A VISION FOR SOUTH DUBLIN’S FUTURE
Managers Invitation

The review of the County Development Plan and the preparation of a new Plan is one of the most important functions of South Dublin County Council. The South Dublin County Council Development Plan 2016-2022 will set out a vision for South Dublin’s future to 2022 and beyond.

The review has come at a time of change. Following a period of economic contraction the outlook for the period of the next Plan is more positive. This time of transition and renewed growth presents new challenges in the way we plan for our future and offers opportunities to examine innovative ways and means of achieving a brighter future for the citizens of South Dublin County.

The publication of the booklet “A Vision for South Dublin’s Future” together with these accompanying background issues papers is the first step in the plan making process. The booklet and issues papers present an overview of the main development issues currently impacting on South Dublin County and identifies the kind of planning matters that the next County Development Plan could address.

We have attempted to highlight the issues that we think are important but this list is by no means exhaustive. Now we want to hear from you. Have we overlooked issues, which are of importance to you? If so we need to know what these are.

Public input at the start of the Plan making process is important so that the final Plan can reflect and respond to public concerns and aspirations. The success of the next County Development Plan depends on the activate participation of citizens, groups and bodies that are engaged in South Dublin County.

Daniel McLoughlin, 
Chief Executive, South Dublin County Council 
September 2014
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Population and Housing
1.0 Introduction

Population and housing trends for South Dublin County are outlined below. This paper will provide a context for the framing of policy under the review of the South Dublin County Council Development Plan, 2010 – 2016, including its Core Strategy. The population and household statistics, trends and projections presented are derived from census data, regional population projections, housing projections and housing completions data.

2.0 A Profile of the County’s Population

2.1 Total Population

In 2011, South Dublin County had a population of 265,205 persons, of which 129,544 were male and 135,661 were female. This represents 20.8% of the Dublin Region’s population and 15% of the Greater Dublin Area’s (GDA’s) population. The County experienced population growth of 3.4% from 2002 to 2006 and of 7.4% from 2006 to 2011, an 11% growth rate overall. This is relative to a growth rate of 13.4% in the Dublin Region and a GDA growth rate of 17.5%.

<table>
<thead>
<tr>
<th>Census Year</th>
<th>South Dublin</th>
<th>DLR</th>
<th>Fingal</th>
<th>Dublin City</th>
<th>Dublin Region</th>
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<tr>
<td>2002</td>
<td>238,835</td>
<td>191,792</td>
<td>196,413</td>
<td>495,781</td>
<td>1,122,821</td>
</tr>
<tr>
<td>2006</td>
<td>246,935</td>
<td>194,038</td>
<td>239,992</td>
<td>506,211</td>
<td>1,187,176</td>
</tr>
<tr>
<td>2011</td>
<td>265,205</td>
<td>206,261</td>
<td>273,991</td>
<td>527,612</td>
<td>1,273,069</td>
</tr>
<tr>
<td>Increase</td>
<td>26,370</td>
<td>14,469</td>
<td>77,578</td>
<td>31,831</td>
<td>85,893</td>
</tr>
<tr>
<td>% Change</td>
<td>11.0%</td>
<td>7.5%</td>
<td>39.5%</td>
<td>6.4%</td>
<td>13.4%</td>
</tr>
</tbody>
</table>

2.2 Age Profile

In terms of age profile, South Dublin County has a relatively young population that is aging, in line with the national trend. In 2011 the 0-18 age group accounted for 23.1% of South Dublin’s population, the 15 – 24 age group accounted for 13.1%, the 25-44 age group accounted for 33%, the 45-64 age group accounted for 22.1%, and the 65 plus age group accounted for 8.7% of the population.

In the inter-censal period from 2006 – 2011, the age profile of the County’s population changed. This is further examined below under various age cohorts.

2.2.2 Pre-Adult (0 – 18)

Those in the 0-18 category within South Dublin increased by 8.7% (71,736 to 77,965 persons) between 2006 and 2011, relative to a 9.3% increase nationally. At 29% of South Dublin’s population, the County has the second highest proportion of people in this age group in the Dublin Region. This reflects an increasing birth rate in the County, which peaked in 2011.

2.2.3 Young Adults (19 – 24)

Numbers in the young adults category decreased by 11% (22,231 to 18,095 persons) between 2006 and 2011, relative to a decrease of 8% nationally. This decrease was the highest recorded in the Dublin Region having fallen from 11% of County’s population in 2006 to 6.8% in 2011. The reduction in this age category is likely to be a result of lower birth rates in the late 1980s and high emigration among this mobile group. While the majority of 19-24 year olds live at home nationally, the percentage living at home in South Dublin County increased from 59% in 2006 to 66% in 2011.
2.2.4 Adults (25 - 64)
Numbers in the 25-64 working age categories in South Dublin increased by 8.1% (135,107 to 146,092 persons) between 2006 and 2011, relative to a 9.6% increase nationally. As a proportion of the County’s population this age cohort increased from a share of 54% to a share of 55%.

2.2.5 Older People (65 plus)
The population in the 65 plus age group in South Dublin increased by 29% (17,861 to 23,053 persons) between 2006 and 2011, relative to a national increase of 13%. This age cohort represents 9% of the County’s population, an increase in share of 2% on 2006. This age cohort has the second highest share of the adult population in the County and is the most rapidly growing in terms of numbers and share.

2.2 Families
2.2.1 Family Cycle
The following classification is used by the Central Statistics Office (CSO) for family cycle:
- Pre-family: Married or cohabiting couple without children where female is under 45 years;
- Empty-nest: Married or cohabiting couple without children where female is aged between 45 and 64 years;
- Retired: Married or cohabiting couple without children where female is aged 65 years and over;
- Pre-school: Family nucleus where oldest child is aged 0-4 years;
- Early-school: Family nucleus where oldest child is aged 5-9 years;
- Pre-adolescent: Family nucleus where oldest child is aged 10-14 years;
- Adolescent: Family nucleus where oldest child is aged 15-19 years;
- Adult: Family nucleus where oldest child is aged 20 years and over.

Adult families accounted for the largest proportion of families in South Dublin in 2011 at 26.5% having dropped from 28.6% in 2006. This drop may be related to the emigration of young adults. This also compares to 24.9% share of adult families for the State in 2011.

The proportion of pre-school (12.8%), early school (12%) and pre-adolescent (11.5%) families within the County was greater than that recorded across the State for all three family types and achieved a combined proportion of 36.3% of families, the second highest recorded proportion of young families in the Dublin Region, increasing from a share of 34.2% in 2006.

Empty nest and retired families accounted for 8.9% and 6.8% of families in South Dublin respectively thus achieving a combined share of 15.8%. This was relatively low compared to that recorded for the State and other Counties in the Dublin Region but had increased from a combined share of 13.4% of families in 2006.

In summary, while adult families make up the largest proportion of families in the County, this family type has lost share to younger and older families. This raises issues in terms of the provision of services, schools and accommodation for older and younger populations.

2.2.2 Family Size
The average family size in South Dublin in 2011 was 1.4 children (reduced from 2 children in 2006). This is equal to the national figure but was the highest recorded in the Dublin Region, highlighting the need for high quality services, accommodation and schools for young families and children in the County.

Family size (measured in average number of children per family) has been falling across the State in recent years. In 1991 there were 2.0 children on average in each family. This had fallen to 1.8 children in 1996, 1.6 children in 2002 and 1.4 by 2006. In 2011 the average number of children across the State fell to just below 1.4 children per family, representing a slowdown in the rate of decrease in family size. A high number of births between 2006 and 2011 is considered to be a contributing factor in this slowdown.
2.3 Conclusion – County Profile
The population and family profile of South Dublin is relatively young compared to the State and other Counties in the Dublin Region but is growing older. The highest proportion of people and families are within the adult age and adult family cohorts but have lost their share to younger (0-18) and older (65+) cohorts and family types in the last inter-censal period. This indicates a greying population but one with an expanding population of children putting a greater squeeze on the working population (15 – 64). This trend is projected to continue under the CSO Regional Population Projections 2016 – 2031, which poses issues in terms of increased demand for services and accommodation for older and younger people including schools, public transport, services and residential accommodation.

In terms of the working population, the share of people in the young adult age cohort (19 – 24) has decreased significantly in South Dublin in the last inter-censal period and was the highest recorded decrease in the Dublin Region. This indicates a high degree of migration from the County for this mobile age cohort and could create a need for a further Development Plan policy response.

3.0 Housing
3.1 Average Household Size
In 2002 average household size in South Dublin was 3.2 persons relative to a state average of 2.8. The gap narrowed in 2011, with the County average reducing to 2.9 persons relative to the state average of 2.7. While average household size has been falling throughout the Dublin Region, South Dublin represented the largest reduction. The reductions are likely to reflect smaller family sizes and the increase in older family types. The reduction in household size nationally appears to be levelling off. Consideration will need to be given to the implications of smaller household sizes in the context of the draft plan strategy and whether this factor alone would give rise to a demand for smaller housing units.

3.2 Housing Stock
Nationally, housing stock increased rapidly from 1996 to 2011 and the speed of housing growth far outpaced population growth. In South Dublin, there were 97,298 housing units in 2011, representing an increase of 11% on the 2006 stock of 87,484 units and a 27% increase on the 2002 stock of 76,666 units. The most recent increase in South Dublin was low relative to other other GDA counties with Fingal, Kildare and Meath experiencing 14% increases between 2006 and 2011. This may partially explain the loss of population from South Dublin due to migration in the last inter-censal period (see section on Migration below). South Dublin had the second highest number of housing units the Dublin Region in 2002. By 2011, the County had the third highest number of housing units in the Region.

1 A household is defined as either one person living alone or a group of people living at the same address with common housekeeping arrangements, Census, 2011.
There was a slowdown in growth between 2006 and 2011, reflecting a national and regional trend. The average annual growth rate for South Dublin between 2006 and 2011 was 2.2% compared to 3.5% between 2002 and 2006. This compares with the State’s average annual growth rate of 2.5% between 2006 and 2011 and 5.3% between 2002 and 2006. These rates reflect unprecedented high levels of output from 2006 to 2008 and a significant slowdown thereafter.

Despite the increase in the number of newly constructed apartments, the semi-detached house remains the most common type of accommodation in South Dublin and represented 44% of occupied housing in 2011. This was similar to the share recorded at State level. This confirms that the County’s housing stock remains predominantly low density. Promoting an appropriate dwelling mix is a key consideration in the context of ensuring for an efficient use of finite land resources and economies of scale that can support viable community services and public transport facilities.

3.3 Type of Accommodation

The number of apartments as a proportion of overall housing stock has risen significantly in South Dublin from 2.6% (1,935 apartments) in 2002 to 22.6% (22,982 apartments) in 2011 and has outpaced the growth of all other dwelling types in the County with the largest increase in apartments occurring between 2006 and 2011 where the share increased from 8% to 23% (6,443 - 22,982 apartments).

