73	1.52	2.28	0.47	1.46	2.19	0.45	1.90	2.60	0.98	1.35	1.94	0.55	1.39	2.07	0.50
Bassendean	4.01	5.13	3.11	4.01	5.13	3.11	3.92	4.99	3.26	3.79	4.83	3.15	4.49	5.66	3.89	3.47	4.39	2.96	4.04	5.45	3.00
Bayswater	6.71	9.70	4.25	6.71	9.70	4.25	6.65	10.21	4.02	6.45	10.00	3.89	6.88	10.73	4.02	5.60	9.33	3.14	6.77	10.74	3.64
Belmont	3.41	4.99	2.60	3.41	4.99	2.60	3.46	5.09	2.59	3.36	4.94	2.52	3.84	5.59	2.63	3.10	4.60	2.16	4.33	6.54	2.90
Cambridge	7.14	9.64	4.64	7.14	9.64	4.64	6.80	9.33	4.26	6.59	9.07	4.11	7.90	10.55	5.25	6.56	8.93	4.20	8.49	10.44	6.53
Canning	5.33	8.32	2.66	5.33	8.32	2.66	5.08	8.41	2.54	4.92	8.15	2.46	5.43	8.32	2.30	4.32	7.00	1.82	5.08	7.99	2.13
Claremont	7.70	7.70	7.70	7.70	7.70	7.70	7.56	7.56	7.56	7.31	7.31	7.31	8.67	8.67	8.67	7.26	7.26	7.26	8.44	8.44	8.44
Cockburn	3.29	7.76	0.65	3.29	7.76	0.65	2.98	7.54	0.36	2.87	7.28	0.34	3.39	7.85	0.92	2.48	6.46	0.43	2.93	8.65	0.39
Cottesloe	5.54	5.54	5.54	5.54	5.54	5.54	5.17	5.17	5.17	4.99	4.99	4.99	5.67	5.67	5.67	4.34	4.34	4.34	5.94	5.94	5.94
East Fremantle	12.96	12.96	12.96	12.96	12.96	12.96	16.11	16.11	16.11	15.78	15.78	15.78	16.13	16.13	16.13	15.02	15.02	15.02	14.36	14.36	14.36
Fremantle	7.62	10.01	4.35	7.62	10.01	4.35	7.92	10.22	4.76	7.67	9.87	4.61	7.76	9.61	5.66	6.56	7.79	4.94	7.66	8.76	6.42
Gosnells	3.70	5.31	0.82	3.70	5.31	0.82	3.52	5.23	0.61	3.41	5.06	0.58	3.56	4.95	1.03	2.75	3.96	0.61	2.83	4.12	0.57
Joondalup	4.29	9.94	0.04	4.29	9.94	0.04	4.03	9.95	0.04	3.89	9.71	0.04	4.66	11.34	0.06	3.60	9.75	0.05	4.56	10.80	0.04
Kalamunda	2.56	5.75	1.34	2.56	5.75	1.34	2.20	5.54	0.85	2.12	5.35	0.82	2.83	5.64	1.75	1.96	4.48	0.91	2.33	5.74	0.85
Kwinana	2.54	4.53	0.86	2.54	4.53	0.86	2.31	4.33	0.52	2.23	4.19	0.49	2.55	4.14	1.18	1.87	3.28	0.58	1.82	3.09	0.52
Melville	7.95	10.08	5.57	7.95	10.08	5.57	7.68	10.12	5.29	7.42	9.81	5.11	7.97	10.09	5.19	6.39	8.33	4.14	7.57	9.99	4.64
Mosman Park	5.28	5.28	5.28	5.28	5.28	5.28	5.36	5.36	5.36	5.18	5.18	5.18	5.99	5.99	5.99	5.10	5.10	5.10	6.62	6.62	6.62
Mundaring	1.96	4.02	0.74	1.96	4.02	0.74	1.58	3.96	0.51	1.53	3.81	0.49	2.29	3.91	0.90	1.45	3.06	0.58	1.47	2.94	0.55
Nedlands	4.87	6.72	1.70	4.87	6.72	1.70	4.69	6.72	1.41	4.53	6.48	1.35	5.71	8.15	1.80	4.60	6.72	1.13	5.18	7.86	1.10
Peppermint Grove	5.90	5.90	5.90	5.90	5.90	5.90	5.83	5.83	5.83	5.63	5.63	5.63	6.26	6.26	6.26	5.25	5.25	5.25	6.65	6.65	6.65
Perth	14.32	19.72	1.84	14.32	19.72	1.84	17.67	25.84	1.44	17.26	25.14	1.39	18.91	28.29	2.18	17.26	25.97	1.37	16.20	23.95	1.25
Rockingham	2.43	6.87	0.15	2.43	6.87	0.15	2.30	6.98	0.15	2.22	6.78	0.14	2.61	7.05	0.21	2.06	5.94	0.17	2.38	7.71	0.16
Serpentine- Jarrahdale	1.21	1.99	0.43	1.21	1.99	0.43	0.93	1.40	0.46	0.89	1.35	0.44	1.53	2.56	0.50	0.97	1.52	0.43	1.33	1.84	0.82
South Perth	6.15	8.23	2.61	6.15	8.23	2.61	6.20	9.51	2.25	6.03	9.36	2.17	6.65	9.84	3.04	5.51	8.92	2.20	6.45	9.60	3.05
Stirling	7.14	18.76	1.94	7.14	18.76	1.94	7.12	21.81	1.62	6.89	21.26	1.56	7.42	22.34	2.14	6.14	20.09	1.47	8.11	20.87	1.51
Subiaco	7.74	15.04	1.68	7.74	15.04	1.68	8.26	18.37	1.41	8.03	17.91	1.35	9.45	20.99	1.71	8.13	18.62	1.10	8.16	17.00	1.03
Swan	2.83	4.91	0.04	2.83	4.91	0.04	2.51	4.72	0.04	2.41	4.55	0.04	3.06	4.82	0.06	2.15	3.73	0.05	2.19	4.81	0.05
Victoria Park	5.97	7.83	4.84	5.97	7.83	4.84	6.12	8.20	4.86	5.96	7.99	4.69	6.26	8.14	5.23	5.28	7.10	4.03	6.46	8.63	4.60
Vincent	16.17	19.73	9.75	16.17	19.73	9.75	18.53	22.99	9.64	18.08	22.40	9.39	19.42	23.79	10.37	17.45	21.44	8.69	17.92	21.80	10.99
Wanenroo	2.57	6.49	0.04	2.57	6.49	0.04	2.30	6.37	0.03	2.22	6.14	0.03	2.61	5.95	0.05	1.86	4.79	0.04	1.96	5.64	0.04
Perth Metro	*5.70*	*19.73*	*0.04*	*5.70*	*19.73*	*0.04*	*5.88*	*25.84*	*0.03*	*5.70*	*25.14*	*0.03*	*6.39*	*28.29*	*0.05*	*5.33*	*25.97*	*0.04*	*5.99*	*23.95*	*0.04*

all suburbs above average

all suburbs below average

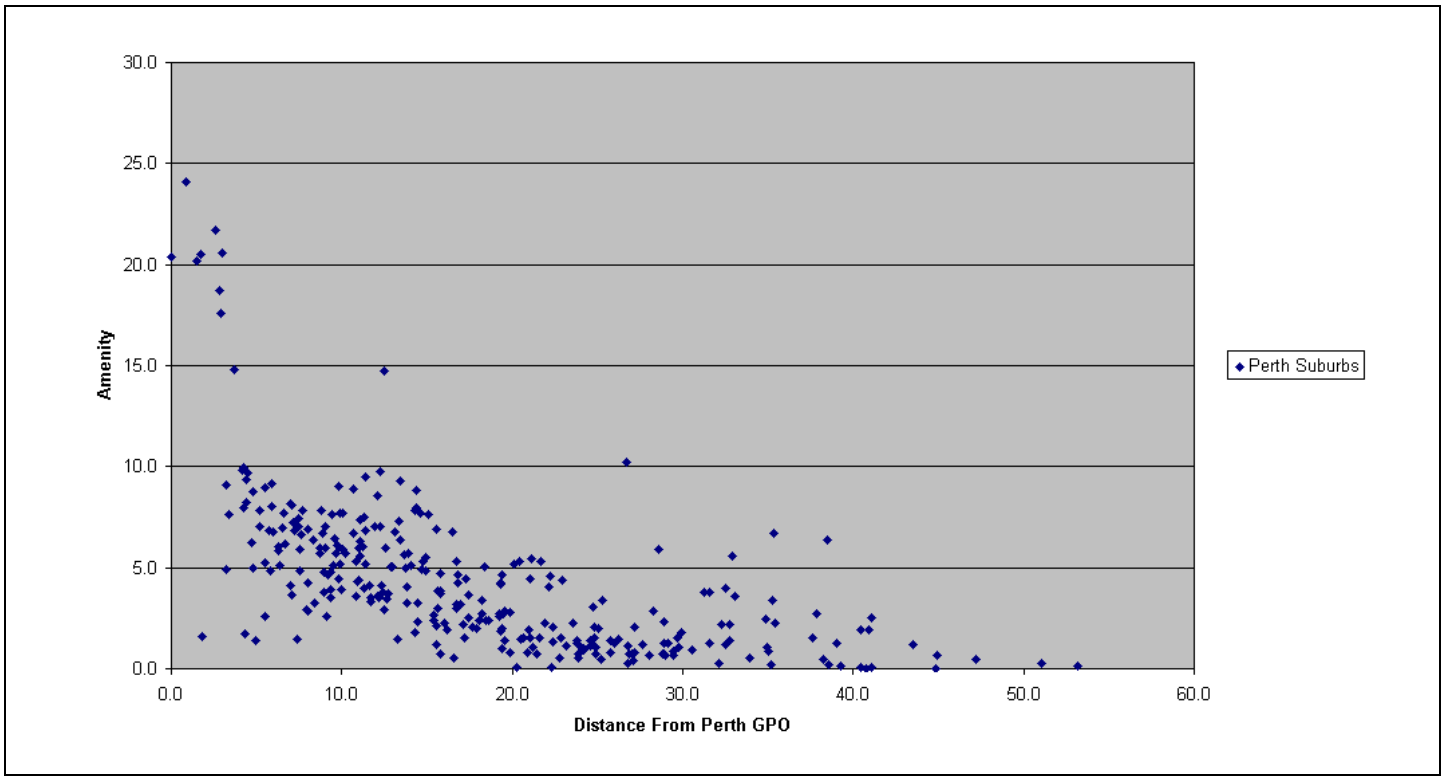
Figure 1 reveals a considerable degree of amenity diversity in the constituent suburbs within each LGA. While the extent varies between different LGAs, this is true across all of the LGAs considered. Of the 30 local government areas 17 showed variation between suburbs from below to above average suburb amenity scores across all target groups. 8 local government areas had consistent below average scores across target groups (Armadale, Bassendean, Cottesloe, Gosnells, Kwinana, Mundaring, Serpentine- Jarrahdale and Swan) and 3 above average (Vincent, East Fremantle and Claremont). For different target groups, 2 LGA's were either consistently above or

below average across suburbs (Mosman Park and Peppermint Grove). The greatest variation was experienced in the City of Perth for People with a Disability where the amenity score ranged from 1.37 to 25.97 across suburbs.

The significant variation in amenity scores across suburbs within local government areas clearly demonstrates that the suburb is a more appropriate scale than the Local Government Area for inquiries into locational disadvantage in the Perth Metropolitan Area.

The following figure indicates the relationship between amenity and distance from the Perth Central Business District. Distances were calculated from the Perth GPO in a direct line to the centre of each suburb.[4] The distance to the CBD was considered as one of the amenity factors due to the obvious access to services that are only provided there, however this cannot account for the obvious strength of the relationship between centrality and amenity in total (as shown below) as there are many other amenity factors that are included.

Figure 2: Average suburb amenity and distance from Perth GPO

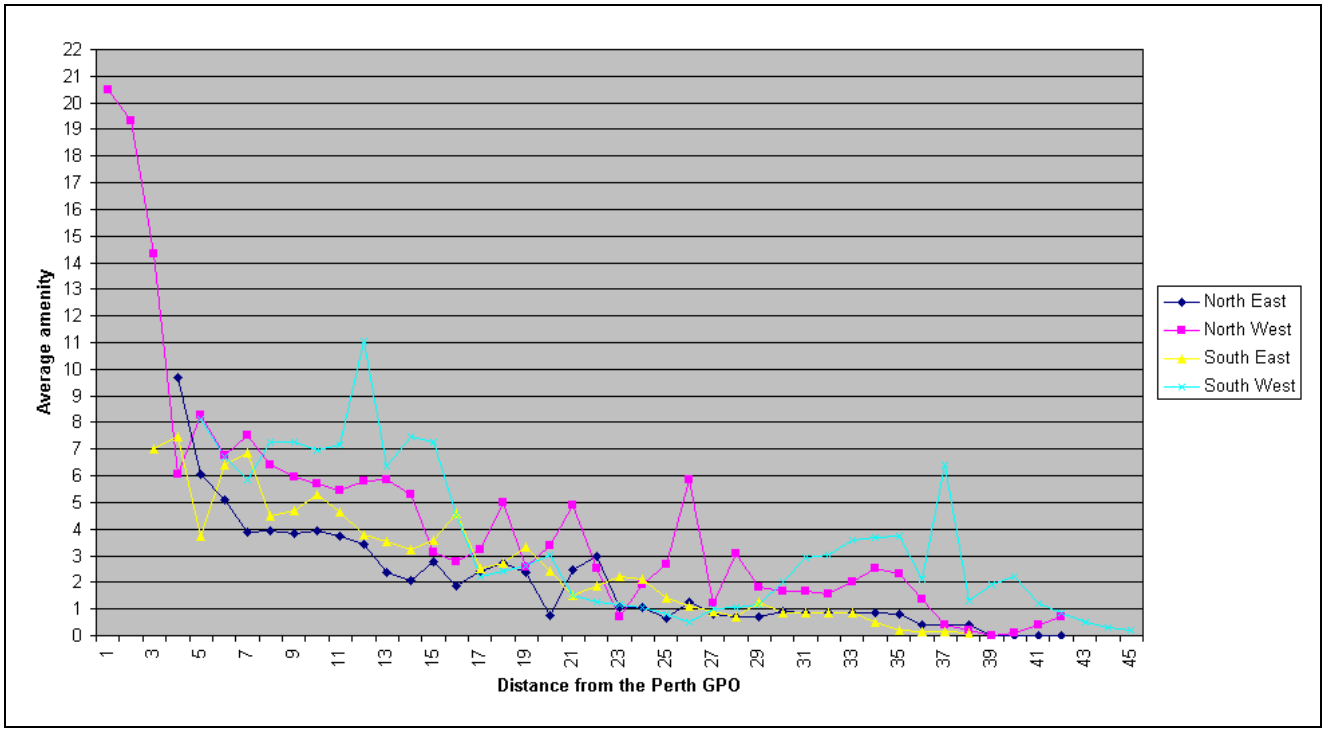


As can be seen from the above figure, there is a significant relationship between centrality and amenity. The general trend of decreased amenity the further the distance from the Perth GPO provides an overall directional message for locational aspects of social housing policy – obviously Perth is a city where most amenity values decrease the further you move away from the city centre.

[4] Suburb Distance form Perth GPO Supplied by the Research Branch, Department for Planning and Infrastructure, 1st October 2002

Whilst a relationship between distance to the CBD and amenity is very obvious, the amenity scores do vary considerably, showing that centrality alone does not determine amenity. To further illustrate this, the following figure shows the relationship between distance and amenity from the Perth GPO in the North Eastern, North Western, South Eastern and South Western Metropolitan Regions. [5] Suburb distance (from the centre) was grouped into a one kilometre range from the Perth GPO (1-1.9, 2-2.9, 3-3.9 etc), and the average amenity score (of all scores for the different target groups) was determined for suburbs within the one kilometre range.

Figure 3: The relationship between amenity and distance: North East, North West, South East and South West Corridors from the Perth General Post Office



[5] The metropolitan regions were determined using the Department of Planning and infrastructure planning sector definitions of the north-west and east and south east and west sectors and by dividing the inner and middle sectors into north west and east and south west and east groupings and combining these with the previous sectors. The City of Perth was excluded as the most central Local Government Area. The following Local Government areas were included in the regions used in this paper:

- *North West*- City of Wanneroo, City of Joondalup, City of Stirling, Town of Vincent, Town of Cambridge, City of Subiaco.
- *North East*- City of Swan, Shire of Mundaring, Shire of Kalamunda, City of Bayswater, Town of Bassendean, City of Belmont.
- *South West*- City of Nedlands, Town of Claremont, Town of Cottesloe, Shire of Peppermint Grove, Town of Mosman Park, Town of East Fremantle, City of Fremantle, City of Melville, City of Cockburn, Town of Kwinana, City of Rockingham.
- *South East*- City of South Perth, Town of Victoria Park, City of Canning, City of Gosnells, City of Armadale, Shire of Serpintine- Jarrahdale.

As can be seen, the North and South Western Regions perform considerably better than the North and South Eastern regions. This shows that there are other contributing factors to amenity scores than distance from the Perth GPO. Other locational elements such as distance from the coast and government expenditure on infrastructure and social services may also impact on the amenity of entire regions. Again considerable variation in suburb amenity against distance can be seen. These variations, at least in part, can be explained by the presence of major centres located along the four corridors. Resulting in peaks of amenity on a trend towards reduced amenity with distance from the Perth GPO. These peaks are pronounced on the western corridors but are not evident at all along the eastern corridors.

The variations in suburb amenity visible in Figure 2 and 3 further illustrates that the suburb is a more appropriate scale to determine amenity and locational outcomes than a Local Government Area or region alone. At a local Government scale these variations and patterns of variation can become obscured.

In particular there is a clear policy conclusion about the need for focussed planning attention on the provision of sub-centres in the eastern corridors. These areas have significantly lower amenity in general and are particularly disadvantaged in terms of access to concentrated places that provide services. A review of sub-centre policies is needed from these data.