Despite the number of owner occupied dwellings rising by 4.9% in South Dublin (from 59,791 to 62,715) between 2006 and 2011, the strong growth in rented accommodation has caused the overall home ownership rate to drop from 74.4% to 69.8%. A similar home ownership rate and drop has been recorded at State level.
3.5 Dwelling Vacancies

South Dublin recorded the lowest dwelling vacancy rate in the State in 2011 at 5.4% (5,249 units), having fallen from 6.2% in 2006. Vacancy rate across the Dublin Region peaked in 2006 before dropping by 2011. The 2002 vacancy rate of 2.8% in South Dublin is considered to reflect a normal vacancy rate for the County. Of the vacant dwellings in South Dublin in 2011, 53% (2,786) comprised houses and 46% (2,439) comprised flats. At State level 58% of vacant dwellings were houses, 21% were flats and 21% were holiday homes.

3.6 Period of Construction

Of all occupied dwellings in South Dublin 26% were built between 1971 and 1980 and 19.6% between 2001 and 2011, representing the two most prolific decades of dwelling construction in the County. Other notable decades for dwelling construction includes the 1980s (14% of stock) and the 1990s (17% of stock). A total of 75% of occupied housing stock was constructed post 1969 (68,351 units), reflecting the expansion of Dublin City into South Dublin County since the beginning of the 1970s. The number of dwellings built pre 2000 and prior to the improvements in building regulations in terms of energy efficiency comes to 67,790, 75% of occupied stock. The energy efficiency and CO2 emissions of this aging housing stock will be a key consideration for the new Plan.

3.7 Rural Housing

One-off houses are defined by the CSO as occupied detached houses with ‘individual septic treatment systems’ in ‘rural areas’. Rural areas are defined as dwellings outside clusters of 1,500 or more people. In South Dublin, a total of 1,538 households met these criteria in 2011 having increased from 1,302 (approx.) households in 2002, an 18.1% increase. It is considered, however, that the number of dwellings served by septic tanks provides for a more accurate reflection of rural dwellings as the vast majority of urban and suburban dwellings in South Dublin are served by the foul sewerage system. A total of 2,061 dwellings in the County were recorded under Census 2011 as being served by an individual septic tank or treatment system. This increased from 1,836 dwellings in 2006 and 1,697 in 2002. This 21.4% increase compares with an increase of just 17.1% for such dwellings types across the State for the same period.

Given that South Dublin County is a predominantly urban County with a relatively limited rural hinterland that accommodates a village network and housing mainly in the non-mountain areas, the pace of rural housing growth since 2002 at 21.4% is significant and is likely to be unsustainable in the longer term.

3.8 House Completion Data

Department of Environment, Community and Local Government housing completions data indicates that housing outputs in the Dublin Region peaked between 2005 and 2007 and that all four of the Dublin Counties experienced a substantial decline in completions thereafter. House completions in South Dublin reached a peak of 3,256 dwellings at the end of 2005 before dropping rapidly year on year to 203 dwellings by the end of 2013, a drop of 94%.
A similar drop in output occurred in the other three Dublin Counties.

The number of house completions at State level reached a peak of 93,419 in 2006 before dropping rapidly year on year to 8,301 dwellings by the end of 2013 representing a drop of 91%. It is considered that this dramatic reduction in construction output combined with problems in the financial/banking industry has damaged the capacity of the construction industry. This is noted in the recent Government report entitled Construction 2020 – A Strategy for a Renewed Construction Sector (2014), which advises that the construction sector has been badly damaged and faces a number of financial constraints.

3.9 Social Housing Need & Provision

Based on the latest Housing Needs Assessment Reports (Housing Agency, 2011 & 2013), the net social housing need in South Dublin (excluding those already in social housing support) increased by approximately 63% between 2002 and 2013 (from approx. 3,800 households to approx. 6,200 households). This has occurred despite a 23% reduction in housing need between 2011 and 2013 having reached a high of approximately 8,000 households in 2011. During the period 2002 to 2013, social housing output (Local Authority Housing completions, Local Authority Housing Acquisitions and voluntary and co-operative housing) peaked in South Dublin at approximately 600 dwellings in 2006 having largely increased year on year from 2002. Since this peak, output reduced year on year to 19 dwellings in 2013.

A recent NESC report entitled Social Housing at the Crossroads: Possibilities for Investment, Provision and Cost Rental (2014) suggests that this increasing supply and demand differential i.e. the gap between social housing need and social housing output, has occurred across the State and that there is a need to devise effective policy approaches at a national level to address this issue.

3.10 Housing Conclusion

Despite a significant increase in housing stock in South Dublin over the past decade, the relatively low rate of increase compared to some of the other GDA counties raises issues in terms of achieving a more even share in housing growth particularly in the Dublin Region and ensuring that the bulk of housing is directed to areas that are accessible to public transport, employment, recreational amenities and community facilities. Consideration will also need to be given to the implications of smaller household sizes and whether this factor alone would give rise to a demand for smaller housing units.

The County is now considered to be moving towards a ‘normal vacancy rate’ and the recent slowdown in housing output across the State and pending review of the Regional Panning Guidelines for the GDA presents the opportunity to deliver housing growth in a sustainable manner that ensures balanced development across the GDA and Dublin Region. It is noted, however, that the dramatic reduction in construction output combined with problems in the financial/banking industry has damaged the capacity of the construction industry to meet housing demand. Furthermore, the gap between the supply and demand for social housing in the County requires a response at a national, regional and County level.
4.0 Population Growth and Migration

4.1 Population Growth

CSO Census results show that the population of the GDA increased significantly between 2002 and 2011 with varying rates of increase between each County. For both inter-censal periods the Dublin Region experienced an overall growth rate of 13.4%. In contrast, the population of South Dublin increased by 11%. The County had the second highest population of the four Dublin counties in 2002 and 2006. By 2011, it had the third highest population. High population growth rates in the Mid-East Counties of Kildare and Meath also outpaced that of South Dublin. This occurred despite the growth rate in South Dublin increasing from 3.4% between 2002 and 2006 to 7.4% between 2006 and 2011. In contrast to the other GDA Counties, South Dublin’s population growth relied completely on natural growth (births minus deaths) particularly between 2006 and 2011. This helps to explain the County’s slower growth rate compared to other GDA Counties which all experienced in-migration.

4.2 Migration

Results from the 2011 Census showed a return to a small net migration inflow into the Dublin Region marking a change from patterns observed in 2002 and 2006 when there was a large net outflow (including from South Dublin) to the neighbouring regions particularly to the Mid-East Region. South Dublin was, however, the only County in the GDA to have experienced net out-migration in the inter-censal period 2006–2011. Although the population in South Dublin rose by 18,270 persons, natural increase accounted for 19,080 persons, resulting in net out-migration of 810 persons. This contrasts with substantial in-migration to the neighbouring Dublin counties and to the Mid-East Counties.

Vital statistics published since the 2011 Census indicate that South Dublin experienced significant natural growth due to an increased birth rate that peaked in 2011. It is calculated that (excluding migration) the population of South Dublin for 2013/2014 has reached approximately 275,000 having grown by approximately 9,500 people (4%).

The share of people in the young adult age cohort (19 – 24) decreased significantly in South Dublin in the last inter-censal period and was the highest recorded decrease for this cohort in the Dublin Region having fallen from 22,231 (11% of County’s population) in 2006 to 18,095 (6.8% of population) in 2011. It is likely that the shrinking of this relatively mobile age cohort accounted for a significant proportion of out-migration from the County.

In order to ensure a more even share of population growth across the Dublin Region and to prevent further out-migration from South Dublin it will be necessary to consider policies and objectives that promote a choice of good quality places to live, work, particularly for young adults, as part of the Development Plan Review.
4.3 Regional Population Projections

Notwithstanding the current uncertainties surrounding the economy, migration and housing; population projections still point to national population growth with a large proportion of growth focused on the Greater Dublin Area. The Regional Planning Guidelines for the Greater Dublin Area 2010 – 2022 incorporate 2016 and 2022 population targets based on Census 2006 data for the Greater Dublin Area. The 2016 population target for the GDA is 1.956 million persons and the 2022 target is 2.104 million persons. The RPG targets have yet to be updated to reflect Census 2011 data or more recently published CSO forecasts.

The CSO published Regional Population Projections 2016 – 2031 (December 2013) are based on the results of Census 2011 and revise previous population projections downward. The projections forecast a 2021 GDA population of between 1.949 million and 2.044 million depending on a range of migration (internal and external) and fertility scenarios. The ‘M2F2 Traditional’ scenario is considered by the CSO to be the most likely scenario and this forecasts a population of 1.858 million for the GDA by 2016, 1.973 million by 2021 and 2.087 million by 2026.

Under the CSO ‘M2F2 Traditional’ scenario the population in all regions is projected to grow due to natural increase. The GDA is the only region that is projected to gain additional population from internal migration and is forecast to grow by 178,000 (9.9%) between 2011 and 2021 to account for 39.6 per cent of the State’s population by 2021. A population of 1.448 million is forecast in the Dublin Region by 2026 (growth of 186,000 people/15%).

4.3.1 Projected Regional Age Structure

Under the CSO Regional Population Projections 2016 – 2031 ‘M2F2 Traditional’ Scenario, the number of young persons (i.e. those aged 0-14 years) within the State is projected to increase steadily up to 2021. For those aged 15 to 24 years, the Dublin Region is projected to see an increase of 6.6% while those within the 25 to 44 age group will decrease by 10.1%. The number of older persons (65 years and over) is projected to increase substantially in every region between 2011 and 2021, with a 33.4% increase in the Dublin Region. All regions are expected to see rises in the Old Age Dependency Ratio (those aged 65 years and over as a percentage of those aged 15-64). These projected age profiles will further increase demand on services and accommodation for older and younger people.

4.4 Extrapolated Population Growth

South Dublin has steadily maintained 21% of the population of the Dublin Region over the last three recorded censuses (2002, 2006 & 2011). With the substantial natural growth (9,500 people/4%) experienced in the County since 2011 and with a reversal of out-migration, it is likely that the County will increase its share of growth during the lifetime of the proposed Development Plan and beyond.

The population targets set out under the Regional Planning Guidelines can be compared with different population projections extrapolated from the CSO Regional Population Projections 2016 – 2031 (M2F2) to develop the following population scenarios for the County:

- Scenario A: RPG target population for County for 2016 and 2022 using CSO 2011 Census population as a base
- Scenario B: Continued share of 21% of Dublin Region’s projected population from 2011 up to 2022 using CSO Regional Population Projections
- Scenario C: 25% share of Dublin Region’s projected population growth from 2011 to 2022 using CSO Regional Population Projections

As illustrated in the graph and table overleaf, it is calculated that the population of South Dublin could grow by between 26,000 (Scenario B) and 43,000 (Scenario A) people from 2011 to 2022 and between 19,000 (Scenario B) and 23,000 (Scenario A) from 2016 to 2022 depending on the scenario used.