5.2 Overall Programme Comparison

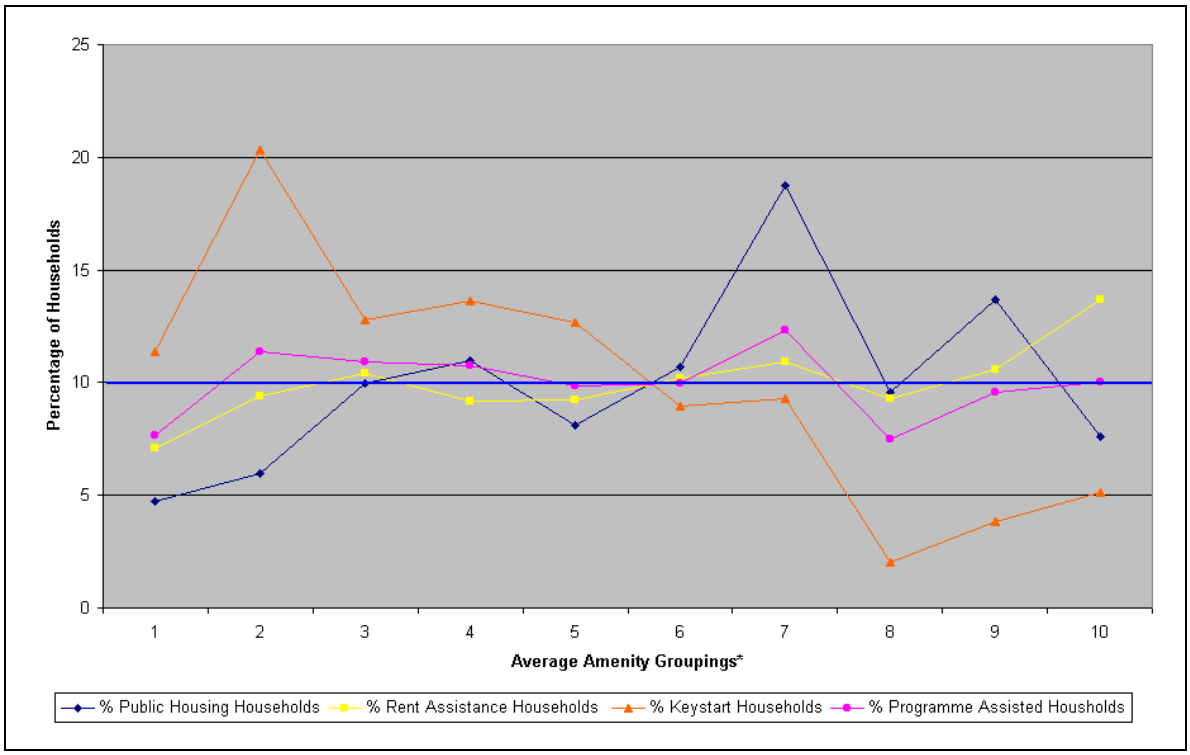
Figure 4 illustrates spatially the overall distribution of each programme, regardless of target group illustrating the relative, rather than absolute, distribution of each programme.

Figure 5 also maps the variations in the three target groups to show the spatial variations across the city. These maps indicate considerable differences in the distribution of the three programmes. Public Housing tenants are concentrated in the middle suburbs north-east and south-east of the city, with relatively high numbers also located around Fremantle and Midland. Keystart households are quite different in their distribution. These households tend to be located in Perth's outer suburbs, with concentrations at Rockingham, Kwinana and Clarkson, north of Joondalup. Significant numbers are also located in middle suburbs in the south east corridor and in the Balga/ Mirrabooka area north-east of the city.

Rent Assistance is more dispersed than the other two programmes. A greater proportion of these households are located in inner areas, around the coast and the river. Significant numbers are also spread across the outer suburbs at the fringe of the metropolitan area.

Figure 4 illustrates the average amenity score groupings for the Housing Assistance programmes and the distribution of households within these programmes. Public Housing households had a lower proportion of households within the lowest two groupings of low amenity. From groupings 3-6 (below average to average amenity) and 8 (above average amenity) they were closer to the distribution of all Perth Metropolitan households. Significantly within the 7^{th} (above average) and 9^{th} (high amenity) groupings their representation was higher than all Perth Metropolitan households.

Figure 4: Average Amenity scores for Public Housing, Keystart and Rent Assistance.



Rent Assistance remained more closely aligned with the distribution of all Perth Metropolitan households, with slightly higher representation from 2-4 (low – below average amenity) and 7 (above average amenity) and slightly lower with the remainder.

Keystart households had a higher representation from 1-5 (low to average amenity) and lower within the higher amenity groupings from 6-10 (average to high amenity).

The overall comparison between programmes reveals that Public Housing tenants are better located than households in receipt of Rent Assistance, and that both groups are significantly better located than households in the Keystart scheme.

Whilst Public Housing households and to a lesser extent Rent Assistance households have at least similar, if not better locational outcomes than that for all Perth Households, Keystart recipients have worse outcomes. Overall 4,892 Public Housing households live within low to below average amenity, 14,223 Rent Assistance households and 19,949 Keystart households.[6] In total 49 percent of programme assisted households live within areas of low to below average amenity.

It is worth noting however, that for particular target groups a lower representation in below average to low amenity areas may not necessarily mean a good outcome for the programme. For example for a disabled person living within a low amenity area in comparison to a high amenity area may mean the difference between being housebound or independent. Therefore in some cases it may be appropriate for housing assisted households to have better outcomes than the general population in terms of locational amenity.

[6] Totals include some double counting see Methodology section 5.4.4

5.2.1 Summary of Target Group Results

Keystart Households: were more likely to be located in low to below average amenity areas than the general population at 64 percent compared to 40 percent for the general population.

Disabled Households: had a lower representation than the general population within low to below average amenity areas. Public housing provided a slightly better outcome with less representation within these lower amenity areas at 30 percent compared to 36 percent for Rent Assistance.

Aged Households: Public Housing Aged households had better locational outcomes than those on Rent Assistance with less representation within low to below average amenity areas at 33 percent. Rent Assistance was much more closely aligned with the general population at 40 percent.

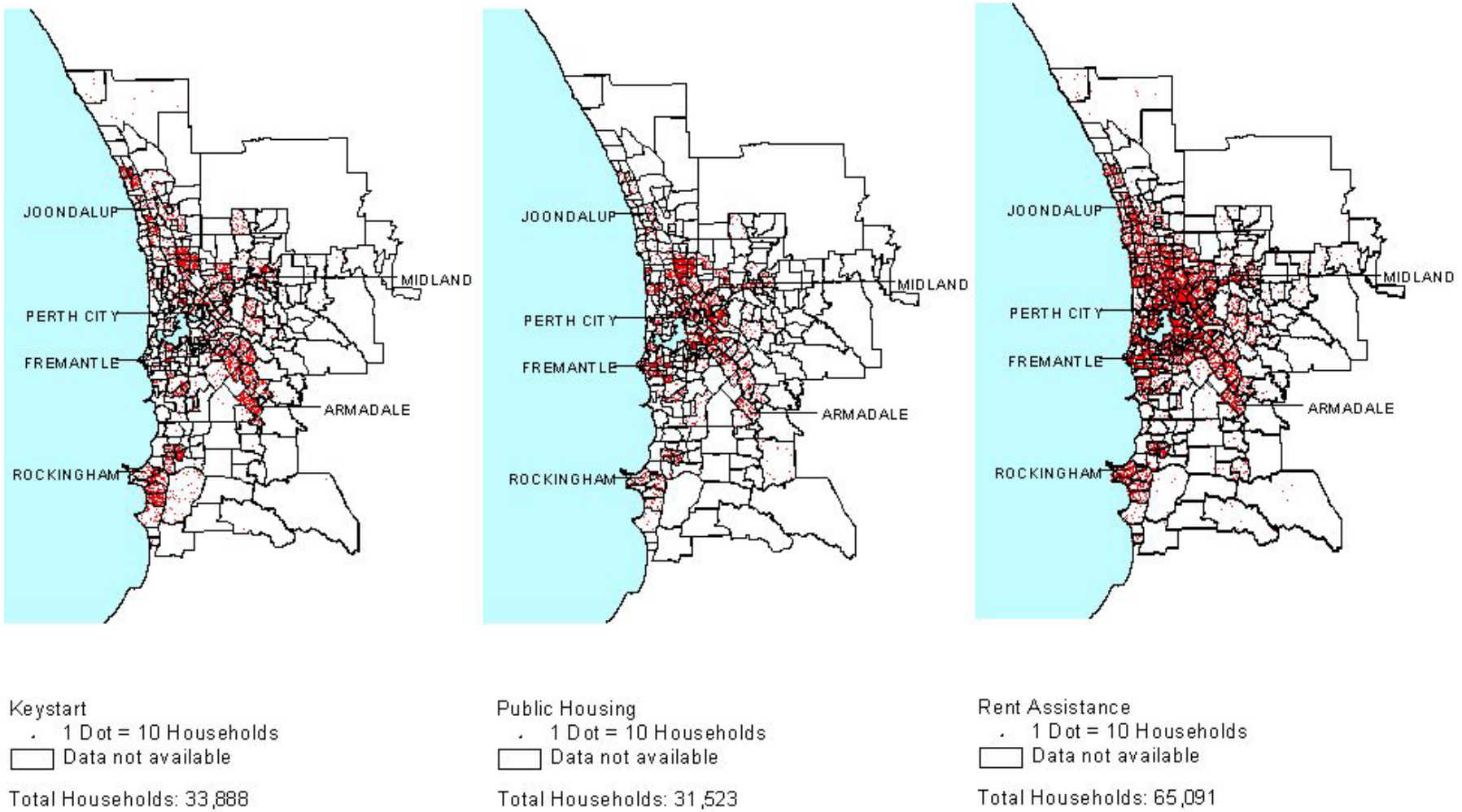
Households with Young Children: Public Housing and Rent Assistance provided similar outcomes for Households with Young Children. Within low to below average amenity areas 39 percent of Public Housing and 41 percent of Rent Assistance households with young children were located, both very similar to that of the general population at 40 percent.

Sole Parent Households with Young Children: Public Housing performed slightly better than Rent Assistance for Sole Parent Households with Young Children. Within low to below average amenity areas 38 percent of Public Housing and 44 percent of Rent Assistance households with young children were located, both very similar to that of the general population at 40 percent.

Households with Teenage Children: Public Housing and Rent Assistance provided similar outcomes for Households with Young Children. Within low to below average amenity areas 36 percent of Public Housing and 39 percent of Rent Assistance households with young children were located, both similar to that of the general population at 40 percent.

Sole Parent Households with Teenage Children: Public Housing performed slightly better than Rent Assistance for Sole Parent Households with Teenage Children. Within low to below average amenity areas 35 percent of Public Housing and 41 percent of Rent Assistance households with young children were located, both very similar to that of the general population at 40 percent.

Figure 5: Spatial Distribution of Keystart, Public Housing and Rent Assistance Programme recipients

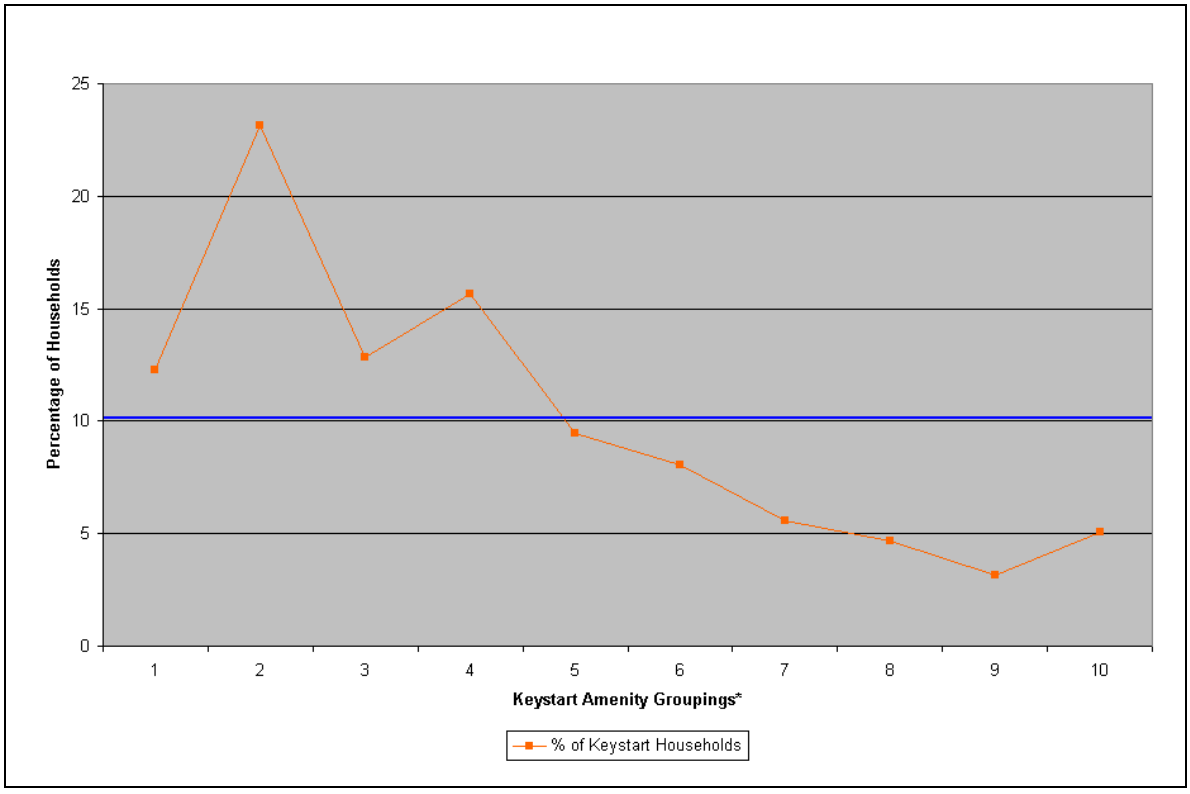


5.2.2 *Keystart*

Keystart households represent 39 percent of all housing assisted households. In total there are 31,197 Keystart households within the studied suburbs at the time of data collection. From Figure 6 it can be seen Keystart households tend to be located in Perth's outer suburbs, with concentrations at Rockingham, Kwinana and Clarkson. Significant numbers are also located in the middle suburbs around Armadale, and in the Balga/ Mirrabooka area north of Perth City. The suburbs with higher amenity scores for Keystart households are the inner and middle suburbs, particularly north of the river, and the areas around Fremantle, Joondalup and Rockingham.

These maps indicate a poor alignment between Keystart households and high amenity suburbs.With the exception of households located near Joondalup, Rockingham and in parts of the south-east corridor, Keystart households are generally located in low to average amenity suburbs. This is also represented in Figure 6, which shows that 64 percent of Keystart households live within low to below average amenity areas compared to 40 percent of all Perth households and 19 percent in above average to high amenity, again, compared to 40 percent of all Perth Households.

Figure 6: Proportion of Keystart Households by Amenity Groupings for That Group.



5.2.3 *Households with a Disability*

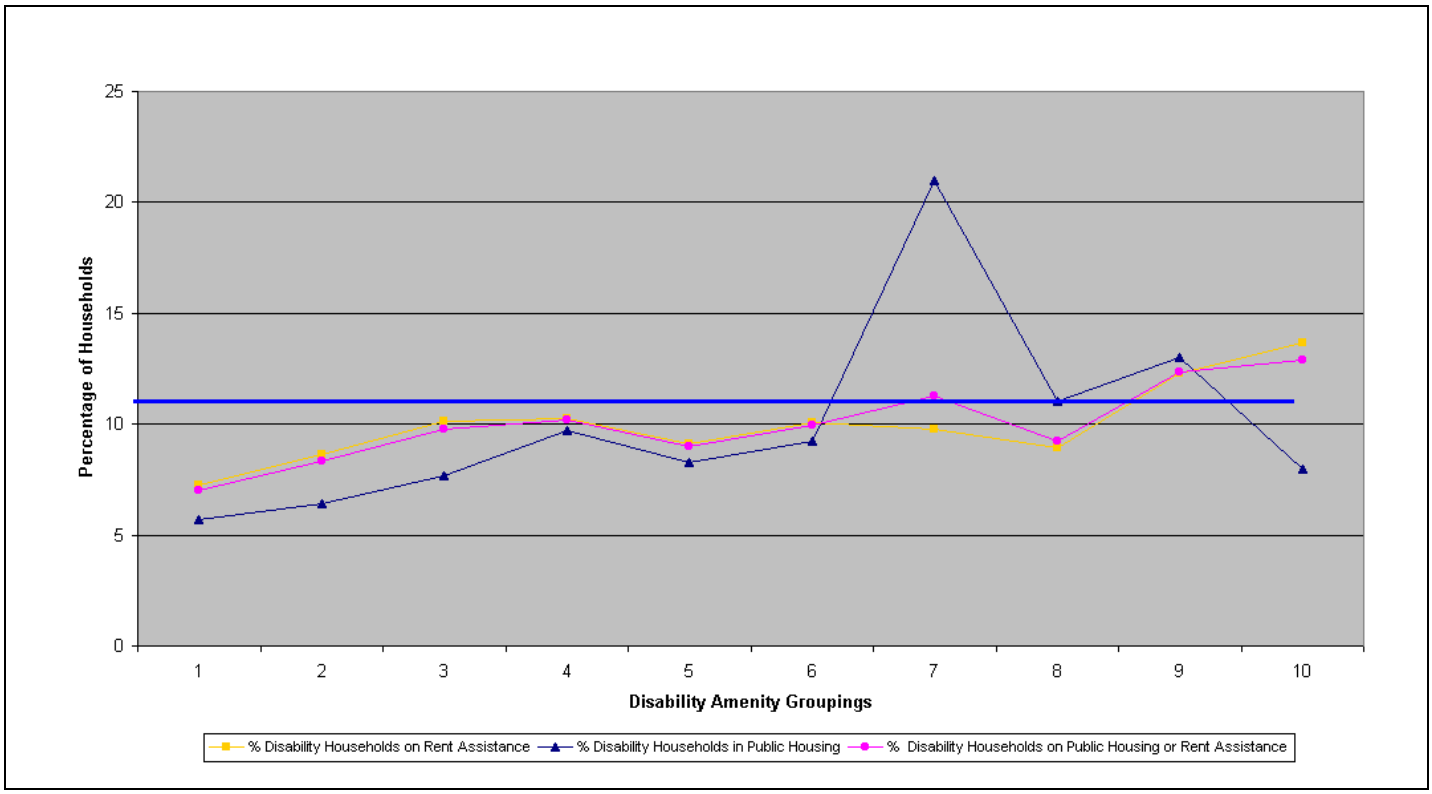
Households with a Disability represent 26 percent of all target group households in Public housing or Rent Assistance a total of 12,647 households. This group represents 12 percent of Public Housing Households (1,705) and 31 percent of Rent Assistance Households (10,942). Figure 7 maps the relative distribution of Households with a Disability within Public Housing and Rent Assistance programmes, and the distribution of suburb amenity these households.

The higher amenity suburbs for people with disabilities are inner to middle city suburbs and the northern corridor to Joondalup, which are fairly well aligned with the distribution of households in both public rental accommodation and those in receipt of Rent Assistance.

Both programmes are concentrated north of the river in inner and middle suburbs, beyond which households are grouped in the average amenity areas north-west of Armadale and around Midland, Rockingham and Kwinana. The proportion of households in receipt of Rent Assistance in the highest amenity inner city areas (amenity grouping 10) is greater than that for public tenants, but this is balanced by a greater proportion of Rent Assistance recipients in the lower amenity suburbs (amenity groupings 1-3) in outer, eastern parts of the metropolitan area.

Figure 7 shows the distribution of Households with a Disability in Public Housing and Rent Assistance across amenity groupings.

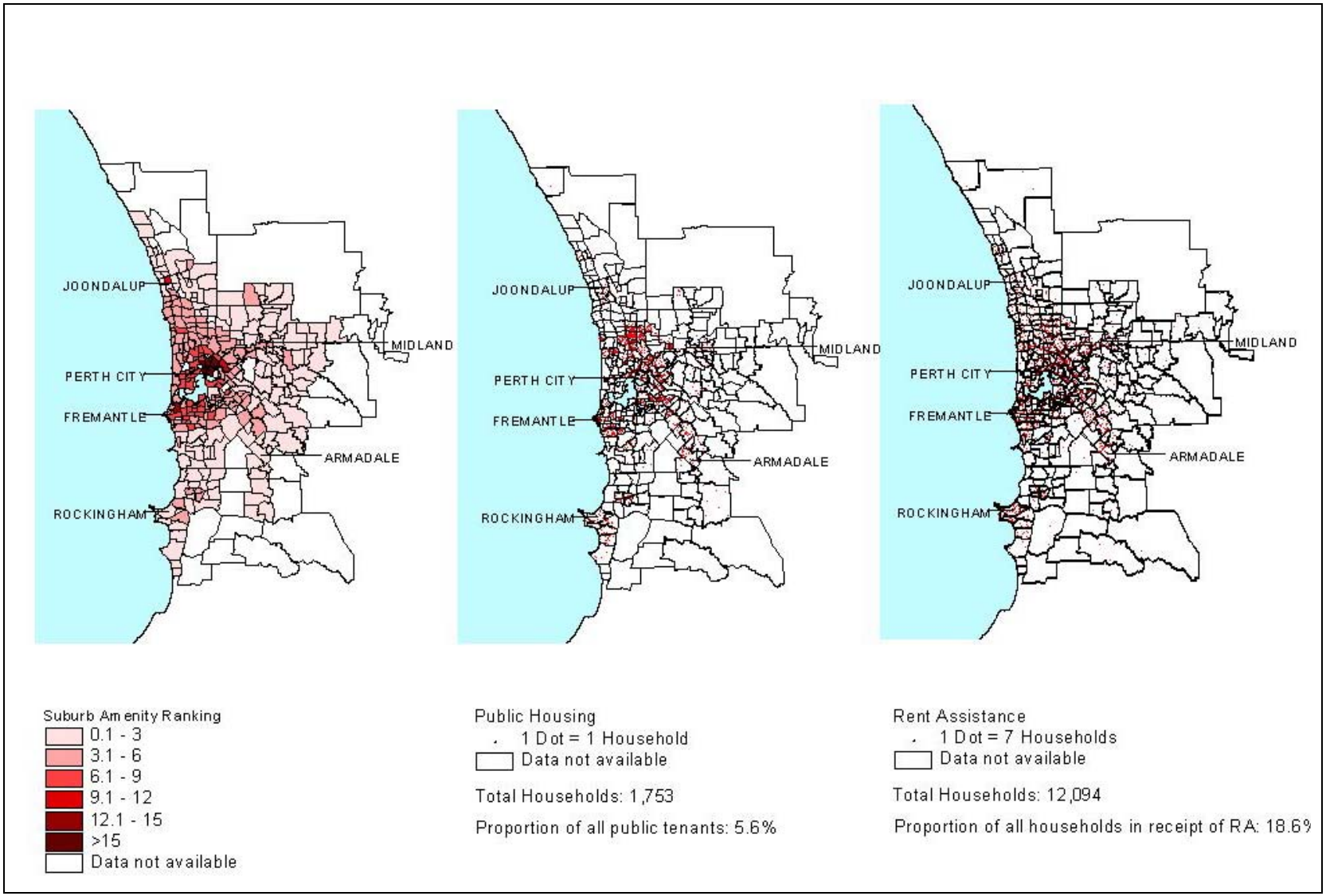
Figure 7: Proportion of Households with a Disability in Rent Assistance and Public Housing by Amenity for that Group



As can be seen from Figure 8 the proportion of households within each grouping generally increases with improved amenity. 36 percent of disability households on Rent Assistance are within low to below average amenity areas (1-4) compared to 30 percent of Public Housing. Both of which are lower than all Perth households' representation (40%). Rent Assistance households have a slightly higher representation than Public Housing households in average amenity areas (5-6) at 19 percent and 18 percent retrospectively. Within the above average to high amenity groupings (7-10) Public Housing households have a higher representation at 53 percent compared to 45 for Rent Assistance households. However in the 10th amenity grouping the proportion of Rent Assistance Households is almost double of Public Housing at 14 percent (Rent Assistance) and 8 percent (Public Housing).

Overall both programmes provide better locational outcomes than for all Perth Metropolitan Households with Public Housing overall providing slight better locational outcomes for the programme recipients than Rent Assistance. Whilst the representation across amenity groupings shows a positive outcome in comparison to all Perth Households, 3,969 Rent assistance Households and 503 Public Housing households with Disabilities are within below average to low amenity areas and may experience disadvantage as a result of this.

Figure 8: DisabilityHousehold's distribution within Public Housing, Rent Assistance and Amenity



5.2.4 Aged Households

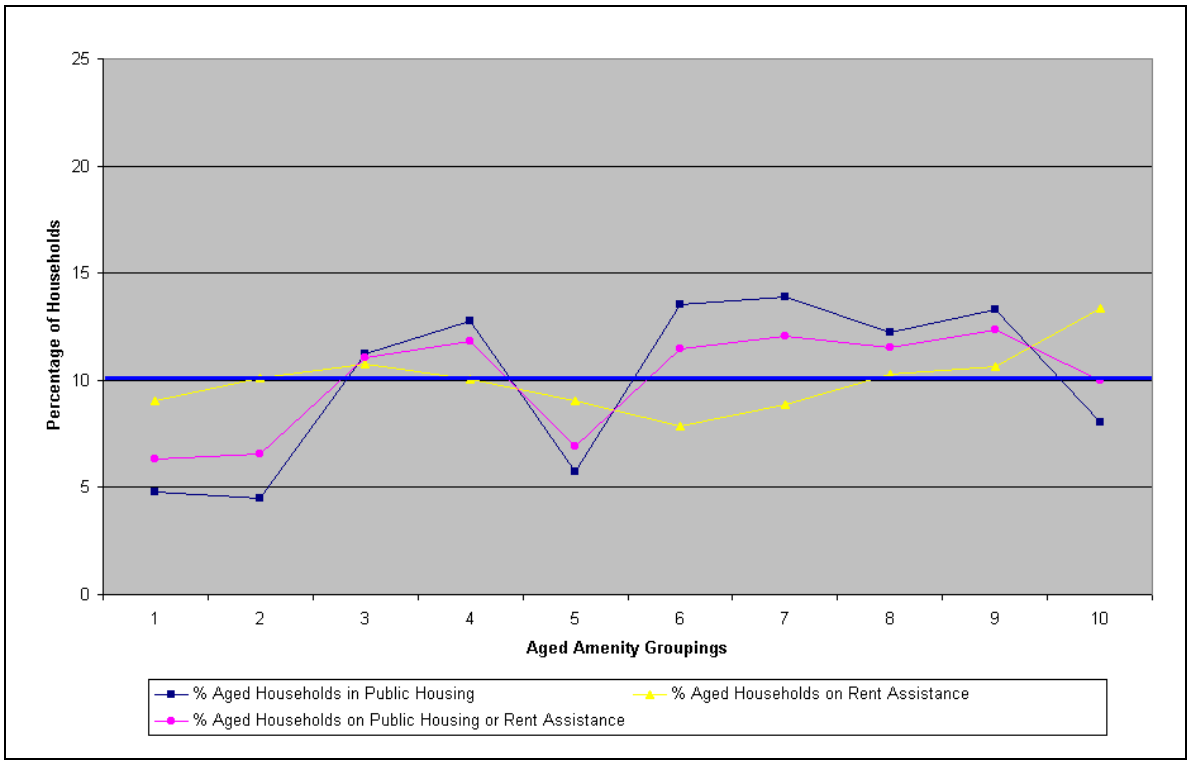
Aged Households represent 21 percent of all target group households receiving Public Housing or Rent Assistance in total there are 10440 Aged Households. This target group represents 47 percent of Public Housing Households (6,643) and 11 percent of Rent Assistance Households (3,797). Figure 10 maps the relative distribution of Aged Households in Public Housing and Rent Assistance, and the distribution of suburbs amenity for these households. The higher amenity suburbs for Aged Households are inner and middle suburbs, the northern corridor, the areas around Rockingham and, to a lesser extent, the north- and south-eastern corridors towards Midland and Armadale.

The distribution of households with members over 65 in public housing is reasonably well aligned with these higher amenity areas: the majority of these households are located in middle suburbs and, to a greater extent than for the other target groups examined in this study, in inner suburbs. Smaller groupings are also located around regional centres around Rockingham, Midland and Armadale.

The majority of Aged Households in the Rent Assistance scheme are also located in inner and middle suburbs, although a considerable proportion are located in outer suburbs.

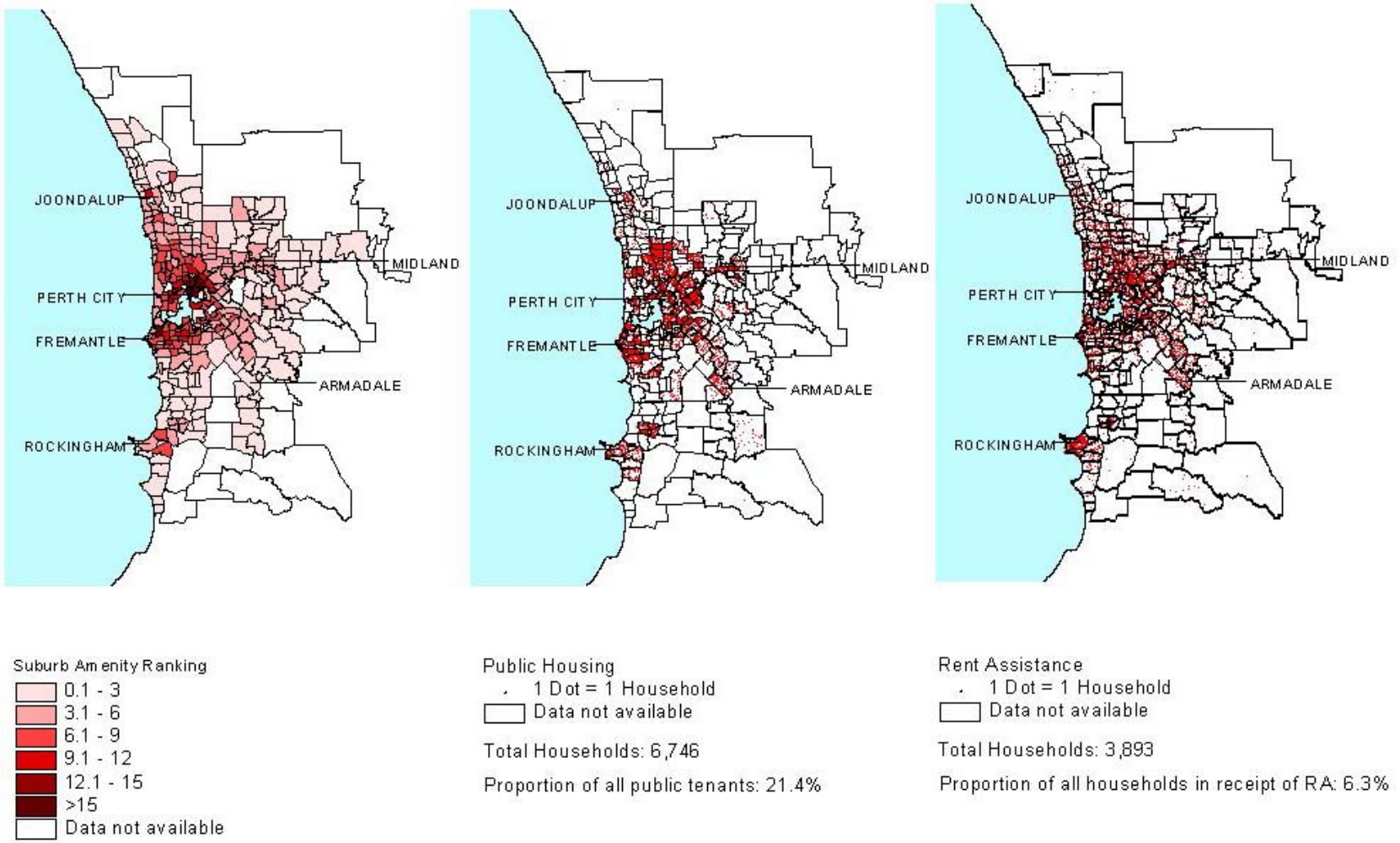
Figure 9 shows Aged Households in Public Housing and Rent Assistance and their distribution within amenity groupings.

Figure 9: Proportion of all Aged Households in Amenity Groupings for That Group



As can be seen from Figure 9, the proportion of Aged Households in Public Housing slightly increases with amenity whilst Rent Assistance is more closely aligned with the distribution of all Perth households. 33 percent of Public Housing households are within low to below average amenity areas, Rent Assistance is slightly higher at 40 percent. The higher proportion of Rent Assistance is concentrated in the low amenity areas where the proportion is almost double that of public housing at 20 percent compared to 9 percent for Public Housing. From above average amenity to high amenity the Proportion of Public Housing households is 47 percent and Rent Assistance 43 percent. Public Housing performs marginally better than Rent Assistance in terms of locational outcomes. Both programmes are only slightly better located than all Perth Households. In terms of absolute numbers, rather than distribution, 2,210 Public Housing Households and 1,518 Rent Assistance households in the Aged category are located in low to below average amenity areas.

Figure 10: Aged Household distribution in Rent Assistance, Public Housing and Amenity



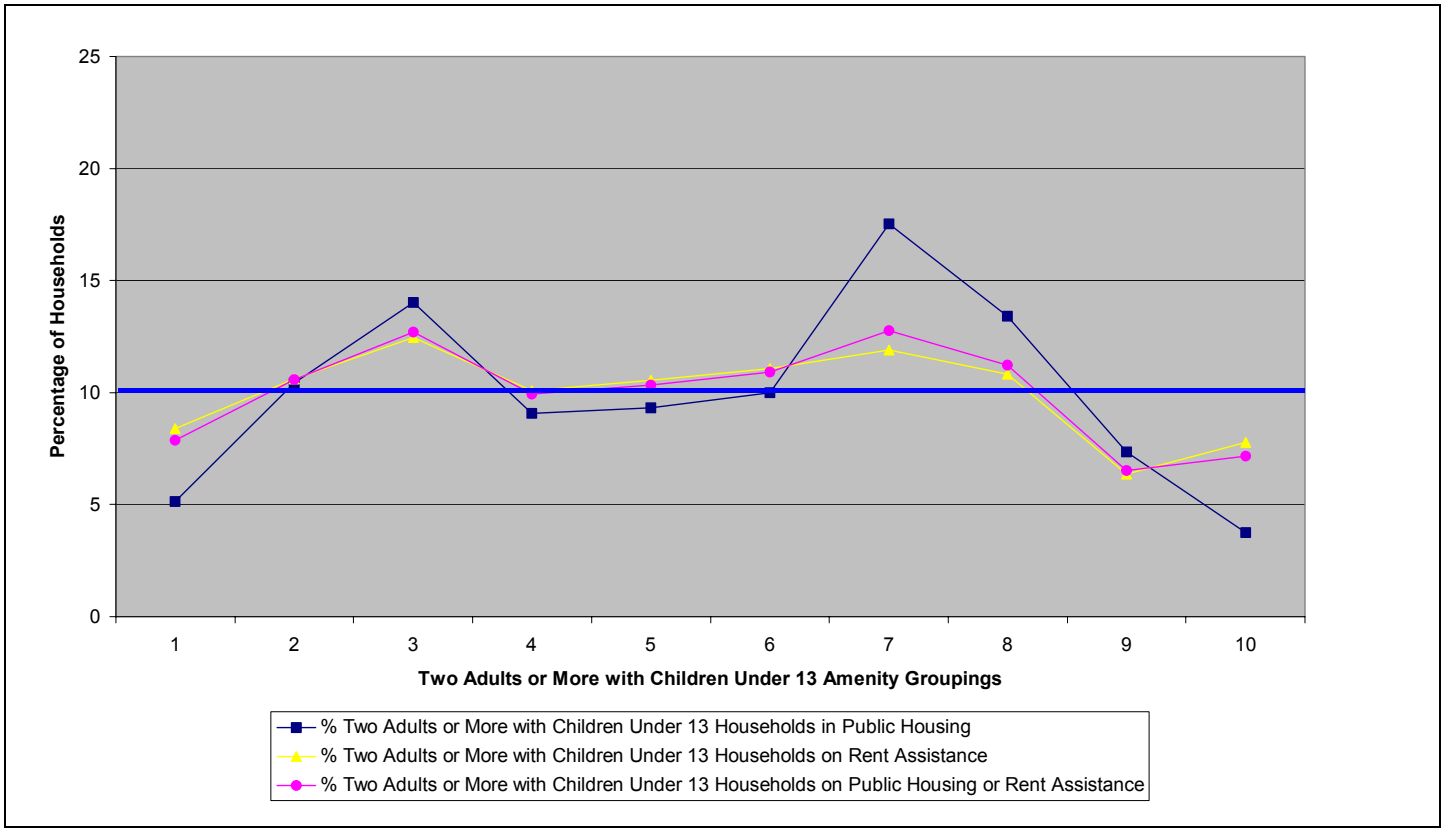
5.2.5 Households with Young Children and Sole Parent Households with Young Children

Households with Young Children represent 15 percent of all target group households in Public Housing or Rent Assistance a total of 7,503 households. This target group represents 8 percent of Public Housing Households (1,170) and 18 percent of Rent Assistance Households (6,333). Figure 11 maps the relative distribution of two parent households with children under 13 in Public Housing and Rent Assistance, and the distribution of suburb amenity for these households.

The higher amenity suburbs for Households with Young Children are inner and middle suburbs, the northern corridor and the Rockingham area. To a lesser extent, the eastern suburbs towards Midland and Armadale also offer reasonable amenity for these households.

The distribution of these households is quite similar for both Public Housing and Rent Assistance, with the latter being more dispersed. The following figure 11 shows the distribution for Households with Young Children amenity groupings.