Scenario C is considered to the most realistic population target given that the Scenario A (RPG) targets are based on CSO 2006 data, which have been revised downwards under the more recent CSO (2011 based) Regional Population Projections. In the context of the increase in natural growth experienced in the County (as demonstrated by CSO Vital Statistics) since 2011 and the likely reversal of out-migration from the County, Scenario B would be likely to represent an underestimation of the share of population growth and would not reflect a more balanced distribution of population growth across the Dublin Region.

4.5 Population Growth & Migration Conclusion

The projected natural growth, in-migration and increase in population for those aged 15 – 24 years, particularly for the Dublin Region, under the CSO Regional Population Projections 2016 – 2031 (‘M2F2 Traditional’ Scenario) represents an opportunity for South Dublin to fall in line with all other GDA counties in terms of the attraction of in-migration and reversing the trend of out-migration.
In the context of the substantial natural growth (9,500 people/4%) experienced in South Dublin since 2011 and the likely reversal of out-migration, it is likely that the County will increase its share of growth during the lifetime of the impending Development Plan and beyond.

Using the CSO Regional Population Projections 2016 – 2031 as a base, it is estimated (using Scenario C and breaking these figures down to correlate with the lifetime of the County Development Plan 2016 – 2022) that the population of South Dublin could reach 296,700 by 2022. This represents a growth of 22,750 people between 2016 and 2022 and 31,500 people (12%) between 2011 and 2022.

In order to ensure a more even share of population growth across the GDA and Dublin Region and to reverse the trend of out-migration from South Dublin, it will be necessary to consider policies and objectives as part of the County Development Plan review that promote a choice of good quality places to live, work, and study, particularly for young adults who might otherwise migrate elsewhere.

5.0 Housing Projections
5.1 Housing Agency Report
The recently published (April 2014) Housing Agency Report Housing Supply in Ireland’s Urban Settlements 2014 – 2018 projects that 47% (37,581 units) of the State’s housing supply over the next 5 years is required across the Dublin Region. These projections were carried out using the ‘M2F2 Traditional’ Scenario published under the CSO Regional Population Projections 2016-2031.

The Housing Agency figures advise an immediate minimum supply requirement of 5,663 units in the Dublin Region in 2014, which is projected to rise year on year to a minimum of 8,970 units per annum by 2018. It is also projected that 57% of all required households in the Dublin Region will be for one person (25.4%) and two person (31.6%) households and that three person households will account for 18% of the required housing in the Dublin Region.

South Dublin has steadily continued to share approximately 18.5% of the housing stock in the Dublin Region over the last three recorded censuses (2002, 2006 & 2011). By applying the same housing share to the Housing Agency targets, this would indicate a need in South Dublin for a minimum of approximately 1,000 additional dwellings in 2014 rising year on year to approximately 1,700 by 2018 and a total minimum need of approximately 7,000 dwellings between 2014 and 2018. The Housing Agency report, however, does not cover the lifetime of the next South Dublin County Council Development Plan (2016 – 2022).

5.2 ESRI Report
The recently published (June 2014) ESRI research note Projected Population Change and Housing Demand: A County Level Analysis projects the required housing supply for different counties by 2021 based on projected populations using Census 2011 data combined with (inter alia) vacancy rates and household sizes sourced from previous ESRI studies.

The ESRI projects that almost 60,000 additional housing units would need to be built in the Dublin Region by 2021 or approximately 8,500 dwellings per annum to meet the projected demographic demand. Based on a continued share of 18.5% of the housing stock in the Dublin Region, this would suggest a need for 11,100 dwellings in South Dublin or 1,600 dwellings per annum between 2014 and 2021.
5.3 Regional Planning Guidelines

The Regional Planning Guidelines for the Greater Dublin Area 2010 – 2022 sets out housing targets for each County based on data available from the 2006 Census. Again, these targets are yet to be updated to reflect the 2011 CSO Census and the recently published CSO Regional Population Projections 2016 – 2031, which has revised population projections downwards.

Under the current Regional Planning Guidelines (RPG), it is projected that (based on occupancy rates of between 2.82 and 2.38 and a vacancy rate of 6.5%) the housing allocation in South Dublin could grow to 115,373 dwellings by 2016 and 137,948 dwellings by 2022 from a base of 87,484 dwellings in 2006. This would equate to a projected average annual growth rate of 2,800 dwellings per annum between 2006 and 2016 and 3,800 dwellings between 2016 and 2022.

The RPG figures significantly exceed the minimum dwelling numbers indicated in the recent Housing Agency and ESRI publications. This suggests that the RPG targets could be met over a longer time period. The Housing Agency and ESRI publications, however, are not as targeted as the RPGs and do not break down projected housing numbers down to County level.

More targeted and up to date housing projections that are extrapolated from the CSO Regional Population Projections 2016 – 2031 and compared with the RPG figures are therefore set out below.

5.4 Conclusion - Extrapolated Housing Growth

The graph and table below set out housing needs scenarios for South Dublin based on the population growth Scenarios A, B and C (see Section 4.4 above). Starting at the 2011 base of 97,298 dwellings\(^2\), housing target Scenarios B and C (CSO based) are calculated using a projected occupancy rate of 2.65\(^3\) and by also applying a vacancy rate of 2.8%, which is considered to be the normal vacancy rate for the County.

Depending on the scenario, between 16,500 and 41,000 dwellings will be required to accommodate growth for the period 2011 to 2022 within the County with an average of between 1,500 dwellings to 3,700 dwellings needed per annum.

As explained under the population projections above, it is considered that Scenario C (based on 25% share of Dublin Region growth under the CSO Regional Population Projections) represents the more realistic target scenario. Using this scenario and breaking figures down to correlate with the lifetime of the County Development Plan (2016 – 2022) it is projected that an additional 18,500 dwellings will be required by 2022 to meet the demands of an additional 31,500 people and to reach a housing stock of approximately 116,000 dwellings.

Broken down between periods, the projected average number of additional dwellings required equates to 1,200 dwellings per annum between 2011 and 2016 and 2,000 dwellings per annum needed between 2016 and 2022. It is noted that there has been a significant shortfall in the numbers of dwellings constructed in the County since 2011 (approx 500 dwellings) and this raises the required dwelling numbers to approximately 1,900 per annum between 2014 and 2016 inclusive.

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\(^2\) House completions in the County since 2011 Census equate to approximately 500 dwellings
\(^3\) Same occupancy rate projected under RPGs for South Dublin in 2016
6.0 Overall Conclusions

- The population and family profile of South Dublin is relatively young compared to the State and other Counties in the Dublin Region but is growing older. The share of people in the young adult age cohort (19 – 24) has decreased significantly in South Dublin in the last inter-censal period and was the highest recorded decrease in the Dublin Region. This indicates a high degree of migration from the County for this mobile age cohort.

- While adults and adult families make up the largest proportion of people and families in the County, this age cohort and family type has lost its share to younger and older people and families. This trend is projected to continue under the CSO Regional Population Projections 2016 – 2031, which will create an increased demand for services, schools and accommodation for older and younger populations.

- The recent net-outmigration that occurred in South Dublin in the last inter-censal period contrasts substantially with in-migration to all other GDA counties. This is considered to result from a shrinking in the young adult age cohort. The projected increase in in-migration to the Dublin Region and increase in population for those aged 15 – 24 years under the CSO Regional Population Projections 2016 – 2031 represents an opportunity for South Dublin to fall in line with all other GDA counties in terms of the attraction of in-migration and reversing the trend of out-migration, particularly from young adults.

- Despite a significant increase in housing stock in South Dublin over the past decade, the relatively low increase compared to some of the other GDA counties raises a need for a more even share in housing growth particularly in the Dublin Region. The County is now considered to be moving towards a ‘natural vacancy rate’ and the recent slowdown in housing output across the State presents the opportunity to address these imbalances in growth. Consideration will also need to be given to the implications of smaller household sizes and whether this factor alone would give rise to a demand for smaller housing units.

- Different population growth scenarios can be extrapolated and sourced from the CSO Regional Population Projections 2016 – 2031 and the Regional Planning Guidelines for the Greater Dublin Area 2010 – 2022. Based on an increased share of population growth projected for the Dublin Region under the CSO projections (Scenario C), it is calculated that the population of the County could reach 297,000 by 2022, representing a growth of 31,500 or 12% between 2011 and 2022. This Scenario is considered to be reasonable in the context that the County has thus far recorded a substantial natural growth of 9,500 people (4%) since Census 2011 and a reversal of out-migration from the County is also likely.

- By applying a projected household size and vacancy rate to growth scenarios extrapolated from the CSO Regional Population Projections 2016-2031, the required quantum of housing for South Dublin can be calculated starting at the 2011 base of 97,298 dwellings. Under Scenario C (most realistic target scenario), it is projected that an additional 18,500 dwellings would be required in the County by 2022 with an average annual construction rate of approximately 2,000 dwellings per annum between 2016 and 2022 and approximately 1,900 per annum between 2014 and 2016. It is considered, however, that the dramatic reduction in construction output across the State combined with problems in the financial/banking industry has damaged the capacity of the construction industry to meet housing demand.
Sustainable Communities
Introduction
Successful, sustainable neighbourhoods need community facilities that are fit for purpose, accessible and adaptable. The timely provision of community facilities in all communities can have a significantly positive impact on social cohesion, enhancing quality of life and helping to create attractive and sustainable neighbourhoods where people choose to live, work and engage in recreational activities throughout their lifetime. Many of these facilities are provided by government departments and agencies, local authorities and increasingly by commercial and community interests. There is a requirement to ensure that they are located so as to be used in an efficient and cost-effective manner.

The term ‘community infrastructure’ is generally taken to include infrastructure and facilities that address the social, community and cultural requirements of the population and includes items such as schools, libraries and arts centres, community centres, cultural spaces, health centres, facilities for older people, facilities for persons with disabilities, childcare facilities, parks and open spaces, places of worship and cemeteries. The review of the County Development Plan presents an opportunity to review existing provision across the County in the context of settlement and population characteristics and to plan for future needs in a strategic and evidence based manner.

Communities of South Dublin
South Dublin County has developed since the 1960’s around a historic village network. Census data indicates that 75% of the County’s housing stock was constructed after 1969 and two periods of significant house building are identified. Approximately 26% of the housing stock dates from between 1971 to 1980 and almost 20% dates from between 2001 to 2011. The period of house construction has defined the age profile and demographic make up of communities within South Dublin County.
The inner suburbs, situated to the east of the M50 and around the historic villages of Tallaght, Clondalkin, Rathfarnham, Templeogue, Terenure and Lucan, developed from the late 1960s to mid 1990s (see Map 1). There are 142,088 people living in this more established area, representing 54% of the County’s population. This area has a lower proportion of children and a higher proportion of older people when compared against the County figures. The 0-14 age cohort accounts for 18.4% of population relative to 23.1% for the County; the 65+ cohort accounts for 12.7% of the population, relative to 8.7% for the County; and the 15-24 and 25-64 age cohorts are similar to the County proportions. While a small proportion of younger families are present, the population profile indicates that a renewal of the housing stock has not occurred and that population numbers are stagnant or falling in some areas (Table 1 & Map 2 below refer). The established areas grew around existing villages and community services and facilities expanded over time, resulting in areas that are relatively well served by services and infrastructure. With falling population numbers the key challenge into the future will be to maintain existing services.