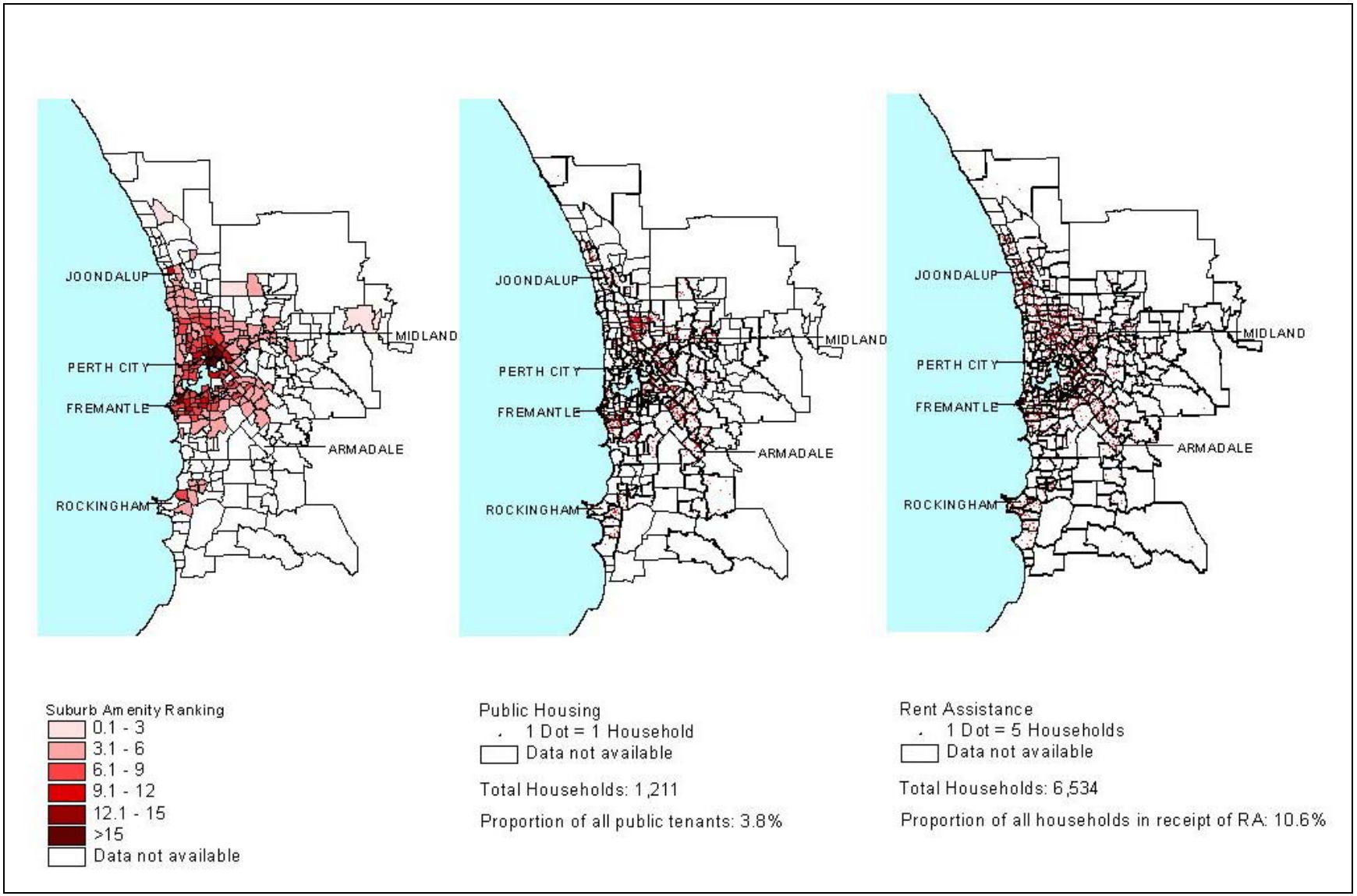
Figure 11: Proportion of Households with Young Children in Rent Assistance and Public Housing by Amenity for that Group.



As can be seen from the above figure both programmes' distribution generally increases in the below average (3) amenity grouping and again in above average groupings (7-8) then drops off in high amenity areas (9-10). Both programmes have similar representation within low, below average, average, above average and high amenity areas. 39 percent of households in Public Housing households are in low (1-2) to below average amenity groupings compared to 41 percent of Rent Assistance households. Rent Assistance households have a slightly higher representation in low amenity areas at 19 percent compared to 16 percent for Public Housing.

Within above average to high amenity areas (7-10) Public Housing and Rent Assistance have a similar distribution, at 42 percent of Public Housing and 37 percent of Rent Assistance households. However for both programmes this is concentrated in the above average groupings (7-8) with 11 percent representation for Public Housing in high amenity areas (9-10) and 14 percent for Rent Assistance. Overall Public Housing performs marginally better than Rent Assistance with the exception of high amenity areas (9-10) where Rent Assistance performs better. Both programmes perform slightly better than all Perth households with the exception of the high amenity areas (9 –10) with around 25-50% less representation for Public Housing and Rent Assistance households. In total 452 Public Housing Households and 2,630 Rent Assistance Households with Young Children are located in below average to low amenity areas.

Figure 12: Households with Young Children distributionof Rent Assistance, Public Housing and Suburb Amenity.

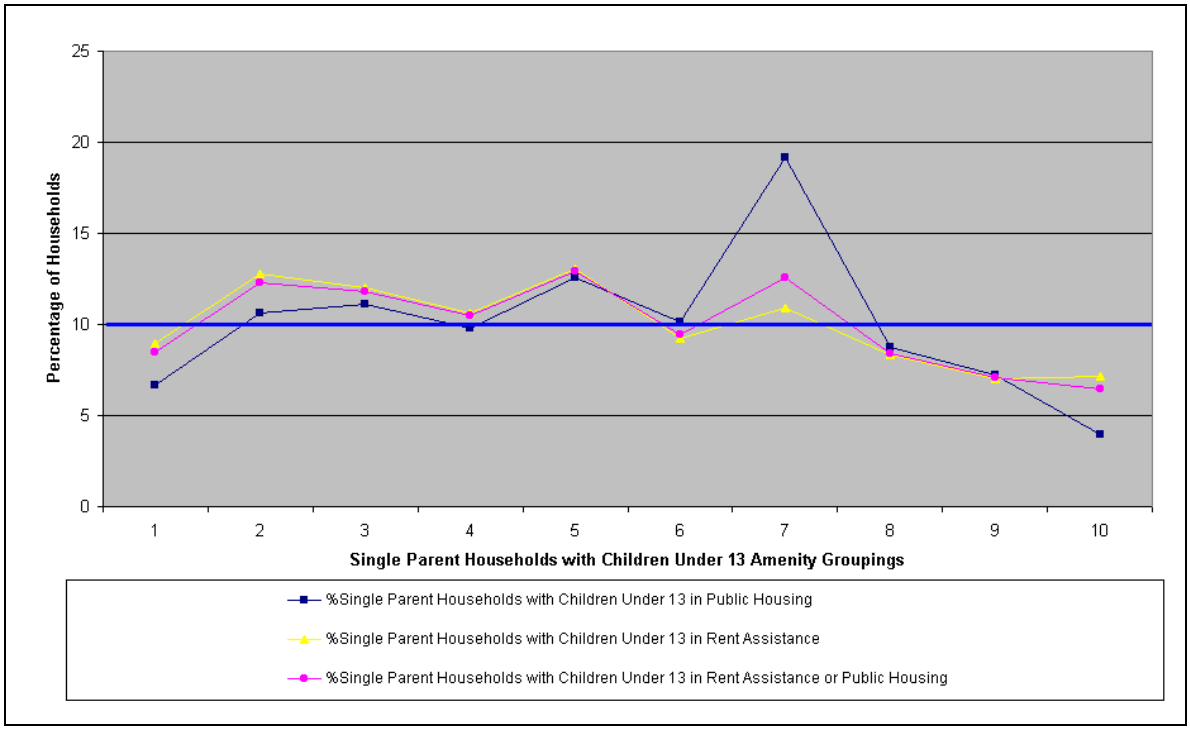


Sole Parent households with Young Children represent 31 percent of all target group households receiving Public Housing and Rent Assistance in total 15,050 households. This target group represents 22 percent of Public Housing Households (3,070) and 34 percent of Rent Assistance Households (11,976). Figures 13 and 14 map the relative distribution of Sole Parent Households with Young Children in Public Housing and Rent Assistance, and the distribution of suburb amenity for these households.

The areas of higher amenity for Sole Parent Households with Young Children are inner and middle suburbs, the northern corridor and the Rockingham area. The eastern suburbs towards Midland and Armadale also offer reasonable amenity for these households.

Households in both Public Housing and Rent Assistance tend to be located in middle and outer areas. Both are concentrated in areas of relatively higher amenity, but large numbers, particularly in the Rent Assistance scheme, are also located in lower amenity areas. Public Housing tenants are concentrated in certain areas, while Rent Assistance is more dispersed across the metropolitan area.

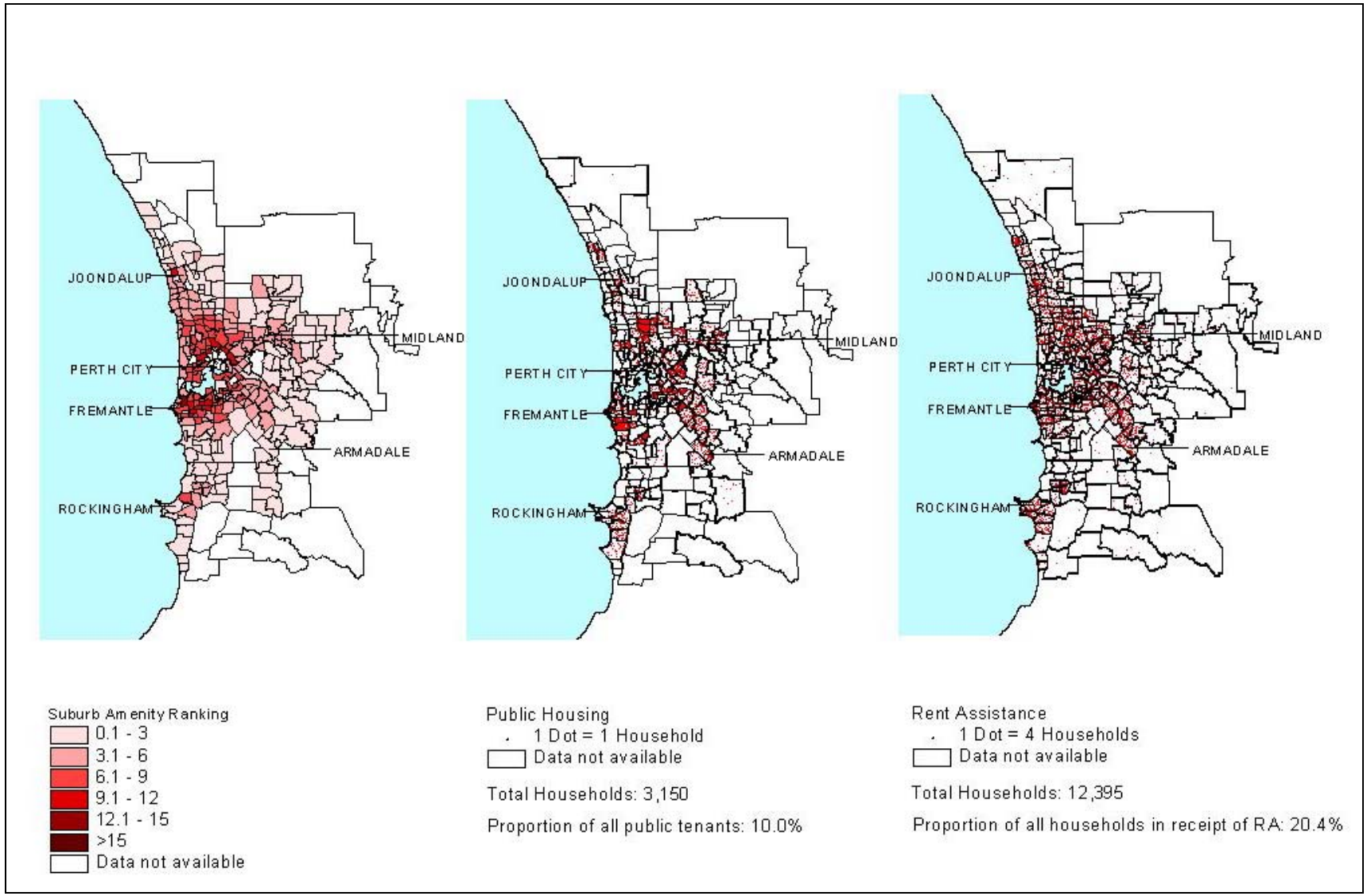
Figure 13: Sole Parent Households with Young Children Amenity Groupings for that Group



Within the low to below average amenity areas (1-4) both programmes' distribution is fairly similar to that of all households. Public Housing is 38 percent, Rent Assistance 44 percent and all Perth households 40 percent. From above average to high amenity (7-10) however Public Housing has 39 percent representation compared to 33 percent for Rent Assistance. Whilst Public housing has a higher representation overall, within the above average to high amenity areas (7-10), Rent Assistance is higher within high amenity areas (9-10) at 14 percent compared to 11 percent.

Both programmes are fairly similar to the distribution of all Perth Households and Public Housing performs marginally better in terms of locational outcomes than Rent Assistance. In total 1,172 Single Parent with Children under 13 Public Housing households and 5,314 Single Parent with Children under 13 Rent Assistance households live within low to below average areas.

Figure 14: Sole Parent Households with Young Children distribution of Rent Assistance, Public Housing and Suburb Amenity



5.2.6 *Households with Teenage Children and Sole Parent Households with Teenagers*

Housholds with Teenage Children represent 2 percent of all target group households receiving housing assistance (excluding Keystart) in total 992 households. This target group represents 3 percent of Public Housing Households (474) and 1 percent of Rent Assistance Households (448). Figure 15 and Figure 16 map the relative distribution of Households with Teenage Children (13-17) in Public Housing and Rent Assistance, and the distribution of suburb amenity for these households.

The highest amenity suburbs for Households with Teenage Children are inner and middle suburbs and the areas around Joondalup and Rockingham. The northern corridor and eastern suburbs towards Midland and Armadale also offer reasonable amenity for these households. With the majority of households in middle suburbs, the distribution of Public Housing tenants is reasonably aligned with these higher amenity suburbs. Households in the Rent Assistance scheme are also fairly well aligned, although a slightly greater proportion of these households are located in the lower amenity areas.

Figure 16 shows the distribution of two parent households with teenagers and their distribution within amenity groupings.

Figure 15: Proportion Households with Teenage Children on each programme by Amenity for that Group

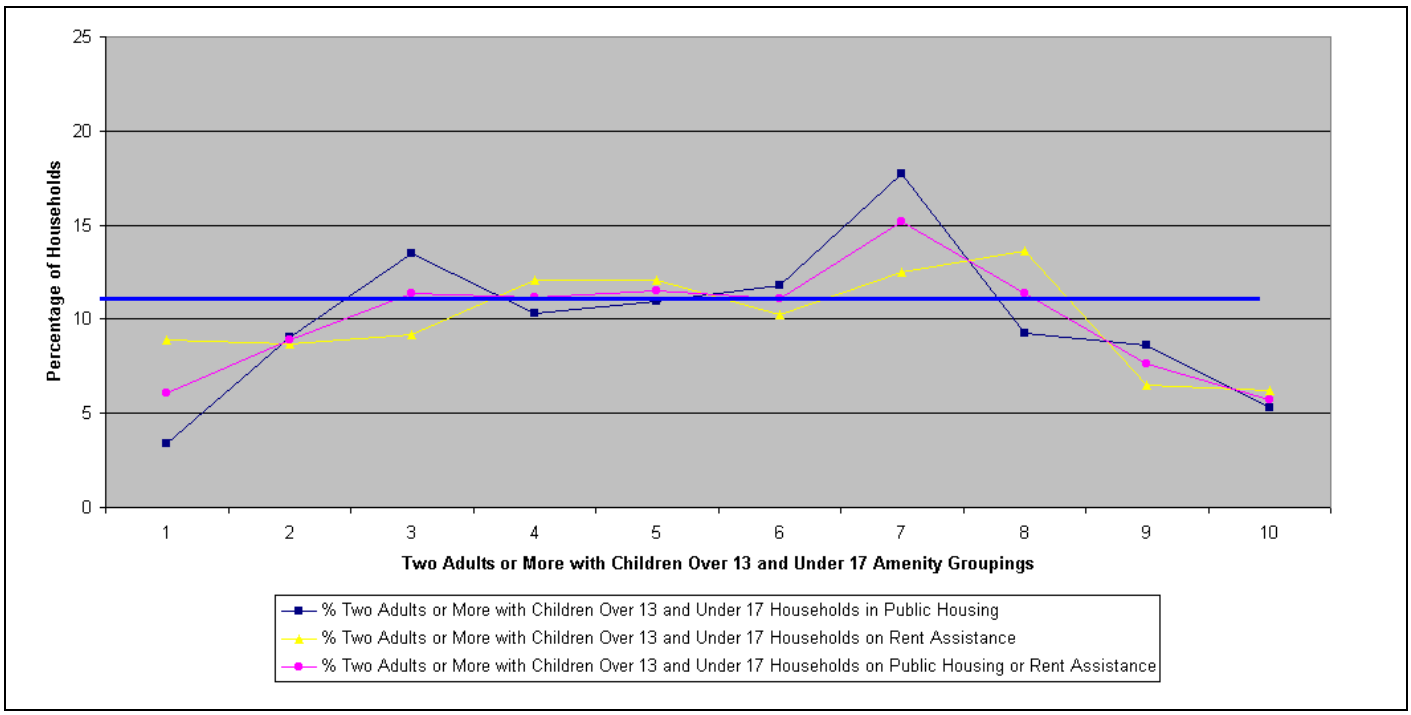
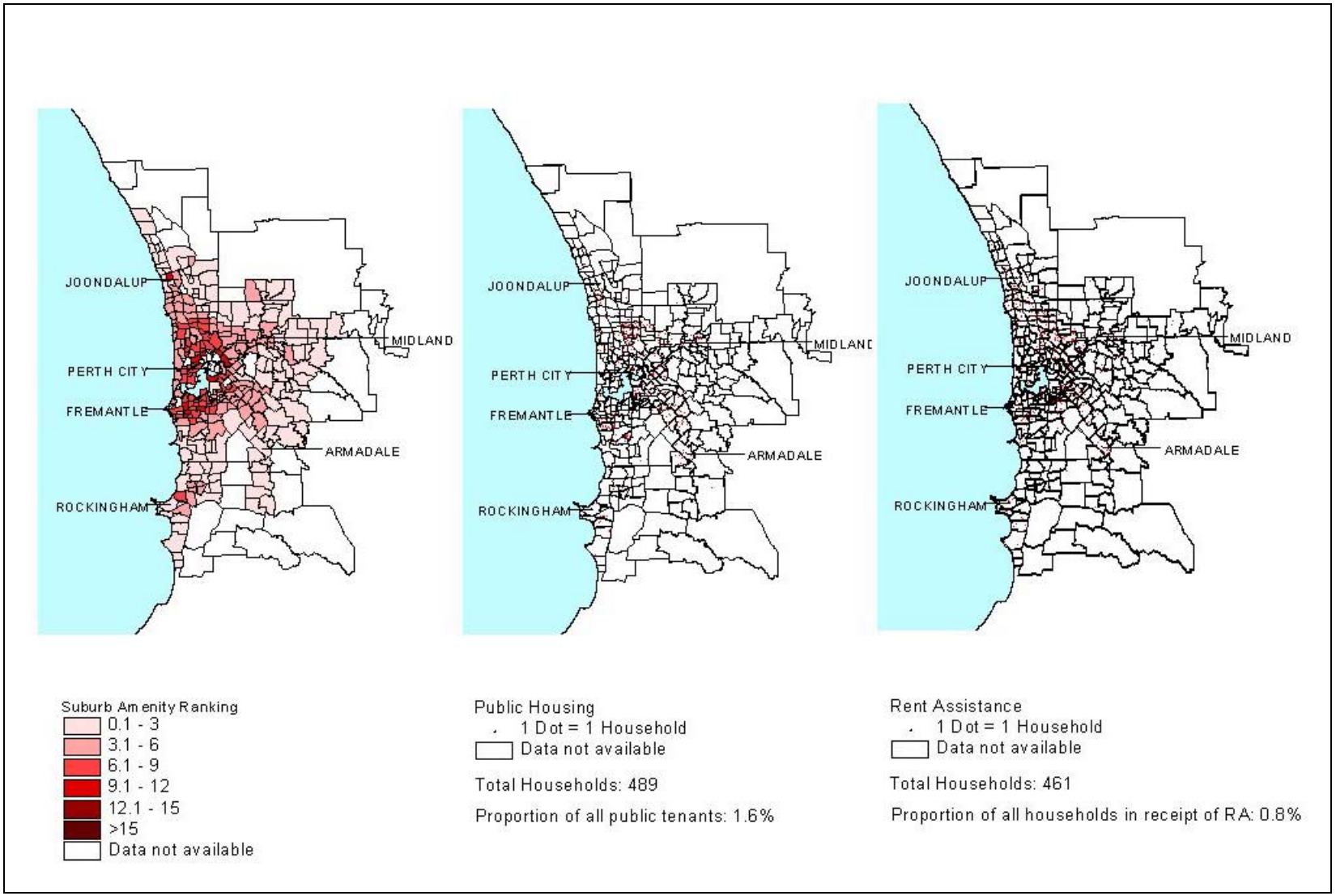


Figure 16 shows both Rent Assistance and Public Housing households have a similar distribution with lower representation in the lowest and highest amenity areas (1-2, 9-10) and overall a fairly similar distribution to all Perth households. Within below average to low amenity areas (1-4) 36 percent of Public Housing households and 39 percent of Rent Assistance households are distributed. There is a higher representation of Rent Assistance within the low amenity areas (1-2) at 18 percent compared to 12 percent for Public Housing. Within average to high amenity (5-10) both programmes are very similar with 23 percent for Public Housing and 22 percent for Rent Assistance within average amenity areas, 27 and 26 percent in above

average and 14 and 13 percent in high amenity areas. 41 percent Public Housing and 39 percent of Rent Assistance households are distributed within above average to high amenity areas.