From the mid 1990s development commenced on agricultural lands at the urban fringe to accommodate significant population and housing growth. This has given rise to newer communities on lands located primarily to the south of Lucan and west of Clondalkin, Tallaght and Rathfarnham. There are 106,172 people in the emerging areas, representing 40% of the County’s population. Communities in these areas are younger with a higher proportion of children and a lower proportion of older people. The 0-14 age cohort accounts for 29.5% of this population relative to 23.1% cross county; the 65+ cohort accounts for 3.4% relative to 8.7% cross county and the 15-24 and 25-64 age cohorts are similar to the County proportions. These areas are characterised by emerging communities that have grown by 56% overall since 1991 and a level of transition and bedding down is ongoing. There is a higher proportion of private and public rental accommodation in these areas, relative to the more established communities and census data shows a more diverse and multi-cultural population. Unlike the earlier expansions, these communities did not grow around established villages and while a network of local retail centres is emerging broader community infrastructure has been slower to emerge.

The rural and mountain area to the west of the County accommodates the rural villages of Newcastle, Rathcoole and Saggart and rural housing (Map 1 refers). The rural and mountain area has a population of 16,945 people representing 6% of the County’s population.

While population growth of 37% has occurred in this area since 1991, the rural and mountain communities have held a steady share of 5-6% of the County’s population. This area reflects the County age proportions, with slightly higher proportions in the 65+ cohort (10% relative to 8.7%) and slightly lower proportions in the 0-14 cohort (22% relative to 23.1%). These areas focus on the rural villages of Newcastle, Rathcoole and Saggart, where vibrant local centres are supported by a good range of community infrastructure.

It is noteworthy that CSO Regional Population Projections 2016 – 2031 forecast that the number of young persons (i.e. those aged 0-14 years) within the State will increase steadily up to 2021 before falling from 2026. For those aged 15 to 24 years, the Dublin Region is projected to see an increase of 6.6% while those within the 25 to 44 age group will decrease by 10.1%. The number of older persons (65 years and over) is projected to increase substantially in every region between 2011 and 2021, with a 33.4% increase in the Dublin Region. All regions are expected to see rises in the Age Dependency Ratio.
Childcare and Education
The South Dublin Childcare Committee has indicated that existing childcare infrastructure in South Dublin County is good but has highlighted the importance of planned provision in the emerging areas of the County in the future as the market is slow to respond.

While school provision is good within the established communities serious deficiencies have been identified at both primary and secondary levels in the emerging and rural and mountain communities. South Dublin County Council (SDCC) is working with the Department of Education and Skills to identify and procure school sites to address identified deficiencies as part of the School Building Programme. Twenty three new primary schools are to be constructed in South Dublin County over the coming years, 11 within the emerging areas and 8 within the rural and mountain area. A review of secondary school provision is now ongoing and this will be addressed in the School Building Programme form 2016.
Sports, Leisure and Recreation
The County has 975 hectares of parkland, all contributing to the sustainability and attractiveness of the County. The established areas of the County are well provided for with regards to playing pitches, 94 in total, relative to 58 in the emerging areas and 6 in the rural and mountain area.

The County's parklands are well distributed between the established areas and the emerging areas. The rural and mountain communities have one public park - the Rathcoole-Saggart link park. The limited parkland provision to the west and south of the County may need to be considered as part of the review.

There are three public leisure centres within the County’s established areas: Tallaght, Clondalkin and Lucan. The Adamstown and Clonburris Planning Schemes contain requirements for further leisure facilities, including a swimming pool in Adamstown, to be provided in tandem with future development.

With a policy shift towards encouraging active and healthy lifestyles with limited resources, the need to maximise the functionality of infrastructure must also be considered.

Health
There are 128 health centres within the County – 95 of which are located within the more established areas and 27 in the emerging areas. The 6 health centres located in the rural/mountain areas are found within the village settlements of Rathcoole and Newcastle. Based on the population figures for the emerging areas it is likely that there will be a future need for more health care provision in the future. The Primary Care Strategy published by the Department of Health and Children in 2001, promotes a ‘one stop’ primary health and community care service integrated under one roof.

South Dublin County Council has recently granted permission for new Primary Healthcare centres at Edmondstown and at the Ashleaf Centre in Crumlin and future provision is planned in the Lucan, Adamstown and Clonburris areas.

Care Accommodation
Best practice dictates that ‘care’ facilities should be located in built-up areas and should be located close to shops and other community facilities required by the occupants, and should be easily accessible to visitors, staff and servicing traffic. There are at least 13 nursing homes in the County – 4 located within the established areas, 6 within the emerging community area and 3 in the rural/mountain areas.

There is a higher proportion of older people aged 65+ in the established communities. It is likely that this trend will continue during the lifetime of the next County Development Plan. The established areas and village settlements accommodate the greater number of social infrastructural items best suited to the needs of an aging population. Future development in these areas should take cognisance of this.

In the established areas, mechanisms to release larger housing stock for families should be considered. The provision of high quality care facilities and smaller accommodation units in established areas may incentivise older persons to trade down within their communities.

Culture and Arts
There are 2 main cultural centres: Rua Red, Tallaght and Áras Chrónáin, Clondalkin; there are 2 theatres, both in Tallaght and 2 cinema complexes one in Tallaght and the other at Liffey Valley. The primary urban centres of Tallaght and Clondalkin are well placed to provide for the cultural community needs in the form of art, music, Irish language and dance amongst others. These spaces are also supplemented by activities taking place within community centres/rooms located throughout the County.

There is a strong network of 38 community centres in the County, with older established areas particularly well served. There are a further 18 buildings accommodating community uses. This includes a number of VEC School Halls, with enhanced sporting and community facilities that are available to the community outside of school hours. Many of the centres are adaptable hubs that offer a range of facilities and activities throughout the day and evening time.

The majority of centres are managed by local volunteers with the support of the SDCC Community Services Department. It is SDCC policy to achieve a network of larger district level centres throughout the County. This type of facility achieves a critical mass, is more efficient to manage and maintain and is considered to provide a better community resource.

South Dublin has a high quality library network and 6 of the 7 County libraries are located within the more established areas of the County. The South Dublin Library Development Plan 2012 – 2016 contains a number of Actions which are relevant to the 2016-2022 CDP, namely the provision of libraries in North Clondalkin, Fortunestown and Adamstown and extension of Clondalkin Library and the provisions for a Digital Hub at Palmerstown.
Religious Culture
There has been an increase in the number of faith communities in the County over the past decade and this may give rise to a demand for worship spaces, either designated or shared. While civic halls and community centres may provide opportunities for public worship, faith communities which have significant numbers may require their own places of worship. Consideration may need to be given to appropriate locations for new facilities, given the potential for traffic and noise related issues.

Conclusions
While the County has a relatively good offer in terms of sports and recreational facilities and community, arts and cultural spaces the spatial distribution of facilities is weighted in favour of the more established communities. Key considerations for the review will be the need to achieve a more equitable distribution of social and community infrastructure; and the need to retain the viability of existing community infrastructure in established areas where population numbers are stagnant or falling.

The key considerations for the future might be the prioritisation of investment in new communities and the need to maintain the vitality of facilities in established areas. In this regard it is noted that capacity remains for new housing within the established urban footprint where the value of existing infrastructure and services can be maximised. With an increasingly diverse population, a policy shift towards encouraging active and healthy lifestyles and more limited resources, the need to maximise the functionality of infrastructure must also be considered.
Economic Development
**Introduction**

The economic development strategy of the County Development Plan will seek to support and facilitate economic activity, across a range of sectors in accordance with the principles of proper planning and sustainable development. The strategy will ensure that the strategic planning framework for the County is consistent with and supports economic development policy and that it is effectively aligned with national, regional and local level policies.

**Economic Outlook**

Following a period of sustained contraction in the Irish economy the economic outlook for the period 2016 to 2022 is more positive. While signs of economic recovery remain tentative a number of key economic indicators are showing signs of improvement. National Accounts data for 2013 shows a 3.4% increase in Gross National Product (GNP). This is the highest increase since 2008 and is considered reflective of the underlying trend in the Irish economy. Numbers at work increased by 2.4% since early 2012 and the rate of job creation accelerated in late 2013. Export growth is considered key to recovery and it is expected that domestic demand will start to grow over the next few years.

Local authorities will have a key role in economic recovery. The government’s document for reform of local government ‘Putting People First (2012)’ envisages a stronger and more explicit direct role for local authorities in promoting economic development within their functional areas. The rationale is that the impact of the Authorities functions generally links the Local Authority to enterprise. To ensure an integrated approach the ‘Regional Planning Guidelines’ which inform planning policy at county level, are to be reshaped as ‘Regional Spatial and Economic Strategies’.

Nationally industry is the largest employer, but there has been a structural change over the past decade (2004 - 2013) in favour of the services sector. The services sector grew from 31% of agency assisted employment nationally in 2004 to 42% in 2013. Industry has fallen from 67% in 2004 to 57% in 2013, with a move towards higher value manufacturing. Only 1% of jobs nationally come from primary production in agriculture, fisheries and forestry and extractive industries and this has remained largely unchanged.

In output terms GDP for 2013 comprised industry at 26% services at 43% distribution, transport, software and communications at 23% public administration and defence at 4% and agriculture, fishing and forestry at 2%.

**South Dublin Within The Dublin Region**

South Dublin County is part of the Dublin City Region, Ireland’s only city of international scale and the engine of Ireland’s national economy. The Dublin Region accommodates almost 30% of the State’s population and generates 40% of economic output. It outperforms the other 11 regional authority areas in respect of key economic indicators. There are more people at work and the economic value of activities undertaken is higher than in all other regions. In 2011 the value of goods and services produced in the region (average Gross Value Added per person) was 32% higher than the State figure. Disposable income (average disposable income per person) was 11.9% higher than the State figure.

The dominance of Dublin’s economy relative to the national economy is reflective of an international trend, whereby competitive city regions with populations in excess of 1 million attract investment and compete for economic activity almost independently of the national economy. International benchmarking is a standard way to compare such cities and Dublin performs well in terms of business competitiveness and in respect of broader economic, environmental, social and cultural indicators. However, it is a small city region in the international scale. In 2007 the OECD ranked Dublin 77th out of 78 cities in terms of population size. Not all cities within this population range are successful on a global stage, so continued investment in the areas that make Dublin competitive is necessary if Dublin’s Global position is to be maintained and improved.

In an increasingly globalised world economy the role of the Dublin Region and of South Dublin County needs to be carefully managed.