Both programmes provide similar locational outcomes. Rent Assistance is much more closely aligned with Public Housing in this case yet Public Housing still provides marginally better outcomes. Unlike many of the other target groups, Rent Assistance does not perform better than Public Housing in the high amenity areas (9-10). In total 172 Public Housing and 174 Rent Assistance Households with Teenagers are located within below average to low amenity areas (1-4).

Figure 16: Households with Teenage Children distribution in Rent Assistance and Public Housing and suburb amenity

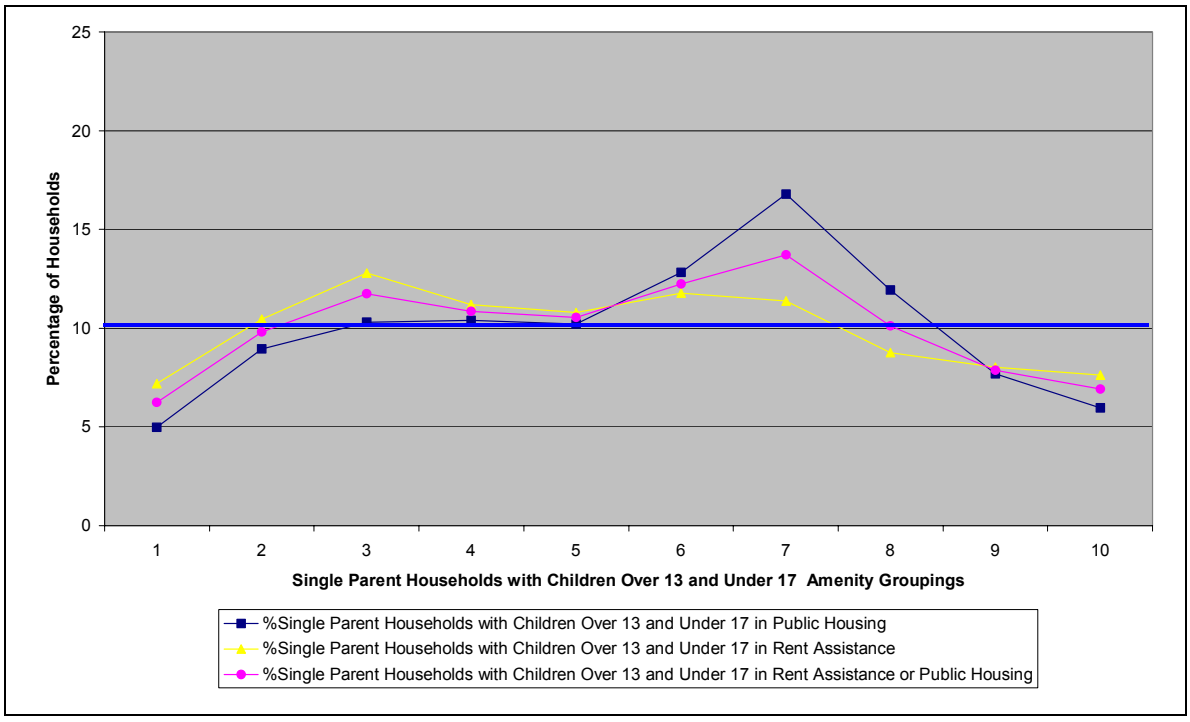


Sole Parent Households with Teenage Children represent 5 percent of all target group households receiving Rent Assistance or Public Housing in total there are 2,591 households. This target group represents 8 percent of Public Housing Households (1,107) and 4 percent of Rent Assistance Households (1,484). Figures 17 and 18 map the relative distribution of Sole Parent Households with Teenage Children (13-17) in Public Housing and Rent Assistance, and the distribution of suburb amenity for these households.

The distribution of these households is quite similar for both Public Housing and Rent Assistance. As for the other groups described earlier, the location of households in receipt of Rent Assistance is more dispersed, with a greater number in the highest and the lowest amenity suburbs.

Figure 17 shows the distribution of Sole Parent Households with Teenage Children in amenity groupings.

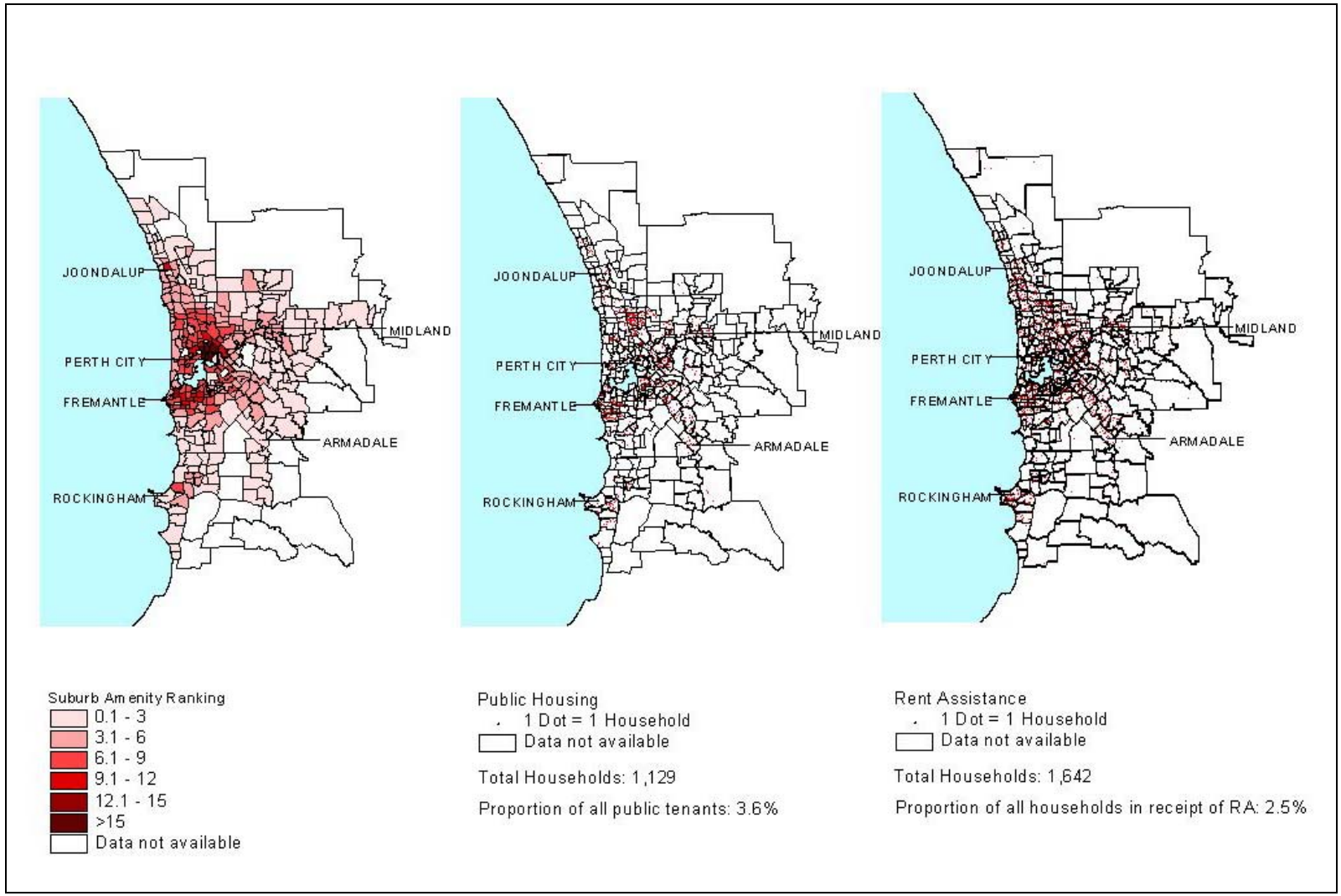
Figure 17: Proportion of Sole Parent Households with Teenage Children on Each Programme by Amenity for that Group



The distribution of Sole Parent Households with Teenage Children is similar to that for Households with Teenage Children, with decreased representation of both programmes within the lowest and highest amenity areas (1-2 and 9-10). 35 percent of Public Housing and 41 percent of Rent Assistance households are within below average to low amenity areas (1-4). 42 percent of Public Housing and 36 percent of Rent Assistance households are within above average to high amenity areas (7-10). The higher representation of Public housing within amenity areas 7-10 is concentrated within the above average areas (7-8), Rent Assistance has a 2 percent higher representation within the high amenity areas (9-10).

Overall Public Housing performs slightly better than Rent Assistance and both programmes have similar locational outcomes to all Perth Households, with the exception of a lower representation in the lowest and highest amenity areas. In total 383 Public Housing and 618 Rent Assistance Sole Parent Households with Teenagers live within below average to low amenity areas.

Figure 18: Sole Parent Households with Teenage Children distributions in Rent Assistance and Public Housing and Suburb Amenity



5.2.7 Overall Target Group Comparisons

A comparison of the target groups against each other, regardless of housing assistance programmes shows that Keystart Housholds and Sole Parent Households with Young Children are the most likely to be located within below average to low amenity (1-4) areas at 64 percent and 43 percent retrospectivly. The groups least likely to be located within these areas were Aged Housholds and Disabled Households at 36 percent and 35 percent retrospectivly. These compare with the 40 percent standard for all Perth Housholds.

Within the above average to high amenity groupings (7-10) the target groups which peformed best were Aged Housholds and Disabled Housholds both at 46 percent. Those least likely to be located within these higher amenity areas were again Keystart and Sole Parent Housholds with Young Children at 18 percent and 35 percent retrospectivly. The percentage of each target group within amenity groupings 1-4 and 7-10 are shown in the table 2 below, the amenity groupings for each target group are based on their own score rather than an average score of all scores.

Table 4: Percentage of each target group within low to below average and above average to high amenity suburbs.

Households Type	Lowest to greatest percentage of each target group within low to below average amenity suburbs (1-4)	Households Type	Lowest to greatest percentage of each target group within above average to below average amenity suburbs (7-10)
Disabled	**35.4**	**Keystart**	**18.5**
Aged	**35.7**	**Sole Parent with Young Children**	**34.5**
Teenage Children	37.5	Young Children	37.7
Sole Parent with Teenage Children	38.6	Sole Parent with Teenage Children	38.6
Young Children	41.1	Teenage Children	39.9
Sole Parent with Young Children	**43.1**	**Disabled**	**45.7**
Keystart	**63.9**	**Aged**	**45.9**

3 out of the 7 target groups had a higher representation than all Perth Housholds within low to below average amenity suburbs. Keystart households were 24 percent more likely to be located in these areas, Sole Parent Housholds with Young Children were 3 percent more likely and Households with Young Children were 1 percent more likely.

4 out of 7 target groups had a lower represention than all Perth housholds within above average to high amenity areas, Keystart is 22 percent lower, Sole Parents with Young Children is 6 percent lower, Households with Young Children is 2 percent lower and Sole Parent Houesholds with Teenage Children is 1 percent lower.

The following target group copmparison looks at the overal outcomes of different target groups against each other within Public Housing and Rent Assistance; Keystart has been excluded as a target group for this section. Table 3 shows the amenity groupings for each target group broken down in to Public Housing and Rent Assistance recipients; for each group the amenity groupings are based on their own amenity scores.

Table 5: Percentage of each target group within Rent Assistance and Public Housing in low to below average and above average to high amenity areas.

Programme	Household Target Group	Lowest to greatest percentage of each target group within low to below average amenity suburbs (1-4)	Programme	Household Target Group	Lowest to greatest percentage within above average to below average amenity areas (7-10)
Public Housing	**Disabled**	**29.5**	**Rent Assistance**	**Sole Parent Young Children**	**33.4**
Public Housing	**Aged**	**33.3**	**Rent Assistance**	**Sole Parent Teenage Children**	**35.8**
Public Housing	**Sole Parent with Teenage Children**	**34.6**	**Rent Assistance**	**Young Children**	**36.9**
Rent Assistance	Disabled	36.3	Rent Assistance	Teenage Children	38.8
Public Housing	Teenage Children	36.3	Public Housing	Sole Parent Young Children	39.1
Public Housing	Sole Parent with Young Children	38.1	Public Housing	Teenage Children	40.9
Public Housing	Young Children	38.6	Public Housing	Young Children	42.1
Rent Assistance	Teenage Children	38.8	Public Housing	Sole Parent with Teenage Children	42.4
Rent Assistance	Aged	40.0	Rent Assistance	Aged	43.1
Rent Assistance	**Young Children**	**41.5**	**Rent Assistance**	**Disabled**	**44.6**
Rent Assistance	**Sole Parent with Teenage Children**	**41.6**	**Public Housing**	**Aged**	**47.5**
Rent Assistance	**Sole Parent with Young Children**	**44.4**	**Public Housing**	**Disabled**	**53.0**

Within the low to below average amenity groupings Rent Assistance households within the following groups were most likely to be distributed within these lower amenity areas - Sole Parent Households with Young Children at 44 percent, Sole Parent Households with Teenage Children at 42 percent and Households with Young Children also at 42 percent. The least likely groups to fall within this range of amenity were Public Housing households - Disabled Households (30 percent), Aged Households (33 percent) and Sole Parent Households with Teenagers (35 percent).

Within the above average to high amenity areas the following households were the most likely to be located within higher amenity areas: Public Housing Disabled Households (53 percent), Public Housing Aged Households (48 percent) and Rent Assistance Disabled Households (45 percent).

3 out of the 12 sub groups within the low to below average amenity areas had a higher representation than all Perth Households ranging from 4 percent higher (Rent Assistance - Sole Parent Households with Young Children) to 2 percent higher (Rent Assistance - Households with Young Children). Within the above average to high amenity areas 7 sub groups had a higher representation than all Perth Households ranging from 13 percent higher (Public Housing –Disabled Households) to 1 percent higher (Public Housing- Households with Teenage Children).

Table 4 shows the distribution of the different target groups within low to below average amenity areas and above average to high amenity areas as a percentage of the total number of all target group households. This shows that the actual likelihood in a particular target group to be located with an amenity range as opposed to programme likelihood. The actual number of households has also been given in the table.

Table 6: Percentage of the total number of all households within all target groups in low to below average and above average to high amenity areas

Lowest to greatest percentage of all target groups within specified amenity range					
Target Group	**low to below average amenity suburbs (1-4)**	Total Numbers	**Target Group**	**above average to high amenity areas (7-10)**	Total Numbers
Two aduts or more with children over 13 and under 17	0.9	346	Two aduts or more with children over 13 and under 17	1.4	368
Sole Parent with children over 13 and under 17	2.6	1001	Sole Parent with children over 13 and under 17	3.9	1000
Two aduts or more with children under 13	7.9	3082	Two aduts or more with children under 13	11.0	2827
Member over 65	9.5	3728	Member over 65	18.6	4790
Member with a disability	11.4	4472	Sole Parent with children under 13	20.2	5199
Sole Parent with children under 13	16.6	6486	Keystart	22.4	5771
Keystart	51.1	19949	Member with a disability	22.5	5783
TOTAL	**100**	**39064**		**100**	**25738**

As with the programme distribution within amenity groupings, in actual numbers of housholds Keystart (51%/ 19,949) and Sole Parents with Young Children (17%/ 6,486) have the highest number of housholds located within low to below average amenity areas, despite Keystart representing 39 percent of all assisted housing. However, in above average to high amenity areas, again, Disabled Households (22 %/ 5,783) (26% of all housing assisted households) have the highest representation in terms of total numbers followed by Keystart (22%/ 5,771) (39% of all housing assisted households).

Table 5 shows the total number of target group households as a percentage of all target group housholds (excluding Keystart) within Public Housing and Rent Assistance in low to below average amenity to above average to high amenity areas; Keystart has been excluded as a target group for this section.

Table 7: Percentage of the total number of all households within all target groups (excluding Keystart) within Public Housing and Rent Assistance in low to below average and above average to high amenity areas.