South Dublin County’s positioning within the GDA is its core economic strength. By virtue of its highly accessible and connected edge of city location South Dublin County can present as a globally competitive business location for Foreign Direct Investment (FDI) and export led investment.

1 Central Bank Quarterly Bulletin links a reduction in GDP to statistical treatment of off-patent drugs, impact of which expected to reduce over the coming years.

On balance GNP is considered more reflective of underlying trends in Irish economy.

2 Central Bank Quarterly Bulletin for Q2 2014


4 CSO Quarterly National Accounts, Quarter 4 2013 and Year 2013 (preliminary).

5 Dublin’s Role in the Irish and Global Economy 2012, Report 3, Dublin Regional Authority.

6 CSO, County Incomes and Regional GDP 2011, released April 2014. Information for Dublin is at a Regional level and is unavailable below this level.

The availability of large Brownfield and Greenfield landholdings gives opportunities for a variety of uses that could not easily be accommodated at an inner urban location or on fragmented Brownfield sites. In terms of future positioning, the economic value of investment (gross value added, jobs created, rates, multiplier effect etc) must be considered with a view to positioning the County to attract enterprises that yield the highest social and economic dividends.

Enterprise and Employment

South Dublin County has a strong and diverse economic base. The county is home to 6,823 business entities\(^8\) and there are 77,699 people employed in South Dublin County\(^9\).

Of the 77,699 people employed in the County, 35,529 persons (46%) live in South Dublin County and 42,170 (54%) live outside of the County coming from all counties in Ireland, and in particular Dublin City (15%), Kildare (13%), Dun Laoghaire Rathdown (6%), Fingal (6%), Meath (3%) and Wicklow (3%). Conversely, of the 106,534 workers who live in South Dublin County 69,803 (66%) work outside the County, with 31% commuting to Dublin City, 8% to Dun Laoghaire Rathdown, 8% mobile, 8% unknown, 4% to Fingal and 2% to Kildare. On a daily basis the County receives 42,170 employees and exports 69,803 showing a net export of 27,633 people for employment purposes\(^10\).

Census 2011 identified that of the 265,205 people that were resident in South Dublin County, 132,573 persons (50%) were in the labour force and of these 80.4% were at work. The unemployment rate for the County was 19.6% compared with a national average rate of 19% and a regional average of 17.1%. There are significant variations across the County with higher rates in Clondalkin and Tallaght (Clondalkin 24.8%; Tallaght South 23.8% and Tallaght Central 20%) and lower rates in Lucan and Rathfarnham (Lucan 15.5% and Rathfarnham 11.2%). Pockets of extreme unemployment in Clondalkin and Tallaght, in the region of 40%, are likely to reflect ongoing social and demographic characteristics and not the broader economic context.

Of the 71,351 persons aged 15 years and over in South Dublin County who were outside the labour force, 31.3% were students, 26.9% were looking after the home/family and 28.9% were retired. By comparison, in the Dublin Region 33.26% were students, 22.58% were looking after family/home and 32.79% were retired.

Economic sectors in the County include bio-pharma, information technology, communications, electronics, hospitality, retail, transport, internationally traded services and prepared food\(^11\). Business entities include blue chip national and multi-national corporations such as Microsoft, Google, Takeda, Pfizer, Johnson & Johnson, SAP and Independent News and Media.

Of the 6,823 rateable commercial businesses within the County, industrial uses account for 52%, retail shops account for 23% and offices account for 14%. Retail warehousing, hospitality, leisure and health all account for approximately 1-2% of rateable businesses\(^12\).

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8 SDCC Rates Data May 2014
9 Census 2011 POWSCAR data.
10 NTA POWSCAR Data, Census 2011.
12 SDCC Rates Data, May 2014.
Economic activity is channelled into employment lands and urban centres primarily. There are 85 business and industrial parks accommodating approximately 2,200 firms\(^{13}\). Town, district and village centres accommodate a range of retail and professional services and large-scale retail activity is focused around The Square in Tallaght, Liffey Valley Shopping Centre in Quarnvale, the Mill Centre in Clondalkin, Rathfarnham Shopping Centre, Fortunestown Shopping Centre, Citywest and Lucan Shopping Centre.

A number of identifiable economic character areas exist within the County and can be described as follows:

- The Citywest Business Campus and Grange Castle Business Park are modern business parks in the west of the County with capacity to attract FDI and large scale indigenous industry due to the availability of large plot sizes, infrastructure and heavily landscaped corporate park style environments. These areas attract some of the largest industrial facilities in the County and house several blue-chip national and multinational corporations.

- The Greenogue and Aerodrome Business Parks at Newcastle are large industrial campuses comprising a mix of industrial, warehousing and manufacturing facilities.

- Tallaght Town Centre, the County Town, has emerged over the last two decades as a centre for civic and institutional uses in addition to retailing and hospitality services. It plays host to a number of major institutions including Tallaght Hospital, Institute of Technology Tallaght, South Dublin County Council headquarters and the head office of County Dublin VEC. This area also incorporates the Whitestown Industrial Estate, Tallaght Business Park and Broomhill Industrial Estate.

- A series of older industrial areas along the Luas Corridor, at Naas Road, Ballymount and Cookstown accommodate a diverse range of SME industries. These areas, while large employment centres, are facing issues of evolutionary renewal.

- In the north of the County, along the Dublin Cork Rail Corridor, green field lands earmarked for future residential and commercial development with an international SDZ designation offer significant future potential.

- South Dublin has a strong network of town, district and village centres, each with unique character and economic profile. They provide a diverse range of local and district level services including comparison and convenience retailing, professional services and hospitality and tourism related services. The smaller centres, in particular, face competition from larger shopping destinations but have potential, particularly in relation to the niche retailing, tourism, local produce, and events/festivals.

Although the economic character of the Rural & Mountain Areas is no longer synonymous with agriculture, horticulture or rural related enterprises the sector continues to play a defining role in the rural landscape and may make a stronger contribution to the economic and social viability of the rural area in the future. Pressure for development is generated by the proximity of the city.

**Vacancy**

There are high levels of vacancy across all business sectors in the County, although this appears to be improving. Rates data for 2011 identified an overall vacancy rate of 16.5% with vacancy rates of 17.2% and 26.6% respectively in industrial and office and 11.4% in retail.

Rates data for 2014 shows a reduced vacancy. There is an overall vacancy rate of 12.5%. An on the ground survey of Cookstown industrial area in late 2011 showed vacancy levels exceeding 25%.

The table below sets out an overview of significant employment areas in South Dublin County showing the number of rateable entities, the proportion of office, industrial and retail shop and vacancy rates.

<table>
<thead>
<tr>
<th>Area</th>
<th>Ratable Entities</th>
<th>Office</th>
<th>Industrial</th>
<th>Retail</th>
<th>Vacancy Rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tallaght</td>
<td>1,060</td>
<td>121</td>
<td>499</td>
<td>342</td>
<td>13.6</td>
</tr>
<tr>
<td>Ballymount</td>
<td>1,189</td>
<td>133</td>
<td>958</td>
<td>52</td>
<td>16.5</td>
</tr>
<tr>
<td>Naas Road</td>
<td>790</td>
<td>157</td>
<td>475</td>
<td>109</td>
<td>15.8</td>
</tr>
<tr>
<td>Citywest</td>
<td>274</td>
<td>109</td>
<td>93</td>
<td>39</td>
<td>14.6</td>
</tr>
<tr>
<td>Grange Castle &amp; Bawnogue</td>
<td>167</td>
<td>63</td>
<td>40</td>
<td>57</td>
<td>10.8</td>
</tr>
<tr>
<td>Greenogue &amp; Aerodrome</td>
<td>670</td>
<td>21</td>
<td>616</td>
<td>15</td>
<td>14.6</td>
</tr>
<tr>
<td>Liffey Valley &amp; Palmerstown</td>
<td>300</td>
<td>60</td>
<td>38</td>
<td>157</td>
<td>5.7</td>
</tr>
<tr>
<td>Fonthill Retail/Ind Park, Ballyowen &amp; Griffeen</td>
<td>146</td>
<td>5</td>
<td>59</td>
<td>36</td>
<td>6.8</td>
</tr>
</tbody>
</table>

\(^{13}\) SDCC Rates Data May 2014.
Employment Lands
A key objective of the current County Development Plan is to “ensure sufficient serviced land to facilitate the sustainable growth of enterprise and employment in the County including inward investment and local economic development and expansion”. A critical factor in the review process is to assess the capacity of existing employment zoned lands, whether additional zoned lands may be required and the potential of established industrial areas to rejuvenate and evolve.

The South Dublin County Council Development Plan 2010 – 2016 sub-divided employment lands into three categories. Enterprise Priority 1 lands are in proximity to established centres and transport corridors and seek to accommodate people intensive uses; Enterprise Priority 2 lands are in intermediate areas and seek to accommodate less people intensive manufacturing and light industrial uses; and Enterprise Priority 3 lands are at more peripheral locations close to the major road network and seek to accommodate distribution and warehousing, storage and logistics. There is a total of c. 1,600 hectares of zoned employment lands (EP1, EP2 and EP3) within the County. While much of these are developed there are 688 hectares of undeveloped Greenfield lands (including EP1 = 5 ha; EP2 = 414 ha; EP3 = 228 ha) and significant potential for the renewal and intensification of established employment areas.

The economic growth of the State and Region over the last two decades has been strongly dependent on Foreign Direct Investment (FDI) and this is expected to continue. It is important that South Dublin County seeks to protect and enhance the factors that make the region competitive for FDI. South Dublin has a locational advantage within the Region for large scale installations by virtue of its well connected edge of city location. It is therefore important that provision is made to accommodate further large scale FDI investment. This will be a key consideration of the review.

There is an increased focus, at Government level, on strengthening entrepreneurship and on enabling indigenous enterprises to access international markets as part of the export led growth strategy. At a national level, the Small to Medium size Enterprise (SME) sector needs to be supported if we are to achieve a sustainable balance between FDI and indigenous investment. The more explicit role for local authorities in promoting economic development and the establishment of Local Enterprise Offices affirms the need to support indigenous start ups and business growth and to work with other stakeholders in doing this.

It is important that entrepreneurs can develop business ideas in a supportive environment. The Development Plan has a role to play in this by ensuring a clear and consistent framework for development, by making ‘space’ for growing Irish businesses and by ensuring that policies and objectives are supportive towards business.

International research proves that higher employment densities across an area significantly increase productivity and competitiveness due to factors such as, more efficient use of infrastructure and inputs; knowledge spill over between firms in the same sector, and across sectors, leading to increased innovation; increased labour pool with a wider range of skills and expertise. In practical terms, a doubling of employment density within a given area can lead to a 12.5% increase in output per worker, or 22% for those in the service sector\(^\text{14}\).