		Percentageof all target groups					
Programme	Target Group	**low to below average amenity suburbs (1-4)**	Total Number	Programme	Target Group	**above average to high amenity areas (7-10)**	Total Number
Public Housing	Two aduts or more with children over 13	0.9	172	Rent Assistance	Two aduts or more with children over 13	0.9	192
Rent Assistance	Two aduts or more with children over 13	0.9	174	Public Housing	Two aduts or more with children over 13	1.1	225
Public Housing	Sole Parent with children over 13 and	2.0	383	Public Housing	Sole Parent with children over 13 and	2.6	545
Public Housing	Two aduts or more with children under	2.4	452	Public Housing	Two aduts or more with children under	2.7	565
Public Housing	Member with a disability	2.6	503	Rent Assistance	Sole Parent with children over 13 and	2.9	593
Rent Assistance	Sole Parent with children over 13 and	3.2	618	Public Housing	Member with a disability	4.5	925
Public Housing	Sole Parent with children under 13	6.1	1172	Public Housing	Sole Parent with children under 13	6.7	1393
Rent Assistance	Member over 65	7.9	1518	Rent Assistance	Member over 65	6.9	1428
Public Housing	Member over 65	11.6	2210	Rent Assistance	Two aduts or more with children under	12.3	2543
Rent Assistance	Two aduts or more with children under	13.8	2630	Public Housing	Member over 65	17.0	3518
Rent Assistance	Member with a disability	20.8	3969	Rent Assistance	Sole Parent with children under 13	20.6	4247
Rent Assistance	Sole Parent with children under 13	27.8	5314	Rent Assistance	Member with a disability	21.7	4485
TOTAL		**100.0**	**19115**			**100.0**	**20659**

The highest number of housholds within low to below average amenity areas are Rent Assistance housholds with: Sole Parents with Young Children (28 %/ 5,314), Disabled (21%/ 3,969) and Young Children (14%/ 2,630). In the above average to high amenity areas again Rent Assistance housholds with: Disabled (22%/ 20,659), Sole Parents with Young Children (21%/4,247) and Aged Housholds (17%/ 3,518) have the highest proportion of households.

6 CONCLUSIONS

From a policy perspective, the research findings show that suburb amenity is a useful base from which to assess the effectiveness of housing assistance programmes to provide locational benefits to their recipients. The methodology used to assess locational amenity showed that the suburb is a more appropriate scale at which to asses amenity. The suburb can reflect both the scale at which communities experience amenity and the emerging *"checkerboard of segregated and protected wealth in an urban soup of equally segregated impoverishment and decay"* (Harvey 1996:405) Data collection issues, limitations with the assessment methodology, and the time consuming nature of the task however may limit the extent to which this scale of assessment is used in the future. This research provides an indication of, rather than conclusive evidence of the impacts of each programme on household locational advantage or disadvantage.

It is suggested that in order for long term housing assistance programme monitoring and evaluation that the amenity assessment method be further refined. Refining the assessment method should provide a more persuasive means of assessing local amenity and weighting systems for specific target groups. It should also focus on investigating the use of data that could be collected and compiled by Local Governments within their normal course of business, both of relevance to the local council and for researchers. This could provide a longitudinal means to assess housing programmes which is less time intensive, whilst also providing a mechanism to further understand the evolution and change of suburb amenity within local government and metropolitan areas.

With the research limitations in mind, it was found that suburb amenity across the Perth Metropolitan area and within Local Government Areas varied considerably.

It was shown that in general terms amenity decreased the further the distance from the Perth city centre, despite the formulation of suburb scores taking into account a wider range of amenity factors than expected purely from distance. Further to this it was found that in the North and South Eastern corridors of the Perth Metropolitan area, amenity decreased more substantially and rapidly with distance from the Perth city centre than in the North and South Western Corridors. Whilst this general trend towards decreased amenity from the centre was evident, so were exceptions to this, with some suburbs performing well despite their distance from the city. This is clearly related to their proximity to regional centres. However these are all in the western corridors and none of the sub-centres in the eastern corridors are showing any benefit in terms of amenity. It is clear that a focussed planning of regional centres in the eastern corridor will be important for amenity and also for other aspects of planning policy (Newman, 2002).

The locational outcomes for the three housing assistance programmes (Keystart, Public Housing and Rent Assistance) showed significant differences both across programmes and across target groups (Disabled Households, Aged Households, Households and Sole Parents with Young Children, Households and Sole Parents with Teenage Children).

Of the three programmes Public Housing provided the best locational qualities, closely followed by Rent Assistance with Keystart providing the worst locational amenity by a considerable degree. Public Housing and Rent Assistance in general terms provided similar outcomes in locational amenity to Perth's general population. Both Programmes had a slightly lower representation within the lowest and highest amenity scores than the general population. Rent Assistance is a mixed bag with higher than average representation within the lowest amenity areas and also higher than average

within the highest amenity areas, whilst Public Housing was more concentrated within the above and below average amenity areas. Keystart on the other hand had very poor representation within the higher amenity areas and was 24 percent more likely than the general population to be located within low to below average amenity areas.

The target groups whom were most likely to be located within poorer amenity areas were Keystart, Sole Parent Households with Young Children and Households with Young Children. The target groups most likely to be located within higher amenity areas were Aged Households, Disabled Households and Households with Teenage Children.

Some specific outcomes for each Programme can also be gleaned from an overall perspective on the data as follows.

6.1 Housing Assistance Programme Outcomes

6.1.1 Keystart

For Keystart h ouseholds, the highest weightings for suburb amenity were allocated to appreciation in property values (5), employment (3) and transport (3). The poor alignment between the distribution of Keystart households and high amenity suburbs suggests that households in the Keystart scheme benefit little from capital growth, and may have access difficulties, particularly with regard to employment. Few employment opportunities nearby and poor access to other areas may mean that a job loss results in mortgage defaults, with the prospect of having to sell the family home at a loss.

Ifthe outer fringes of the Perth Metropolitan areas are going to have areas of negative equity as outlined by the WAPC (2000:61) then it is of concern as these are likely to be the same areas that many Keystart households are purchasing. This combined with welfare reforms towards a greater focus on 'Mutual Obligation' provides an added impetus for policy makers to use locational disadvantage as a means to asses not only housing assistance programmes but also welfare provision and 'mutual obligation'. Households in this programme are thus likely to be vulnerable to a change in circumstances and in the case of loss of work, their location and lower ability to move as homeowners, will further exacerbate issues associated with loss of employment or changing lifestyle.

For home owners the impact of location is often not considered at first, but with experience it is likely to become an issue. In contrast to first time home buyers, who make compromises in order to move into homeownership, changeover homebuyers are very conscious of locational amenities in respect to their decision to upgrade (HALCS, pxiv). Keystart households are poorly located and have a lower ability to purchase up, and if found in a negative equity situation they are likely to become locked in to a depreciating asset. Whilst Keystart assists people into homeownership that they would otherwise be unable to through normal means, the locations in which many of these households are purchasing in the longer term, will ultimately further disadvantage them despite their assistance into homeownership.

In addition to these issues Keystart households also are required to maintain there own property, something that Rent Assistance and Public Housing tenants are not burdened with. This may further disadvantage them when experiencing job loss or when on a relatively low income.

6.1.2 Rent Assistance

Rent Assistance, relative to Keystart and to a lesser degree the general population, provides good locational outcomes. However for sub groups within Rent Assistance particularly Single Parent Households with Young Children, Single Parent Households with Teenage Children and Households with Young Children, their representation within lower amenity areas is greater than that of the General Population. Arguably it is these groups that the anticipated tightening of the rental market will affect the most, as their potential inability to compete in terms of tenancy history and income will disadvantage them with increased competition for affordable rental accommodation (Wulff 1999).

Wulff and Evans (1999) found that Melbourne Rent Assistance households with children were more likely to be located in middle to outer suburbs where housing sizes were larger; the results of this study show a similar trend. Household satisfaction surveys have showed less satisfaction for people with children in Rent Assistance. This suggests that Rent Assistance is useful for people who can live in a share house or a flat, but families who want something larger are forced to live in lower amenity areas. These factors combined with the rapid growth in property values in more central and desirable areas, may further contribute to, particularly for the above Target Group, increasing difficulty in finding housing in average to high amenity areas.

Whilst Rent Assistance overall, on the surface at least, provides reasonable to excellent amenity outcomes, other issues such as insecurity of tenure, landlord relationships, maintenance and home security still remain valid concerns for those on Rent Assistance. The impact of gentrification may further add to these issues, particularly for those currently best located, who may also experience added insecurity and poor home maintenance as a result of property owners waiting to redevelop with minimal attention paid to current tenants.

Whilst tenants are concerned with the cost of renting and the lack of tenure security, a significant advantage of Rent Assistance for tenants is the choice of location. (HALCS, pxv). For private renters, employment related concerns are prominent in making housing decisions (HALCS, pxiv).

6.1.3 Public housing

Of the three programmes Public Housing performed the best in terms of locational outcomes. The target groups however with the worst locational outcomes with public housing were Sole Parent Households with Young Children, Disabled Households, and Households with Young Children. This coupled with the relative security of tenure and housing maintenance support ensures that these housing assisted households are the least likely to be locationally disadvantaged. A limited choice of location and stigma associated with public housing, remain valid concerns for tenants; despite this they value the affordable rents (HALCS, pxv). Public Housing's comparatively better performance however may not be sustainable in the longer term. The proportion of public housing as part of the total housing stock in Perth has dropped from around 14% in 1966 to below 5% (Adams 1999) showing a trend towards decreased provision. Significant issues include long waiting lists; the yet to be seen impact of the 'New Living' programme; and an ongoing focus on supported fringe development through public housing. These issues question the ability of Public Housing to sustain these locational outcomes in the longer term for the relatively few in number households in Public Housing.

6.2 Policy Implications for Housing Assistance Programmes

There is a strong history of research that highlights the importance of location for an individual to be able to participate in social and economic activities. This research suggests that housing assistance programs should take this into consideration by examining how and where housing assistance is administered by seeking to promote better locational outcomes for their recipients and the broader community. Welfare reforms towards 'mutual obligation' requiring people to participate in some form in economic activity add further weight to this argument.

It has been common practice for government to administer housing assistance in particular places to gain other perceived additional benefits, such as through seeding and cross subsidising fringe development in Perth (Thorpe, 2000), and through mechanisms such as the first homebuyers grant also inadvertently favouring new subdivisions. Unfortunately these mechanisms have not been seen to benefit those whom are already disadvantaged and the amenity outcomes for Keystart recipients is a clear demonstration of this. Further, the viability of government sponsored fringe development through housing assistance is increasingly being questioned.

Given this history of government sponsored development to gain outcomes that are broader than low income housing provision, it could be expected that new outcomes will be incorporated into housing programmes. This research suggests that a key component of how housing is assessed in future should be in terms of its locational outcomes. It is also feasible that housing can be a major driver of more sustainable urban development (Newman, 2002). In Perth this would mean a concentration on the building of viable regional centres within the eastern corridors.

The role of community housing, and land currently owned by all levels of government within areas of existing good locational amenity should be investigated for their potential to contribute to developing increased housing for assisted households. In particular, housing should be targeted to those households most disadvantaged within programmes namely:

- Keystart households,
- Rent Assistance Single Parent Households with Young Children, Single Parent Households with Teenage Children and Households with Young Children, and
- Public Housing Sole Parent households with Young Children, Disabled Households, and Households with Young Children.

REFERENCES

Adams, T. (2000), *Planning, Politics and Power: A Geographical Critique of Community Housing in Perth*, Honours thesis, Geography Department, University of Western Australia.

Alexander, I. & Greive, S. (1998), 'Population Growth in Metropolitan Perth; A Divided City on the Edge', in *Building Communities*, Issue1(1), published by Community Housing in Western Australia.

Armstrong, R. and Ruane, S. (2002) *Ellenbrook Community Survey,* ISTP Murdoch University, Perth.

Australian Bureau of Statistics (2001) ABS CDATA 2001, published by the Australian Bureau of Statistics, Canberra

Australian Bureau of Statistics (1997) *Perth: A Social Atlas* published by Australian Bureau of Statistics, Canberra

Australian Bureau of Statistics (1996) Catalogue No. 6101.0

Australian Department of Family and Community Services (1996 - 1997) *Housing Assistance Act Annual Report/ Department of Family and Community Services* Published by Australian Department of Family and Community Services, Canberra

Australian Department of Family and Community Services (1998) Rent Assistance Satisfaction Survey

Badcock, B. (1997), 'Recently Observed Polarising Tendencies in Australian Cities', in *Australian Geographic Studies*, Vol 35(3), pp3-15.

Badcock, B (1999) Doing More with Less: Public Housing in the 1990's, pp81-95 in in *Houses and Jobs in Cities and Regions: Research in Honour of Chris Maher*, O'Connor K. (ed.), published by the University of Queensland for AHURI.

Baum S., Stimpson R., O'Connor K., Mullins, P. & Davis R. (1999) *Community Opportunity and Vulnerability in Australia's Cities and Towns: Characteristics, Patterns and Implications*, University of Queensland Press for AHUR Institute.

Benassi, D., Kazepov, Y. & Mingione, E. (1997), 'Socio-economic restructuring and urban poverty under different welfare regimes', in Moulaert, E. & Scott, A.(eds.) *Cities Enterprises and Society on the Eave of the 21st Century,* Printer, London.

Berry, M., Dalton, T., Engles, B., & Whiting, K. (1999), *Falling Out of Home Ownership: Mortgage Arrears and Defaults in Australia.* Australian Housing and Urban Research Institute (RMIT), University of Queensland Press.

Burbridge, A. & Winter, I. (1995), Urban Housing Report, Australian Living Standards Study, Australian Institute of Family Studies.

Burgess, R. & Skeltys, N. (1992) *The findings of the Housing and Location Choice Survey: An Overview* National Housing Strategy Background Paper 11, AGPS, Canberra.

Coulton, C. (1997), *Housing, Transportation and Access to Suburban Jobs by Welfare Recipients in the Cleveland Area*, Centre for Urban Poverty and Social Change, Case Western University, Cleveland, July.

Donovan Research (2000), National Social Housing Survey (Volume 6, WA) conducted for Homeswest, Final Report, November.

Donovan Research (1999), Customer Satisfaction with Public Rental Housing Assistance (Volume 6, WA) conducted for Homeswest, Final Report, December.

Economic Planning Advisory Council (1991) *Urban Trends and Issues,* Council Paper No.46, Australian Government Printing Service, Canberra.

Ferrante, A M, Fernandez, J A, and Loh, N S N (1999) *Crime and Justice Statistics for WA: 1998*, Crime Research Centre, UWA.

Fincher, R. (1991), 'Locational Disadvantage: an Appropriate Policy Response to Urban Inequities', *Australian Geographer*, vol. 22, no. 2, pp132-135. Published by Geographical Society of New South Wales Inc North Ryde, N.S.W,

Fincher, R. & Nieuwenhuysen, J. (Eds) 1998 *Australian poverty: then and now* Melbourne University Press, Carlton, Vic.

Green A. (1997), 'Exclusion, unemployment and non-employment', *Regional Studies*, 31(5), pp 505-520.

Gregory, R.G. & Hunter, B. (1995), *The Macro-Economy and the Growth of Ghettos and Urban Poverty in Australia*, Discussion Paper No. 325, Centre for Economic Policy Research, Canberra.

Gregory, B.& Sheehan, P. (1998) 'Poverty and the collapse of full employment' pp 103-126 in, Fincher, R.& Nieuwenhuysen, J. (eds.) *Australian Poverty: Then and Now*, Melbourne University Press, Carlton.

Greive, S., Jeffcote, R. & Welsh, N. (1999), 'Governance, Regulation and the Changing Role of Central Perth: Is There Room for Affordable Housing'*, Urban Policy and Research,* vol. 17, no. 3, pp225-233.

Harloe, M. (1993) *The social construction of social housing.* Urban Research Program, Research School of Social Sciences, Australian National University, Canberra

Harvey, D. (1996), *Justice, Nature, and the Geography of Difference*, Blackwell Publishers, Massachusetts, USA.

Homeswest (WA) (1986 – 2001) *Homeswest Annual Reports* Homeswest Centre, East Perth

Homeswest (WA) (1988 – 1992) *Homeswest Strategic Plans 1989-90 – 1992-93* Homeswest Cntre, EastPerth

Homeswest (WA) (2001) Applications Awaiting Accomidation/Zone/Report/June

Industry Commission (1993) *Public Housing,* Report 34, Volumes 1 & 2 November. Published by the Commission, Belconnen, ACT

Kemp, D. (1998), *Facilitating Employment Growth: The Urban Planning Contribution for Perth*, a discussion paper / prepared by Derek C. Kemp. West Australian Planning Commission.

Knox, P. (1995) *Urban Social Geography*, Strongman Press, Washington.

Kupke, V. & Marano, W. (2001) *The implications of changes in the labour market for first home buyers,* Work in Progress Paper, AHURI.

Lepani, B. (1994), 'The economic role of cities: Australia in the global economy', *Urban Futures*, 9,13-23. Published by Housing and Urban Policy Section of the Dept. of Industry, Technology and Commerce, Canberra, ACT

Lipietz, A. (1987), *Mirages and miracles: the crises of global Fordism*, Verso, London, UK.

Low, N. (1995), 'Regulation Theory, Global Competition Among Cities and Capital Embedded', *Urban Policy and Research*, vol. 13, no. 4, pp205-221. Hargreen Publishing, Melbourne

Lumsden, E. (1998) "Ellenbrook: An integrated sustainable housing development in Perth's eastern corridor" in *Planning for Sustainable Futures: National Conference 14-16 September 1998*, Conference proceedings.

Maher, C. (1992) *Mobility and locational disadvantage within Australian cities : social justice implications of household relocation* Report (Social Justice Research Program into Locational Disadvantage (Australia), AGPS, Canberra.

Maher, C. (1994) 'Forum Special - Spatial Inequality and Locational Disadvantage: New Perspectives on an Old Debate', in *Urban Policy and Research*, Vol 12, No 3, pp 185-190, Hargreen Publishing, Melbourne.

Maher, C. (1996) 'The Private Rental Market: Implications of Restructuring and Housing Reform'; in *National Housing Action* 12(2), pp 15-24.

Maher C. (1999) 'Locational disadvantage and concentrations: a review and evaluation of the findings', pp17-55 in *Houses and Jobs in Cities and Regions: Research in Honour of Chris Maher*, O'Connor K. (ed.), published by the University of Queensland for AHURI.

Newman, P. & Kenworthy, J. (1999) *Sustainability and Cities: Overcoming Automobile Dependence,* Island Press, Washington, DC.

Newman, P. (2000) *The Global City and The Parochial City*, Supporting Papers for Towards a Vision for Perth in 2029, Minister for Planning, WA Government.

Newman, P. (2002) *Housing and Sustainability More than a Roof Overhead,* Ninth F. Oswald Barnett Oration, Ecumenical Community Housing, Uniting Care Connections, Hanover, AHURI, Melbourne.

National Housing Strategy (1992) *Australian Housing: The The Demographic, Economic and Social Environment,* National Housing Strategy, AGPS, Canberra.

National Housing Strategy (1992) *Housing Location and Access to Services* National Housing Strategy Issues Paper 5, AGPS, Canberra.

O'Connor, K. (ed) (1999) *Houses and jobs in cities and regions : research in honour of Chris Maher* University of Queensland Press for AHURI, Brisbane.

O'Connor, K. & Healy, E. (2001) *The Links Between Housing Markets and Labour Markets in Melbourne* Work in Progress Paper, AHURI.

Pers com Roz Walker

Reference Group on Welfare Reform (2000), *Participation Support for a More Equitable Society*, Final Report of the Reference Group on Welfare Reform, Department of Family and Community Services, Canberra, July.

Reich, R. (1991) *The Work of Nations: a blue print for the future*, Simon Schuster, London.

Selwood, H.J. (1981) *Patterns and Processes of Residential Subdivision in the Perth Metropolitan Region 1829-1969*, PhD. Thesis, Department of Geography, University of Western Australia.

State Housing Commission (1944 – 1985) *Annual Reports*

Stevens, C., Baun, S, Hassan, R. (1996), 'Housing and Location Preferences of Adelaide Residents', in *Urban Policy and Research*, Vol 10, No3, pp 6-22.

Stilwell, F. (1993), *Reshaping Australia; Urban Problems and Policies*, Pluto Press, Marricville .

Thorpe, A. (2000), 'More than a roof over their heads: state housing and urban form in Perth', Honours Thesis, Institute of Sustainability and Technology Policy, Murdoch University.

Urban Development Institute of Australia (WA Division) (1999- 2001) *Land Supply Survey*, Quarterly Surveys

United States Department of Labour, Employment and Training Administration (1997), *Transportation Issues in Welfare Reform: Background Information*, Paper prepared by Demetra Smith Nightingale.

United States Department of Transportation (1998), *Welfare Reform and Access to Jobs in Boston*, prepared for the Bureau of Transportation Statistics division by Annalynn Lacombe.

United States General Accounting Office (1998), *Welfare Reform – Transportation's Role in Moving from Welfare to Work*, Report to the Chairman, Committee on the Budget, House of Representatives, Report RCED pp98-161.

Urban Policy & Research (1991) 'Forum Special - Urban Consolidation in Perth', in *Urban Policy and Research*, Vol 9, No2, pp 78-100. Hargreen Publishing, Melbourne

Urban Policy & Research (1994) 'Forum Special - Spatial Inequality and Locational Disadvantage: New Perspectives on an Old Debate', in *Urban Policy and Research*, Vol 12, No 3, pp 180-199. Hargreen Publishing, Melbourne

Yates, J., & Wulff, M. (eds.) (1999), *Australian Housing Choices*, published by the University of Queensland for AHURI.

Yates, J. (1997), 'Changing Directions in Australian Housing Policies: The End of Muddling Through?' in *Housing Studies,* 12 (2), pp 265-277. Longman, Harlow, Essex

WAPC (2000), *Future Perth – What's Important to the Community*, *Focus Group Outcomes,* published by the Western Australian Planning Commission.

Wilson, W., (1997), *The Truly Disadvantaged: Inner City, the Underclass and Public Policy*, the University of Chicago.

Winter, I. & Stone, W. (1998) *Social polarisation and housing careers : exploring the interrelationship of labour and housing markets in Australia* Melbourne, Australian Institute of Family Studies.

Winter, I. & Stone, W. (1999) *Reconceptualising Australian Housing Careers*. Melbourne, Australian Institute of Family Studies.

Wulff, M. & Evans, S. (1999), 'The Spatial Impacts of Commonwealth Rent Assistance on Australia's Low Income Households Australian Housing Choices', pp 101-113 in *Australia's Housing Choices*, Yates J. & Wulff M. (eds.), published by the University of Queensland for AHURI.

APPENDICES

Appendix 1: Suburb Amenity Scores

SUBURB	Sole Parent with Young Children	Sole Parent with Teenage Children	Households with Young Children	Households with Teenage Children	Aged Households	Disabled Households	Keystart Households
ALEXANDER HEIGHTS	4.56958018	4.56958018	4.332812442	4.175011964	4.125859703	3.184349256	3.575812659
ALFRED COVE	7.846537025	7.846537025	7.680843353	7.426387839	8.270862411	6.688951382	8.019892702
APPLECROSS	7.454761374	7.454761374	7.273000941	7.034039367	7.69838884	6.265999104	7.492374387
ARDROSS	8.075939738	8.075939738	7.804262279	7.542559883	8.263972146	6.703745582	8.141386661
ARMADALE	2.212108559	2.212108559	2.141145719	2.065140114	2.240648284	1.761536377	1.742324458
ASCOT	3.657994959	3.657994959	3.679238754	3.555141417	4.335061178	3.301998825	3.249922333
ASHBY	1.772107081	1.772107081	1.305433518	1.253675539	2.200402603	1.311217412	1.162613073
ASHFIELD	3.110841868	3.110841868	3.264168798	3.153335372	3.90483842	3.038467485	3.004477557
ATTADALE	7.791919081	7.791919081	7.551233666	7.301955448	8.299690332	6.631938549	8.179736491
ATWELL	0.995960209	0.995960209	0.592830873	0.568577357	1.348864612	0.659268544	0.607912669
BALCATTA	6.085203381	6.085203381	5.992881291	5.800078164	6.105973188	4.994572128	7.058899588
BALGA	6.361613223	6.361613223	6.402540756	6.170519957	5.921191936	4.938700275	6.263753398
BALLAJURA	3.281425886	3.281425886	3.058410441	2.953663886	3.102597471	2.33496914	2.458856572
BANJUP	0.64869428	0.64869428	0.359034445	0.344076426	0.916948694	0.42700995	0.391687889
BASSENDEAN	5.132317866	5.132317866	4.99084754	4.833699558	5.66373219	4.393614838	5.451824833
BATEMAN	7.448279831	7.448279831	6.976403259	6.730964672	7.150170748	5.63470005	6.66166183
BAYSWATER	5.252629742	5.252629742	5.169370845	4.999010428	5.412390808	4.325020255	5.25921358
BEACONSFIELD	6.964503251	6.964503251	7.243940425	7.018404255	6.995270276	6.014718561	7.169084048
BECKENHAM	4.470593831	4.470593831	4.320907311	4.175680107	4.277702176	3.384349588	3.818060911
BEDFORD	7.095993406	7.095993406	6.91196752	6.674968769	7.056821915	5.694917693	7.254184071
BEECHBORO	3.973840259	3.973840259	3.537595551	3.416534184	3.940977824	2.82231327	3.125296436
BELDON	5.489860946	5.489860946	5.105161836	4.919963304	5.755507041	4.38929074	6.000656106
BELHUS	1.652752723	1.652752723	0.992586828	0.952474357	2.283003368	1.130447439	1.039126791
BELLEVUE	3.467144011	3.467144011	3.280562914	3.152060179	3.738128351	2.74456032	2.628892745
BELMONT	3.794674233	3.794674233	3.860445254	3.743889668	4.437479565	3.60200532	5.623298072
BENTLEY	6.789244523	6.789244523	6.827660236	6.623711766	6.880189123	5.826816292	6.697648943
BERTRAM	1.638663405	1.638663405	1.264108908	1.236756347	1.887661337	1.129865633	1.101529889
BIBRA LAKE	3.40866377	3.40866377	3.191626281	3.076179116	3.439575292	2.597234788	3.121702374
BICKLEY	1.342226695	1.342226695	0.851919477	0.819009934	1.793524162	0.905077033	0.848930246
BICTON	6.12248787	6.12248787	6.298513236	6.097993496	6.956293544	5.769893155	6.782783605

SUBURB	Sole Parent with Young Children	Sole Parent with Teenage Children	Households with Young Children	Households with Teenage Children	Aged Households	Disabled Households	Keystart Households
BOORAGOON	9.429912692	9.429912692	9.102739549	8.798403412	9.560194527	7.708702175	9.195053049
BOYA	2.114295687	2.114295687	1.51372422	1.449649254	2.782134947	1.558564398	1.489849699
BRENTWOOD	8.340568978	8.340568978	7.92977282	7.644204635	7.981649855	6.392901946	7.439095908
BROOKDALE	0.801908503	0.801908503	0.467418303	0.447313159	1.131236263	0.547487789	0.497062733
BULL CREEK	8.172906877	8.172906877	7.654981934	7.387098013	7.901644729	6.188176509	7.191718584
BURNS	2.647874543	2.647874543	2.233670364	2.138293392	2.962381744	1.927117105	1.810679733
BURSWOOD	4.840720592	4.840720592	5.154052084	5.032354168	5.354393856	4.469429444	4.597798909
BYFORD	0.434754506	0.434754506	0.456142844	0.43849713	0.504488696	0.429565392	0.81725163
CALISTA	4.003907807	4.003907807	3.829698265	3.698363716	3.733062858	2.963095302	2.810834937
CANNING VALE	2.656261725	2.656261725	2.542048311	2.456392607	2.300543563	1.822634652	2.128355561
CANNINGTON	5.488657867	5.488657867	5.409503381	5.250291712	5.324617127	4.357507209	4.810663863
CARABOODA	0.035504411	0.035504411	0.034984594	0.033394385	0.054036343	0.044500517	0.038667183
CARINE	7.196109642	7.196109642	6.908814093	6.662513551	7.849765938	6.218835337	9.062459365
CARLISLE	6.057001231	6.057001231	6.184693682	6.017397771	6.216086759	5.278861286	6.60666132
CARMEL	1.545907274	1.545907274	1.098748737	1.054237922	1.895243459	1.05247963	0.984485494
CARRAMAR	1.392554498	1.392554498	1.113174	1.069340348	1.645861416	1.067736357	0.946553864
CASUARINA	1.413649535	1.413649535	1.067604508	1.035534747	1.573555706	0.917049516	0.872310217
CAVERSHAM	3.553783072	3.553783072	3.263006974	3.134180584	3.952950703	2.832155974	2.651138591
CHURCHLANDS	7.602875562	7.602875562	7.342799048	7.113845239	7.665802837	6.448105375	8.474149186
CITY BEACH	4.641211387	4.641211387	4.263480345	4.113731101	5.2488196	4.197978661	6.529603197
CLAREMONT	7.699994929	7.699994929	7.562835517	7.312149536	8.674959903	7.262215325	8.443040789
CLARKSON	2.555101491	2.555101491	2.317109116	2.225224752	2.383113862	1.720802476	1.656567289
CLOVERDALE	2.655579217	2.655579217	2.722622861	2.641752751	2.986243083	2.457553266	4.042234788
COMO	2.612158297	2.612158297	2.253346475	2.173410072	3.044685832	2.204976313	3.053909466
CONNOLLY	2.118667006	2.118667006	1.723016936	1.661170131	2.507217372	1.67867286	2.314790392
COOGEE	5.590873402	5.590873402	5.389726106	5.210698179	5.319128467	4.206709396	5.012363506
COOLBELLUP	7.761439725	7.761439725	7.537568119	7.278430883	7.846751357	6.460643773	8.654299785
COOLBINIA	1.939379527	1.939379527	1.621787254	1.564410821	2.144455082	1.474721465	1.508363889
COOLOONGUP	6.030187311	6.030187311	6.007846712	5.802352608	7.045652509	5.93549523	7.707355564
COTTESLOE	5.540030053	5.540030053	5.172772407	4.985742699	5.673936444	4.33879964	5.936388024
CRAIGIE	4.833796002	4.833796002	5.245056097	5.051792788	6.637976129	5.506833029	4.936139347
CRAWLEY	1.677427567	1.677427567	1.410999222	1.351390561	1.714993909	1.096105697	1.033291824
CULLACABARDEE	3.109457698	3.109457698	2.724817916	2.627132612	3.54340759	2.573343618	3.290701887

SUBURB	Sole Parent with Young Children	Sole Parent with Teenage Children	Households with Young Children	Households with Teenage Children	Aged Households	Disabled Households	Keystart Households
CURRAMBINE	9.937510463	9.937510463	9.952500934	9.710673975	11.33853651	9.75084622	10.802921267
DAGLISH	4.724122918	4.724122918	4.907328777	4.750700747	5.9144691	4.976408359	4.932423999
DALKEITH	1.696017041	1.696017041	1.407097219	1.353745166	1.795866799	1.134103821	1.101728634
DARLING DOWNS	1.987205618	1.987205618	1.402181513	1.349020685	2.556827827	1.516653749	1.835954702
DARLINGTON	5.754631932	5.754631932	5.541155928	5.354188393	5.636323423	4.477149764	5.742633708
DIANELLA	6.888147632	6.888147632	6.657462155	6.448905918	7.328450723	5.989787772	8.941001437
DOUBLEVIEW	5.736256823	5.736256823	5.446174982	5.254399021	6.338678085	4.957970392	6.606699468
DUNCRAIG	4.18486373	4.18486373	4.055872334	3.932569551	3.917661261	3.144550665	3.717010399
EAST CANNINGTON	5.935916834	5.935916834	6.133940079	5.940326999	6.469896174	5.390057439	6.647244729
EAST FREMANTLE	12.956163108	12.956163108	16.114222914	15.775022033	16.12704864	9 15.016593555	14.359487725
EAST PERTH	1.837037367	1.837037367	1.443794679	1.387977519	2.184474643	1.372561028	1.252517849
EAST ROCKINGHAM	6.874097096	6.874097096	6.980210061	6.78116352	6.811013564	5.850209197	6.886598605
EAST VICTORIA PARK	5.083496226	5.083496226	4.85885852	4.692171653	5.225468643	4.026614486	5.111576454
EDEN HILL	3.788351779	3.788351779	3.50544983	3.379855606	3.892669869	2.963390442	3.668005405
EDGEWATER	0.038755995	0.038755995	0.038496086	0.036746264	0.058523855	0.048196116	0.042548306
ELLENBROOK	4.885023153	4.885023153	4.715421823	4.554636368	4.695601351	3.726258365	4.811436881
EMBLETON	5.183797295	5.183797295	4.877460621	4.722942904	5.338177271	4.159775911	4.642190795
FERNDALE	6.727429431	6.727429431	6.231772174	6.026319398	7.302879142	5.862762763	7.90948577
FORRESTFIELD	1.949036865	1.949036865	1.694909396	1.638951343	2.091125511	1.486732605	1.833509314
FREMANTLE	7.398582877	7.398582877	8.152475056	7.907379862	8.230254996	7.287337645	8.653032688
GIRRAWHEEN	6.491723843	6.491723843	6.367386616	6.139025592	5.9504647	4.793278991	5.641875638
GLEN FORREST	1.469980199	1.469980199	0.89033581	0.852277732	2.041747643	1.03794235	0.911173894
GLENDALOUGH	7.367546202	7.367546202	7.155157268	6.942074296	7.25882166	6.102981102	7.261945379
GOLDEN BAY	0.152892714	0.152892714	0.151356567	0.144476723	0.209805136	0.1727807	0.16042741
GOOSEBERRY HILL	2.182433459	2.182433459	1.654923141	1.594156866	2.733141325	1.72641358	2.258887008
GOSNELLS	5.154748495	5.154748495	4.931922973	4.766656705	4.917655833	3.812879087	3.792224087
GREENMOUNT	3.113068048	3.113068048	2.668402639	2.668402639	3.224000948	2.287800901	2.688166587
GREENWOOD	5.830061257	5.830061257	5.488016299	5.294631057	5.910459346	4.570534391	5.619965664
GUILDFORD	3.774048458	3.774048458	3.630247393	3.509084032	4.213459883	3.276322377	3.816982401
GWELUP	4.306771316	4.306771316	4.095128079	3.949930845	4.651400078	3.662814101	5.725955276
HAMERSLEY	7.156262512	7.156262512	6.902685337	6.657389748	7.327849363	5.828412477	8.01095585
HAMILTON HILL	5.504231966	5.504231966	5.387154577	5.202071709	5.489821983	4.401643118	5.650170353
HAZELMERE	2.551147588	2.551147588	2.275019073	2.187409548	2.891911916	2.030423489	1.89617337

SUBURB	Sole Parent with Young Children	Sole Parent with Teenage Children	Households with Young Children	Households with Teenage Children	Aged Households	Disabled Households	Keystart Households
HEATHRIDGE	4.564270343	4.564270343	4.188221802	4.037520964	4.83801555	3.653465105	4.852927994
HELENA VALLEY	1.751830521	1.751830521	1.299989818	1.245425044	2.214115637	1.276158344	1.234234275
HENLEY BROOK	1.682227978	1.682227978	1.033570442	0.991023901	2.30998784	1.167489192	1.069831184
HERDSMAN LAKE	6.59246414	6.59246414	6.242890787	5.996496248	6.103713171	4.751910567	4.690017518
HERNE HILL	1.231430916	1.231430916	0.791474824	0.758802005	1.644663013	0.862176242	0.792072583
HIGH WYCOMBE	1.596786723	1.596786723	1.354177249	1.304593509	1.748546293	1.204160932	1.357565226
HIGHGATE	18.707335808	18.707335808	22.078434926	21.56522589	22.163640697	20.362707468	19.977633607
HILLARYS	4.30964713	4.30964713	4.099506569	3.955294778	4.494148595	3.535182062	5.255210112
HILLMAN	1.707899898	1.707899898	1.355842888	1.307925854	1.939023834	1.264093194	1.244336283
HILTON	9.154728937	9.154728937	9.416338201	9.106286732	8.824917917	7.428309864	8.756010057
HOCKING	1.715223734	1.715223734	1.335000602	1.285870141	2.052569676	1.238673045	1.173858556
HOPE VALLEY	0.880057062	0.880057062	0.645077083	0.624421557	1.205330833	0.713776221	0.666645626
HUNTINGDALE	2.782522234	2.782522234	2.513124529	2.42338897	2.823368536	2.074952485	2.282711079
ILUKA	2.339702627	2.339702627	1.88706033	1.808492489	2.721841737	1.715525988	1.640786499
INGLEWOOD	9.695039608	9.695039608	9.569114558	9.238956306	9.608344434	7.893275027	10.000338417
INNALOO	6.905455543	6.905455543	6.771745348	6.561101296	7.275735455	5.992569197	8.686309038
JANDAKOT	3.478138761	3.478138761	3.229078232	3.098466135	3.099402914	2.239747035	2.198211802
JANE BROOK	1.785548079	1.785548079	1.288037696	1.233992579	2.152070474	1.216260652	1.12082514
JOLIMONT	8.747393728	8.747393728	8.482381087	8.253443353	9.631548959	8.128571769	9.110140772
JOONDALUP	3.527993	3.527993	3.179040575	3.066962091	3.821085858	2.889360706	3.623082066
JOONDANNA	8.04331525	8.04331525	7.764385143	7.52363956	8.081546576	6.694093963	8.600998593
KALAMUNDA	2.798697704	2.798697704	2.371006709	2.285391066	3.256543252	2.265002847	3.053349083
KALLAROO	4.516217984	4.516217984	4.247469458	4.09314371	4.663037202	3.599176516	5.461242177
KARAWARA	7.068391737	7.068391737	7.033008813	6.797316166	7.404135502	6.077533207	7.221403778
KARDINYA	7.408657725	7.408657725	7.098134438	6.871475422	6.983702315	5.508942877	6.310663839
KARRINYUP	6.80122617	6.80122617	6.701150068	6.464567373	7.395846149	6.002074831	9.15533342
KELMSCOTT	2.391194983	2.391194983	2.189177019	2.111324057	2.598257246	1.936160044	2.071838735
KENSINGTON	8.192250681	8.192250681	8.453665146	8.227370333	8.422262374	7.306724783	8.786273214
KENWICK	3.625305953	3.625305953	3.525172765	3.411704581	3.288238918	2.621501878	2.664533331
KEWDALE	2.599685159	2.599685159	2.591215432	2.523860992	2.627107851	2.155002341	2.903207842
KIARA	4.914908738	4.914908738	4.521637731	4.346131743	4.818866168	3.435381038	3.380128742
KINGSLEY	4.449330329	4.449330329	4.042292207	3.903550199	4.764709784	3.557832661	4.383352584
KINROSS	3.172053801	3.172053801	2.780966112	2.679198185	3.370387988	2.426325882	2.601253761