Numbers employed also reflects the value of economic activity in an area. In the interest of achieving a compact urban form and economic competitiveness, it is important that employment uses are appropriately located and that employment density is maximised throughout the region. Notwithstanding this, different enterprises have different space characteristics and a balance needs to be struck on a region wide basis, with Dublin City and other key enterprise centres taking primacy. There is capacity for increased employment densities in established centres in South Dublin County, such as Tallaght Town Centre, a growing urban centre with an employment density of 54 jobs per hectare. The ‘jobs yield’ of other employment lands such as Grange Castle (43 jobs /ha); Citywest (33 jobs /ha); and Ballymount/Naas Road (36/38ha) can also be reviewed and consideration given to initiatives to increase yield at appropriate locations\(^\text{15}\).

Analysis of undeveloped lands and likely employment potential, (based on employment densities of 50 jobs per hectare in Town Centre and EP1 lands, 30 jobs per hectare on EP2 lands and 10 jobs per hectare on EP3 lands), identifies potential for over 16,000 additional jobs within the County.

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15 Census 2011, POWSCAR
Centres For Learning

The GDA has a highly educated population, with the largest proportion of third level attainment in the Country. The metropolitan region boasts a wide ranging and diverse number of centres for learning and innovation, including universities (two of which are ranked in the world’s top 100, with one of these in the top 50), institutes of technology and specialist third level institutes which attract high levels of R&D investment and includes the highest level of research activity by any region. The continual provision of high quality education is required to facilitate Ireland’s focus on the knowledge based economy and in order to be competitive in international markets. South Dublin County, by virtue of its position within the Dublin metropolitan region is proximate to some of the State’s largest universities and the Institute of Technology Tallaght provides a range of third level educational opportunities within the County.

Opportunities for greater collaboration between the Council, industry and third level institutions for the production, transfer and application of knowledge i.e. “triple helix collaboration” could be explored. In line with national policy a strategy for attracting inward investment and enterprise by creating strong collaboration may yield dividends into the future. A clear strategy for collaboration and possibly clustering based on the Council’s enterprise strategy could inform the spatial framework for the County.

In South Dublin County in 2011, of those aged 15 years and over whose full-time education had ceased, 14.9% were educated to at most primary level only, a further 55.6% attained second level, while 29.5% were educated to third level and above. This is relative to 38% educated to third level and above in the Dublin Region.

In terms of Social Class, managerial and technical workers account for the highest proportion of the population at 33.5%, followed by non-manual workers at 23% and skilled manual workers at 19.8%. Semi-skilled accounted for 11.8%, while professional workers represented 7.7% and unskilled was the lowest represented at 3.8%.

Social Class Comparison

Census 2011 outlines persons at work by industry. Commerce and trade dominates in South Dublin County followed by professional services, other, transport and communications, manufacturing and public administration. Building and construction is low and has reduced significantly since 2006, while agriculture, forestry and fishing are almost absent.

16 Regional Planning Guidelines for Greater Dublin Area, 2010 to 2022.
17 Dublin’s Role in the Irish and Global Economy 2012.
Tourism
Tourism can contribute to the economic and social well being of South Dublin County on many levels. Revenues generated through tourism support a broad cross-section of the economy, sustaining jobs and benefiting the public purse and the local economy. Increased visitor numbers bring a critical mass and viability that can sustain services and events that may not otherwise be viable. Investment in tourism infrastructure, such as enhancement projects, improves quality of life for all.

Dublin City is an international tourist destination and South Dublin County could be used to strengthen the overall offer of the region for business, retail and leisure tourism. The County’s heritage, village networks and amenities such as the Dublin Mountains, Grand Canal and River Liffey and Dodder Valleys offer opportunities either collectively of individually. The historic villages and parks, have potential for niche retailing and markets, tourism, and events and festivals. Local government is a key player in “destination development” and is positioned to influence visitor experience and to work in real partnership with state agencies, business and local communities. Through investment in physical infrastructure, such as greenways and signage, branding and marketing this sector of the County’s economy has potential for growth.

Conclusions
Having regard to the projected growth in the Irish economy over the life of the County Development Plan, it is important that the plan review process seeks to position South Dublin County to be part of economic recovery and to play an active role in the growing Dublin Region.
Background & Policy Context
The retail strategy outlined in the South Dublin County Council Development Plan 2010-2016 focuses on the need to support the future viability and vitality of retail centres throughout the County. The Greater Dublin Area (GDA) Retail Planning Strategy 2008 - 2016 forms the basis for retail planning in the County. This strategy was formulated using population data derived from Census 2006 and reflects a time of record growth in population and spending. In 2012, the DoEHLG published Retail Planning Guidelines and a companion Retail Design Manual, replacing 2002 guidelines. In light of the changed population, economic and policy contexts there is a recognised need for a revised retail strategy for the wider Dublin metropolitan area.

Retailing Outlook
The Irish retail market has contracted significantly since 2008. More recently and in line with the wider economy, key indicators of the retail market have stabilised and the outlook is now more positive. Consumer confidence has shown signs of limited growth and unemployment levels have dropped. The ESRI Consumer Sentiment Index improved in April 2014, indicating that households are more positive about household finances and the current buying climate. GDP is forecast to grow and consumer spending in the Irish economy typically grows at the same rate.

With increased competition and a demand for retail environments that offer entertainment, safety and a family friendly atmosphere, the social and economic implications for traditional town centres and streets in relation to highly managed shopping centre environments needs to be considered.

Retail Hierarchy
The retail hierarchy for the Greater Dublin Area reflects and re-enforces the regional settlement strategy outlined in the Regional Planning Guidelines. The hierarchy confirms Dublin City Centre as the prime retailing centre for the Greater Dublin Area (Level 1) and the role of County and Major Towns below this, as significant retailing centres at a county level (Level 2). It is proposed to reinforce county and major towns as important multi-functional places where retail is just one key element. These larger centres will be supported by a necklace of spatially balanced lower order town or district centres providing for more regular needs. A network of neighbourhood centres and local shops sits below this. The Strategy aims to encourage the achievement of more balanced flows of shopping patterns.

South Dublin County has a varied network of town, district and local centres. The centres include retailing as a key element and most also perform a range of civic, social, cultural and leisure functions. The urban network includes the County Town of Tallaght, a Level 2 centre in the GDA retail hierarchy and the designated Town Centres of Liffey Valley and Clondalkin, Level 2 and 3 Retail Centres respectively. There is a wider network of district centres, with a Level 3 designation in the GDA retail hierarchy including Lucan Village and shopping centre, Rathfarnham Village, Kilnamanagh, Crumlin (Ashleaf) and Fortunestown.

Provision is also made for future Level 3 centres in the developing areas of Adamstown and Clonburris. There is a diverse network of neighbourhood and local centres at Level 4 in the retail hierarchy that offer a range of services at a local level including the rural villages of Rathcoole and Newcastle; and the urban villages of Palmerstown and Templeogue as well as purpose built centres in Firhouse and Knocklyon. In addition, a network of smaller local centres and shops provide for local retailing. Figure 1 below outlines the network of centres throughout the County.

1 IBEC and Retail Ireland Strategy for Retailing 2014-2016
2 eTail Excellence Ireland Online Tradition Report for July 2013
Retail and Commercial Floorspace in South Dublin

In retail, leakage occurs when members of a community spend money outside that community. It is considered that the retention of the spend in the County is a sustainable objective economically, socially and environmentally, insofar as it supports economic activity within the County, contributes towards vibrant centres and reduces travel.

The GDA Retail Strategy 2008 - 2016 identified a net retail expenditure leakage on comparison goods of 11% from the County. Fingal and Dun Laoghaire - Rathdown County Council were both recorded as net importers of retail expenditure in the same category, 30% and 25% respectively. Dublin City Council has the primary retail offering in the region and is a net importer (87%). The level of expenditure outflow from South Dublin is a cause for concern, as it impacts upon the economic performance of the County and also undermines the social and economic viability of established centres. The GDA Strategy 2008 - 2016 outlines that in terms of convenience goods, the County is a net importer of convenience goods expenditure.

In 2009 the total amount of retail and commercial service floor space in the County was estimated at 366,924 sq.m. This represented an increase of 83,529 sq.m or 23% between 2004 and 2009\(^3\). Significant retail floor space additions include the Tallaght Cross and Arena sites in Tallaght Town Centre, Citywest Shopping Centre and Slade Castle in Saggart.

Planning permission has also been granted for significant retail expansions at The Square Shopping Centre (13,487 sqm – subject to appeal decision in 2014) and Liffey Valley Shopping Centre (5,228 sqm – Permission granted in 2013) which are yet to materialise. The Adamstown and Clonburris SDZ Planning Schemes also make provision for significant district sized centres.

The role of the planning system is to regulate the location and scale of development, with a view to accommodating need and demand. The market identifies retail opportunities and supplies retail and commercial floorspace on a speculative basis. There has been limited investment in South Dublin County over the period of the County Development Plan 2010 - 2016, reflecting adverse investment and trading conditions during this period.

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\(^3\) Vacant Retail and Commercial Service Floorspace survey in 2009
It is a requirement of the Retail Planning Guidelines, 2012 that the Greater Dublin Area Planning Authorities prepare a multi-authority Retail Strategy for the GDA. The central objectives of the strategy will be to identify requirements for additional retail floorspace in the GDA; to support the settlement hierarchy; to outline quantity and type by county; and to guide the location and function of retail activity.

In the absence of an up to date Dublin Retail Strategy and noting the key objectives for the strategy as set out in the 2012 Retail Guidelines, it is considered that the Development Plan should outline the location and scale of retailing activity appropriate to the settlement hierarchy, including the general retail function applicable to each settlement.

Performance of Centres in South Dublin

There are high levels of vacancy across all business sectors in the County. A South Dublin County Council ‘Vacant Retail and Commercial Service Floorspace’ survey in 2009 found that 12.8% of retail and commercial floorspace in the County is vacant. The SDCC survey also indicated that the greatest proportion (61%) of vacant retail floorspace is categorised as “comparison” shopping and that Tallaght (Non-Square) accounted for 61% of the total vacancy in the County at the time of the survey in 2009.

The Retail Excellence Ireland Shopping Centre Review 2013 outlined that The Square Shopping Centre in Tallaght has a relatively high vacancy rate of 13%. Liffey Valley recorded a lower rate of 4.5% in the same review. In comparative terms, Jervis and Dundrum Shopping Centres recorded rates of less than 2% vacancy whilst Dun Laoghaire Town Centre had a vacancy rate of 25%.

It is clearly evident from the data that market demand for major centres located in South Dublin County (i.e. The Square and Liffey Valley) is not as strong as for Dundrum and the City Centre.

Retail Warehousing and Retail Parks

In terms of retail parks and retail warehousing, clusters are located at Belgard, Fonthill and Liffey Valley Retail Parks.

The Retail Excellence Ireland Retail Park Review 2013 outlined that these main retail parks in the County have a vacancy rate of 0% for Fonthill Retail Park, 33% for Liffey Valley Retail Park and 11% for Belgard Retail Park. The need for any additional retail warehousing needs to be carefully assessed.

Estimation of Demand

Emerging population projections for the period 2011 to 2022, suggest a possible increase of 30,000 people giving a total of 295,000 persons in the County.

The County Development Plan will seek to increase the importance of retail centres in South Dublin County so as to increase retail spend in the County and to claw back leakage to other counties. While leakage figures in the GDA Retail Strategy 2008-2016 are dated it is likely that the County remains a net exporter of comparison expenditure. The County’s population has grown by 7.4% between 2006 and 2011, there have been limited additions to retail floorspace in South Dublin and conversely the retail offer of other adjacent centres such as Dundrum Town Centre, Blanchardstown Shopping Centre and the Pavillion Swords has increased significantly.

The projected increase in population for the Plan period will result in an increased demand for retailing and an increase in total expenditure in the County. It is estimated that the increase in population alone will provide a significant increase in available expenditure (in the range of 11% for comparison and 7% for convenience) and would require additional floorspace to accommodate the expenditure within the County. This is likely to be coupled with increased spending power across the existing population, due to improved economic conditions.

Role of Centres in South Dublin

Retail is a key element of the County’s town and village centres. New retail and commercial activity should be channelled into established centres to ensure the most efficient use of transport and other infrastructure and to improve the amenity and liveability of centres.

Tallaght

Tallaght is South Dublin’s County Town. It is designated as a metropolitan consolidation town and is a GDA Level 2 Retail Centre. It has extensive residential, industrial and warehousing areas and is served by a range of social, civic and commercial facilities.

The establishment of Tallaght, as the ‘County Town’ for the new South Dublin County in 1994 started a transition towards an urban centre of regional significance, which is ongoing. The establishment of the Civic Offices, a Regional Hospital and the Institute of Technology in Tallaght, all confirmed the centre’s primacy in the County’s urban hierarchy. The Square Shopping Centre forms the Core Retail Area of the town centre. While the Tallaght Cross and Arena Developments have added significant
retail and commercial floorspace, they have not been fully occupied and expansions to The Square Shopping Centre and a permitted redevelopment of the former Woodies site on the Belgard Road (permission elapsed) did not materialise.

Although Tallaght has a significant quantum of existing comparison floorspace, it does not match the quality of the offer in the main competing GDA Centres of Liffey Valley, Blanchardstown or Dundrum. This issue is reflected in the fact that it has a more local customer base than these competitors with only 20.9% of shoppers coming from outside of the County to do their comparison shopping in the town4.

The Tallaght Town Centre LAP sets out a vision for a more intense urban structure in the town centre area, with intensification of land uses to include high quality retail, commercial, civic, cultural and other services commensurate with its role as the County Town. There was market interest and momentum for this intensification up to 2008, with a number of significant schemes permitted or in planning.

A critical mass of investment is needed to achieve a successful and dynamic town centre. While the capacity of other regional centres appears to have peaked, it is evident that capacity remains in Tallaght to create a retail centre to rival other regional centres. Tallaght offers significant potential with undeveloped town centre blocks and vacant floorspace. By focusing new investment into Tallaght and ensuring that the town centre grows as an integrated social, cultural and leisure destination with a high quality public realm, its role as a County Town of regional significance can be realised.

It is considered important to maintain the vision for Tallaght as a vibrant and sustainable County Town that sits at the top of the County settlement and retail hierarchy, and to continue to seek to improve Tallaght’s importance in regional shopping terms.

**Liffey Valley**

Liffey Valley is a designated Town Centre and a Level 2 Retail Centre in the regional hierarchy. The Town Centre zoning comprises a purpose built Shopping Centre and cinema with a predominantly comparison offer (95%) at present. There is also a retail park and several stand alone office buildings, car showrooms, 2 hotels and a bar/restaurant. Until the opening of Dundrum Town Centre, Liffey Valley, together with Blanchardstown, was a key shopping destination outside of Dublin City Centre for quality comparison shopping drawing trade from across the Region and beyond. Turnover at the centre is predominantly from outside of the County in contrast to Tallaght5.

The Centre while still a key retailing centre, has lost market share as a result of improvements in retail floorspace in and around the GDA and in its wider catchment area. Since the beginning of the 2000s, there has been a limited diversification of the centre. This has included the opening of the Liffey Valley Retail Park (including car showrooms), hotel and leisure and office developments. Permission has also been granted for a large convenience store with construction still to commence. The GDA Retail Strategy 2008-2016 advocates aligning the region’s urban hierarchy with the retail hierarchy. In this regard it is important to note that Liffey Valley function successfully as a regional shopping centre served by the adjoining national road network.

The wider mixed use residential, social, civic and commercial elements that would normally characterise a Town Centre have not emerged at Liffey Valley. The non – retailing uses that have been developed are predominantly related to its location at a major road junction. The potential for a mixed use town centre at Liffey Valley is limited by virtue of its two road vehicular dominated access and fragmented local catchment. It is considered that the future role of Liffey Valley may be as a regional shopping centre and that the wider town centre role may be promoted at more appropriate adjacent centres.

There is potential to accommodate further growth such as retail warehousing expansion in competition with locations such as Airside and Carrickmines, given the sites high accessibility from the national and regional road network. A key consideration for the Development Plan review will be the role of the centre and whether the current designation as a Town Centre within the County urban hierarchy is appropriate.

**Clondalkin**

Clondalkin is designated as a Level 3 Retail Centre in the GDA and County retail hierarchies. In recognition of the importance and diversity of the Centre, it is designated as a Town Centre in the County’s urban settlement structure. Clondalkin comprises a range of social, civic and leisure functions in addition to two distinct retailing areas – Clondalkin Village and The Mill Centre. The Village area is characterised by independent outlets and national multiples with a limited retail offer overall.

The Mill Centre is a purpose built single storey mall type development anchored by a Dunnes Stores department store. As a centre for a local catchment, Clondalkin is a popular and busy shopping destination.

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4 South Dublin County Retail Study, August 2007

5 South Dublin County Retail Study, August 2007
It is attractive and vibrant with potential for further enhancement. Notwithstanding this, as the third most important retail centre in the County, the floorspace quantum and quality plus the results of household and shopper surveys illustrate a significant gap between it and the two Level 2 Centres. It is struggling to compete with adjoining centres such as Liffey Valley for inward investment and its future role in conjunction with that of Liffey Valley and the emerging centres at Adamstown and Clonburris needs to be considered.

**Other Centres**

The SDZ Planning Schemes for Adamstown and Clonburris include provision for integrated district centres with retail, social, cultural, and leisure functions. Clonburris is reasonably proximate to the centres at Liffey Valley and Clondalkin and as such, the future role of all three centres must be considered together.

The County is served by a mix of traditional village and town centres and shopping centres that serve local catchments. Tallaght and then Clondalkin are the primary urban centres within the County. After this, new retail development should be focused into the existing town centres and the developing SDZ locations.

The functionality of a number of Level 3 centres (e.g. Lucan and Rathfarnham in particular) is disjointed with historic village cores offering retail services and newer shopping centres nearby offering convenience and some comparison shopping. In order to retrofit and reinforce the traditional centres, the concept of merging or ‘twinning’ the established shopping zones in an urban catchment will be investigated. Designated land uses, car parking strategies and sustainable transport infrastructure may facilitate and encourage the linking of the ‘edge of centre’ shopping centre and the adjacent traditional town centre. The combination of the retail offering of the shopping centre and the existing service, social and economic functions of the traditional town centre can provide an opportunity for vitality. These centres also have potential for diversification, particularly in relation to the niche retailing, tourism, local produce, events and festivals.

Furthermore, an examination of the smaller neighbourhood centres (zoned ‘Local Centres’) and their catchment shall take place to identify inconsistencies and opportunities for expansions where significant population growth is anticipated in the lifetime of the County Development Plan. In particular, large retail shopping centres at Knocklyon and Rathfarnham have the same status as many local parades of shops.

**Settlements and Retail**

Retail planning policy generally aligns the settlement strategy and the retail strategy for the County. In the context of South Dublin County, the Regional Planning Guidelines 2010 – 2022 designates Lucan (including Adamstown), Clondalkin (including Clonburris) and Tallaght as ‘Metropolitan Consolidation Town’. The RPGs describes this designation as a ‘strong active urban places within metropolitan area with strong transport links’.

In quantity terms, the existing retail hierarchy designates 11 retail centres between Level 2 ‘Metropolitan & Major Town Centre’ and Level 3 ‘District & Town Centres’ and the RPGs designates 3 corresponding settlements categorised as ‘Metropolitan Consolidation Town’.

It is evident that the existing retail hierarchy of the GDA Retail Strategy 2008 - 2016 and the existing settlement strategy of the Regional Planning Guidelines do not align. Liffey Valley functions as a motorway focused shopping centre and not a town centre. Furthermore, the shopping centres at Citywest, Kilnamangh and Lucan are not comparable to the traditional town centres of Lucan, Rathfarnham and Rathcoole in terms of their wider functions.

The predominant retail principle for the County will be to support the existing retail locations, in particular village and town centres and to provide for suitable floorspace extensions at locations of population growth and new district centres within the SDZ areas of Adamstown and Clonburris. Given the suburban character of the County, retail catchments overlap and are difficult to define and as such, the alignment of a retail hierarchy and the settlement hierarchy is complex. Residential areas such as Kilnamanagh, Citywest and Lucan provide sufficient local catchments to support district centres but are outside the main settlement hierarchy of the County. In this context, the Plan will seek to adopt a broader approach to the alignment of the settlement strategy and the retail strategy.
Transport and Mobility
Transport and Mobility

1.0 Introduction:
The vision for transport and mobility in the current South Dublin County Council Development Plan is to promote ease of movement within, and access to South Dublin County (SDCC), by integrating sustainable land-use planning with a high quality transport system for people and goods within the County. SDCC’s transport policy is guided by a comprehensive and coordinated set of national and regional policy documents that have emerged over the past decade (see Table 1.1).

Within all of these documents there is an acknowledgement that current transport trends are unsustainable and in order to meet future travel demand, change is needed. All policies place a major emphasis on changing travel patterns and behaviour to reduce car dependence in favour of more sustainable modes of transportation, such as walking, cycling and public transport. The immediacy of this challenge is highlighted by estimates that travel demand within the Greater Dublin Area (GDA) is likely to increase from 4.5 million journeys in 2006, to in excess of 6 million by 20301.

These policies also note the considerable benefits change will bring such as:

• Reductions in pollution and greenhouse gas emissions.
• More efficient infrastructure provision and journey times.
• Social equity as it is the disadvantaged and most vulnerable in society for whom car travel is less of an option.
• Public well being and the negative health and social impacts associated with inactivity.

Moreover, a well managed transport network will attract businesses, ensure competitiveness and provide employment opportunities for the people of South Dublin County.

In accordance with national policy, the Development Plan will seek to present an integrated strategy for transport and mobility that promotes change. This will be one of major challenges facing South Dublin County Council during the life of the 2016-2022 County Development Plan.