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KOONDOOLA	4.20515349	4.20515349	4.057311329	3.916645508	3.844466356	3.021183846	3.456888745
KOONGAMIA	2.659147901	2.659147901	2.289360597	2.208231344	2.896758943	1.974686663	2.083804845
LANDSDALE	2.227431531	2.227431531	1.902148226	1.827489608	2.279753807	1.481170051	1.43006835
LANGFORD	3.73018715	3.73018715	3.441063066	3.33506064	3.879058354	2.923195654	3.13849019
LATHLAIN	6.035319682	6.035319682	6.220040739	6.070616095	6.374265081	5.504531507	7.372088334
LEDA	3.845219244	3.845219244	3.606725293	3.463606802	3.706150087	2.833067136	2.623277995
LEEDERVILLE	16.505342888	16.505342888	19.429810364	18.95462535	21.328378705	19.323927377	18.90752526
LEEMING	6.333634752	6.333634752	5.947221331	5.741943588	5.719873211	4.420478449	4.815741911
LESMURDIE	2.618771721	2.618771721	2.143762525	2.065925505	2.99308459	2.003813485	2.40261879
LOCKRIDGE	0.04056251	0.04056251	0.043724278	0.041736811	0.064514988	0.05312999	0.048063676
LYNWOOD	4.425631691	4.425631691	4.045244647	3.914273699	4.587033262	3.454458666	3.910515393
MADDINGTON	5.200570904	5.200570904	5.226040895	5.064077784	4.539359999	3.750611428	3.557502841
MADELEY	2.492379562	2.492379562	2.116370443	2.03826738	2.828486434	1.865321275	1.770428176
MAHOGANY CREEK	1.461583743	1.461583743	0.976512879	0.934707971	1.952127015	1.041612903	0.932757391
MAIDA VALE	2.24831589	2.24831589	1.89229985	1.823557548	2.604944163	1.802330433	2.334230621
MALAGA	4.459302361	4.459302361	4.192389028	4.039024288	4.342117348	3.202159864	3.062123721
MANNING	6.330958573	6.330958573	6.082932205	5.87762712	6.550171135	5.245112466	6.763092646
MARANGAROO	5.47475481	5.47475481	5.297649371	5.107162857	5.219318505	4.139622909	4.950789533
MARMION	4.55301853	4.55301853	4.356147101	4.202449135	5.174337194	4.090233395	6.264172455
MARTIN	0.818517068	0.818517068	0.60939169	0.58463553	1.028859105	0.611208093	0.570840673
MAYLANDS	9.366256505	9.366256505	10.208298926	9.996441275	10.729661982	9.334699509	10.73824548
MEDINA	4.1860537	4.1860537	4.169723099	4.02627221	3.723300214	3.110214815	3.063921106
MELVILLE	7.66705054	7.66705054	7.471570091	7.233048164	7.829956893	6.239960998	7.41103014
MENORA	14.551085328	14.551085328	15.336993838	14.936917152	15.25181345	13.308728749	15.592487883
MERRIWA	2.859425033	2.859425033	2.712698979	2.609133633	2.471662575	1.915789948	1.903812991
MIDDLE SWAN	3.767560673	3.767560673	3.377083035	3.24568812	3.967153436	2.815311968	2.629423594
MIDLAND	4.146501637	4.146501637	4.031009291	3.898278164	4.27996588	3.397522865	3.259905845
MIDVALE	4.017156538	4.017156538	3.961128904	3.809123299	3.9145056	3.057149216	2.941452952
MINDARIE	2.481018571	2.481018571	2.26701564	2.177135015	2.372217518	1.723495766	1.665186185
MIRRABOOKA	6.081297741	6.081297741	5.982174269	5.774782951	5.693374317	4.627816263	5.605948705
MORLEY	6.122960874	6.122960874	5.821050456	5.6296639	5.981181098	4.654163851	5.845534242
MOSMAN PARK	5.279832754	5.279832754	5.359843367	5.177157083	5.994960737	5.101297913	6.622512089
MT CLAREMONT	6.718516837	6.718516837	6.393853117	6.179858767	7.615608574	6.212579964	7.856461566

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MT HAWTHORN	9.749601385	9.749601385	9.63614233	9.387059933	10.374300016	8.692537551	10.988628124
MT LAWLEY	18.76298329	18.76298329	21.80662541	21.26406289	22.34311541	20.09045410	3 20.8724183
MT PLEASANT	6.955045297	6.955045297	6.572693712	6.344320877	7.21184508	5.750221435	7.301291993
MULLALOO	4.109254046	4.109254046	3.896936644	3.755708311	4.28916534	3.319959117	4.884510348
MUNDARING	0.739919128	0.739919128	0.59134151	0.569366836	0.90389609	0.580667891	0.705524926
MUNSTER	2.165435778	2.165435778	1.750736776	1.688400746	2.531608209	1.684439744	2.18701711
MURDOCH	5.574361051	5.574361051	5.289903313	5.105099339	5.190725351	4.142197666	4.641843271
MYAREE	9.188626359	9.188626359	8.905699503	8.635287984	9.466784583	7.644902701	9.246520661
NAVAL BASE	1.142513533	1.142513533	0.911567393	0.886507109	1.573436093	1.06180783	1.44353839
NEDLANDS	6.661509605	6.661509605	6.71721529	6.479075495	8.150865946	6.723507332	5.790535623
NOLLAMARA	6.602959118	6.602959118	6.584680228	6.369884835	6.232819785	5.194933591	6.857825567
NORANDA	4.24734205	4.24734205	4.022097591	3.886439991	4.024194011	3.140699344	3.636327079
NORTH BEACH	5.608844508	5.608844508	5.420852658	5.229858325	5.978022435	4.774281948	7.265013575
NORTH FREMANTLE	4.346624632	4.346624632	4.755460908	4.606212411	5.663339159	4.935315377	6.41600297
NORTH LAKE	5.514483244	5.514483244	5.195608985	5.009816332	5.060738752	3.919594891	4.162587986
NORTH PERTH	19.73136369	9 19.73136369	9 22.98792996	1 22.40012496	3 23.79438794	6 21.43555363	2 21.797000348
NORTHBRIDGE	19.7159499	19.7159499	25.83668907	1 25.13813737	2 28.28926971	7 25.97052349	4 23.952723552
OCEAN REEF	3.154075893	3.154075893	2.818425029	2.715216374	3.5321044	2.571189695	3.592839573
OCONNOR	10.00739857	2 10.00739857	2 10.2197803	9.867181157	9.607807071	7.794498881	7.689979944
ORELIA	4.153643776	4.153643776	4.060110831	3.914671229	3.990942026	3.163993304	3.013612972
OSBORNE PARK	8.326585159	8.326585159	8.167787054	7.930564475	8.251960121	6.897486752	9.030280585
PADBURY	5.143441339	5.143441339	4.748568089	4.579584701	5.471375932	4.169578225	5.91680425
PALMYRA	10.04449494	9 10.04449494	9 10.12474946	7 9.805336026	10.08780956	1 8.331164208	9.988472795
PARKERVILLE	0.882124948	0.882124948	0.507886279	0.485804267	1.278597796	0.608753596	0.554043739
PARKWOOD	3.691431753	3.691431753	3.187286258	3.065447725	4.100960149	2.805575688	2.607088119
PARMELIA	4.533040825	4.533040825	4.328930998	4.188202883	4.139645394	3.28357474	3.094224791
PEARSALL	1.050745106	1.050745106	1.086491245	1.046650734	1.07152663	0.894786636	0.81436836
PEPPERMINT GROVE	5.895530625	5.895530625	5.832098528	5.627594738	6.259367305	5.25266576	6.645203238
PERTH CITY	17.84500276	3 17.84500276	3 21.98325641	1 21.55966962	6 22.64954726	8 21.04331114	7 19.629453406
PORT KENNEDY	0.460049473	0.460049473	0.377088713	0.362585301	0.572169633	0.398629668	0.58410331
QUEENS PARK	4.739698211	4.739698211	4.790327472	4.64666103	4.353101238	3.682564261	4.230006456
QUINNS ROCKS	2.531474089	2.531474089	2.365812707	2.275781449	2.351739132	1.807525881	2.05211601
REDCLIFFE	2.785547995	2.785547995	2.814090718	2.732971844	3.05629799	2.465460086	3.624865149

SUBURB	Sole Parent with Young Children	Sole Parent with Teenage Children	Households with Young Children	Households with Teenage Children	Aged Households	Disabled Households	Keystart Households
RIVERTON	4.234815455	4.234815455	3.774664026	3.640446179	4.391155308	3.312140536	3.991550949
RIVERVALE	4.994748367	4.994748367	5.085752241	4.943223309	5.588920576	4.598547188	6.541635129
ROCKINGHAM	2.94703716	2.94703716	2.632429906	2.541567218	3.190309405	2.372613673	2.376229809
ROLEYSTONE	0.734320302	0.734320302	0.520198743	0.500575714	0.980165478	0.601578289	0.692892115
ROSSMOYNE	6.854584307	6.854584307	6.34935388	6.123032577	6.814288489	5.362499147	6.571614506
SAFETY BAY	2.720686847	2.720686847	2.477916387	2.391073449	2.854319567	2.133170285	2.311752507
SALTER POINT	4.503397488	4.503397488	4.24944423	4.09555535	4.954841337	3.683743742	3.580657705
SAMSON	8.659832646	8.659832646	8.412010325	8.124817621	7.96230829	6.346749778	7.665279944
SCARBOROUGH	5.655596503	5.655596503	5.518119469	5.322999489	6.400574818	5.133615311	8.026364446
SECRET HARBOUR	0.275507058	0.275507058	0.273158426	0.261776825	0.335625854	0.282632298	0.271726064
SHELLEY	4.02906077	4.02906077	3.5254681	3.403719327	4.42471437	3.262741591	3.969514709
SHENTON PARK	8.828452756	8.828452756	8.699794167	8.441917469	9.962419923	8.472281571	9.364136649
SHOALWATER	2.085938603	2.085938603	1.932364391	1.866311915	2.208095232	1.714919696	1.712306912
SINAGRA	1.373893352	1.373893352	0.822220823	0.787776439	1.868256234	0.912338875	0.830002647
SORRENTO	4.272188762	4.272188762	4.069061425	3.925635985	4.958963033	3.894418679	5.813517531
SOUTH FREMANTLE	6.691672815	6.691672815	7.187104837	6.952216189	6.99329736	6.053134702	6.843855437
SOUTH GUILDFORD	3.810316431	3.810316431	3.629876613	3.502273282	4.111571936	3.069287951	2.948420293
SOUTH LAKE	2.471763953	2.471763953	2.253591466	2.171530256	2.425220729	1.771390183	1.765484456
SOUTH PERTH	8.232716651	8.232716651	9.506581966	9.359213429	9.836748683	8.923993623	9.601998475
SOUTHERN RIVER	2.218887462	2.218887462	1.961693043	1.880967259	2.357093036	1.62199788	1.500755025
SPEARWOOD	2.413251201	2.413251201	2.120630995	2.047337496	2.753426528	1.977624001	2.773772575
ST JAMES	8.32016299	8.32016299	8.412066853	8.150256589	8.324814058	7.003385235	7.994835229
STIRLING	6.025095309	6.025095309	5.946379139	5.759018403	5.986445762	4.907974737	7.057631229
STONEVILLE	1.016673998	1.016673998	0.723538722	0.69571031	1.308993331	0.743851109	0.852369215
STRATTON	3.063600321	3.063600321	2.857967914	2.761315302	2.952928131	2.256296704	2.095892203
SUBIACO	7.436177308	7.436177308	7.688523997	7.487426921	8.48592848	7.484566047	7.524281142
SUCCESS	1.822063377	1.822063377	1.225764588	1.174644389	2.33030498	1.240826649	1.147274294
SWAN VIEW	3.076053254	3.076053254	2.665342612	2.569752511	3.324750665	2.298325085	2.400148065
SWANBOURNE	4.410727991	4.410727991	4.246351542	4.098030329	5.275586692	4.320911872	5.977875625
TAPPING	1.66715006	1.66715006	1.252523905	1.202848953	2.048983577	1.245789388	1.103695176
THE VINES	0.953141542	0.953141542	0.590874293	0.566705845	1.271235151	0.631931245	0.590271679
THORNLIE	5.308141487	5.308141487	5.1786578	5.009478654	4.949953049	3.956147997	4.117982029
TRIGG	4.834122962	4.834122962	4.754334797	4.583975766	5.318592253	4.326226069	6.675019309

SUBURB	Sole Parent with Young Children	Sole Parent with Teenage Children	Households with Young Children	Households with Teenage Children	Aged Households	Disabled Households	Keystart Households
TUART HILL	7.988741229	7.988741229	7.86481251	7.611358183	7.646580599	6.252858637	8.538200979
UPPER SWAN	0.891192282	0.891192282	0.542553674	0.520486123	1.232512167	0.611399704	0.560892918
VICTORIA PARK	7.832091303	7.832091303	8.202978061	7.992286597	8.144815322	7.104549629	8.634703611
VIVEASH	2.864865254	2.864865254	2.551686142	2.453569354	3.350931588	2.366194539	2.214941325
WAIKIKI	2.112288454	2.112288454	1.870683326	1.801618583	2.209528153	1.5740969	1.814454918
WALLISTON	2.069478217	2.069478217	1.658889153	1.600278032	2.412876192	1.572637411	1.906033417
WANDI	0.862709234	0.862709234	0.515559654	0.493361408	1.18436306	0.58082272	0.523240448
WANGARA	2.239792023	2.239792023	1.783994693	1.721647097	2.734573658	1.700176585	1.585213435
WANNEROO	1.724216508	1.724216508	1.252040132	1.206192435	2.055015726	1.219299942	1.392178923
WARNBRO	1.319817565	1.319817565	1.193079208	1.147576162	1.313210154	0.962428235	1.164218058
WARWICK	6.719428144	6.719428144	6.583121437	6.347424459	6.56167508	5.310445269	6.534267378
WATERFORD	6.082809301	6.082809301	5.850363269	5.65342622	6.338478404	5.105033929	6.15729013
WATERMAN	4.982281203	4.982281203	4.848199594	4.675384225	5.850252651	4.677728333	7.096320775
WATTLE GROVE	4.099818047	4.099818047	3.911885346	3.784194678	3.981692245	3.012656328	2.951648688
WATTLEUP	1.358337706	1.358337706	0.919680776	0.881651177	1.814166323	0.98412999	0.907008609
WELLARD	1.23192102	1.23192102	0.968524697	0.940327971	1.314045547	0.796929375	0.763887257
WEMBLEY	9.641083679	9.641083679	9.327161534	9.071886091	10.549944039	8.927059354	10.444528341
WEMBLEY DOWNS	5.889557473	5.889557473	5.659244568	5.485619777	6.318362766	5.154946287	7.523918231
WEST LEEDERVILLE	15.037956756	15.037956756	18.36579712	17.910545072	20.993865653	18.621104134	17.003742933
WEST PERTH	17.868028039	17.868028039	21.414850274	20.968702186	22.500192335	20.673321989	19.98366533
WEST SWAN	1.376980338	1.376980338	0.91256727	0.874629563	1.796394371	0.955381894	0.882383971
WESTFIELD	2.465736323	2.465736323	2.275937635	2.19359388	2.565870219	1.905428925	1.930267308
WESTMINSTER	6.416605008	6.416605008	6.358653361	6.129859001	6.045437617	4.949683058	6.557031373
WHITE GUM VALLEY	7.729537887	7.729537887	8.008494616	7.753552516	7.773383042	6.597159263	8.08689552
WILLAGEE	9.093682281	9.093682281	8.841357473	8.555151417	8.893847206	7.089671281	8.237982438
WILLETTON	5.682677686	5.682677686	5.252211292	5.072703165	5.391662307	4.160218297	4.832621298
WILSON	5.078338839	5.078338839	4.6802275	4.529449519	5.327545645	4.10968063	4.785374442
WINTHROP	10.083578933	10.083578933	9.646272975	9.31737786	10.043197173	7.986418854	9.135697361
WOODLANDS	6.889053106	6.889053106	6.809620771	6.596366126	7.17019559	5.931366462	8.172629097
WOODVALE	4.422437791	4.422437791	3.985097201	3.844901155	4.713509975	3.447461406	4.307208404
YANGEBUP	2.875290126	2.875290126	2.507228523	2.416950503	3.033816011	2.133452582	2.443332572
YOKINE	9.425096681	9.425096681	9.303492831	8.999512338	9.22384352	7.660393248	10.276214053

Appendix 2: Keystart Profile

During September and October 1999, 609 Keystart households were surveyed to determine their satisfaction with the scheme and the retailers. As part of this, some demographic information was collected, including:

The respondent occupations were:

- white collar 30.4%
- blue collar 41.2%
- not working 28.4%

Respondent ages were:

- 18--24 11.2%
- 25--34 41.5%
- 35--44 32.7%
- 45+ 14.6%

Respondent lifecycle stages were:

- Young single 6.2%
- Young couple 12.0%
- Unrelated adults 1.3%
- Single parent, child<12 7.6%
- Two parent, child <12 49.3%
- Single parent child teenager 2.8%
- Two parent child teenager 10.5%
- Older couple no children 7.1%
- Older single 2.6%
- Refused info 0.6%

Household incomes were:

- up to $30,000 24.8%
- 30,001--50,000 39.7%
- 50,000+ 35.5%

The majority of respondents described as not working were housewives, with a small proportion being students, unemployed or pensioners.

Appendix 3: Perth Suburbs Excluded from Research

Baldivis	6171
Bedfordale	6112
Butler	6032
Floreat	6014
Forrestdale	6112
Gidgegannup (Unbounded)	6083
Hopeland	6125
Jarrahdale	6124
Karnup	6176
Karrakup	6122
Mardella	6125
Nowergup	6032
Oakford	6121
Oldbury	6121
Perth Airport	6105
Pickering Brook	6076
Pinjar	6065
Reservoir	6076
Ridgewood	6030
Sawyers Valley	6074
Serpentine	6125
The Lakes	6556
Two Rocks	6037
Wooroloo	6558
Yanchep	6035

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