This paper outlines an overview of the South Dublin County and reviews the challenges faced across the network.

2.0 Status of Transport Projects
The national and regional policy documents outline a number of major infrastructure projects that are required to support changes in travel patterns and behaviour. Many of these been delivered or are in the process of construction since the adoption of the current County Development Plan.

There are also several major infrastructure plans for the region which will directly benefit the County (however the status of many of these is not clear, particularly those identified under Transport 21). Those projects that are of direct benefit to the County (including local projects undertaken by SDCC) are outlined in Table 2.1.

<table>
<thead>
<tr>
<th>Publication</th>
<th>Publication date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Manual for Urban Roads and Streets</td>
<td>2013</td>
</tr>
<tr>
<td>(Draft) Greater Dublin Cycle Network (2013)</td>
<td>2013</td>
</tr>
<tr>
<td>Swiftway - Bus Rapid Transport</td>
<td>2013</td>
</tr>
<tr>
<td>Spatial Planning and National Roads: Guidelines for Planning Authorities</td>
<td>2012</td>
</tr>
<tr>
<td>(Draft) Greater Dublin Area Transport Strategy 2011-2030</td>
<td>2011</td>
</tr>
<tr>
<td>National Cycle Manual</td>
<td>2011</td>
</tr>
<tr>
<td>Regional Planning Guidelines for the Greater Dublin Area 2010-2022</td>
<td>2010</td>
</tr>
<tr>
<td>Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (Cities, Towns &amp; Villages)</td>
<td>2009</td>
</tr>
<tr>
<td>Smarter Travel - A Sustainable Transport Future 2009-2020</td>
<td>2009</td>
</tr>
<tr>
<td>Retail Strategy for the Greater Dublin Area</td>
<td>2008</td>
</tr>
<tr>
<td>Transport 21</td>
<td>2005</td>
</tr>
</tbody>
</table>

Table 1.1: National and regional policy documents that will guide the development of the transport and mobility strategy

1 (draft) Greater Dublin Area Transport Strategy 2011-2030
3.0 South Dublin Context

Smarter Travel outlines a series of specific targets in relation to the transition toward more sustainable modes of transportation. These include:

- The total share of car commuting to be reduced to 45%
- Walking, cycling and public transport to achieve a 55% share of journeys to work, with cycling comprising 10%.

As illustrated in Table 3.1, SDCC needs to make significant progress over the life of the next County Development Plan with regard to these targets. This is further emphasised by the need for urban areas to exceed the targets in order to off-set more rural areas where travel distances are longer and public transport services are more difficult to provide.

<table>
<thead>
<tr>
<th>Project</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Network Improvements</strong></td>
<td></td>
</tr>
<tr>
<td>Leap Card - Integrated Ticketing</td>
<td>Implemented</td>
</tr>
<tr>
<td><strong>Rail</strong></td>
<td></td>
</tr>
<tr>
<td>Extension of the red line LUAS from Belgard to Saggart</td>
<td>Complete</td>
</tr>
<tr>
<td>Construction of rail stations at Fonthill Road and Kishoge</td>
<td>Fonthill Road Open</td>
</tr>
<tr>
<td>Dart Underground (also known as the Interconnector) linking Inchicore Station and the Docklands, via St. Stephen’s Green</td>
<td>Kishoge due to open spring 2015</td>
</tr>
<tr>
<td>Light Rail Transit (Metro West) linking Tallaght to the City Centre and Dublin Airport via Metro North</td>
<td>Postponed</td>
</tr>
<tr>
<td>Luas Extensions to Lucan to the City Centre (via Liffey Valley)</td>
<td>Subject to further assessment</td>
</tr>
<tr>
<td>Opening of the Phoenix Park tunnel for commuter services</td>
<td>Late 2015/early 2016</td>
</tr>
<tr>
<td><strong>Bus</strong></td>
<td></td>
</tr>
<tr>
<td>Real Time Network information</td>
<td>Implemented</td>
</tr>
<tr>
<td>Swiftway - Bus Rapid Transport (BRT) from Clongriffin to Tallaght Route (Final route to be determined)</td>
<td>Initial design phase</td>
</tr>
<tr>
<td><strong>Road</strong></td>
<td></td>
</tr>
<tr>
<td>Newlands Cross Upgrade Scheme, including new flyover</td>
<td>Under construction</td>
</tr>
<tr>
<td>Upgrade of the N81 from Hollywood Cross to Tallaght</td>
<td>Due to open spring 2015</td>
</tr>
<tr>
<td>Regional Road upgrades including Adamstown Road and Nangor Road</td>
<td>Awaiting funding</td>
</tr>
<tr>
<td><strong>Pedestrian/Cycle</strong></td>
<td></td>
</tr>
<tr>
<td>Greenway Cycle Routes, including Grand Canal, River Dodder, Grand Canal to Adamstown/Graffeen Park</td>
<td>Completion or various stages of construction</td>
</tr>
<tr>
<td>Cycle Routes, including Welling to Whitehall Road, Tallaght to Ballyboden/Templeogue, Grange Road, Ballyown, N81</td>
<td>Various stages of design/construction</td>
</tr>
<tr>
<td>Local Permeability Projects (including a County review)</td>
<td>Completion or various stages of design/construction</td>
</tr>
<tr>
<td><strong>Studies</strong></td>
<td></td>
</tr>
<tr>
<td>Tallaght Town Centre Urban Movement Framework Plan, Clondalkin Movement Framework Plan, Lucan Access Study</td>
<td>Complete or under preparation</td>
</tr>
</tbody>
</table>

Table 3.1: Infrastructure projects relevant to South Dublin County
Achieving, and exceeding the Smarter Travel targets will be particularly challenging when viewed against current trends. Table 3.2 illustrates that over the last two census periods there has not been a shift toward more sustainable modes of transportation. This trend is generally reflective of the Greater Dublin Area (GDA) where there was an increase in mode share for cars and reductions in walking and travel by bus.

The 2011 Census also records the origin and destination of journeys. In this regard there were:

- 77,699 work trips into the County.
- 105,286 work trips from the County.

Figures 3.1 and 3.2 (overleaf) illustrate the origin and destination of these trips as percentages, respectively. These figures illustrate that:

- The largest proportion of the workforce within the County also resides within it.
- The largest destination for work trips outside of the County is into Dublin City.
- A significant minority of trips (20%) into the County are from rural based counties.
- Nearly all trips to/from the County are made from within the Greater Dublin Area.

The National Transport Authority (NTA) notes that while employment has dropped in many areas of Dublin, Sandyford, Cherrywood, Blanchardstown and Citywest all emerge as major employment growth areas for Dublin in the period 2006-2011. This has placed additional pressure on orbital trips, especially along the M50.

Census 2011 data is also available with regard to the origin and destination of education trips within the County. Figure 3.3 (overleaf) shows origin/destination movements by Electoral Districts (ED) to education.

There is a distinct pattern to the movement of students into more established areas (such as Tallaght, Clondalkin, Lucan Village, Rathfarnham and Templeogue) from the urban fringe/peripheral areas (such as Ballycullen, Firhouse, South Lucan and West Tallaght). This movement pattern is indicative of a smaller number of school places in areas located on the urban fringe/periphery.

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### Table 3.1: Comparison of mode splits

<table>
<thead>
<tr>
<th>Mode of Transport</th>
<th>Trips 2006</th>
<th>Trips 2011</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>On foot</td>
<td>28,469</td>
<td>27,765</td>
<td>-2.5</td>
</tr>
<tr>
<td>Bicycle</td>
<td>4,662</td>
<td>4,985</td>
<td>+6.9%</td>
</tr>
<tr>
<td>Bus, minibus or coach</td>
<td>26,246</td>
<td>22,941</td>
<td>-12.6%</td>
</tr>
<tr>
<td>Train, DART or LUAS</td>
<td>3,148</td>
<td>3,152</td>
<td>+0.1%</td>
</tr>
<tr>
<td>Motorcycle or scooter</td>
<td>1,888</td>
<td>1,239</td>
<td>-34.4%</td>
</tr>
<tr>
<td>Car driver</td>
<td>71,663</td>
<td>68,785</td>
<td>-4%</td>
</tr>
<tr>
<td>Car passenger</td>
<td>21,452</td>
<td>24,468</td>
<td>+14.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>157,478</strong></td>
<td><strong>153,335</strong></td>
<td><strong>-2.6%</strong></td>
</tr>
</tbody>
</table>

### Table 3.2: Population aged 5 years and over by means of travel to work, school or college South Dublin County Council

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Car Commuting</td>
<td>56%</td>
<td>59%</td>
</tr>
<tr>
<td>Walk, bicycle, bus or rail.</td>
<td>35%</td>
<td>30%</td>
</tr>
<tr>
<td>Other</td>
<td>9%</td>
<td>11%</td>
</tr>
</tbody>
</table>
The formation of a complete view of travel patterns and behaviour requires further study. However, there are a number of general observations that can be made with particular regard to the challenges faced by different users and how this is likely to affect their travel choices. From this analysis a number of strategies emerge. These are discussed further below.
4.0 Challenges Faced by Network Users

4.1 Pedestrians

Trips on foot have the potential to replace motor vehicle travel for short trips. Figures 4.1 and 4.2 illustrate highly contrasting levels of travel by foot for EDs within the County to employment and education, respectively. The reasons for this contrast are likely to be complex. However as would be expected the proportion of trips by foot are:

- Higher for work in those EDs that are within/adjacent to major areas of employment such as Citywest, Tallaght Town Centre, Liffey Valley Shopping Centre, Palmerstown Village.
- Higher for education in those areas where several schools are located.
- Lower in rural parts of the County where access to work for school involves travelling greater distances.

These patterns are not however, uniform and there are several EDs where trips by foot are relatively low, given their proximity to employment centres and schools. These include:

- Areas where workforce participation and car ownership are higher, such as Rathfarnham, Knocklyon, Firhouse and parts of Lucan.
- Areas known to have a less well connected walking environment, such as parts of Lucan, Clondalkin and Saggart.
- Newly developed areas where local services and schools are yet to be established.

Figures 4.1 and 4.2 indicate that a walking culture has been established in many areas and there is significant potential to increase the share of walking in the County, particularly as a significant proportion of the County’s population lives in close proximity to employment and education facilities. This is further highlighted by the Irish National Household Survey 2012 which indicates that a significant proportion of daily journeys made by car, could be undertaken on foot (see figure 4.3).
In order to reduce the number of short journeys taken by car (as well as improve access to public transport services) national and regional transport policies direct local authorities to prioritise the movement of pedestrians. The means to achieve this will include:

- Reducing the speed of traffic to create a safer street environment;
- Providing more permeable pedestrian (and cycling) networks that allow for direct connections and route choice;
- More frequent and better quality crossing facilities;
- Creating a more comfortable pedestrian environment by ensuring streets are overlooked, well lit and with adequate space for walking;
- Creating a more attractive street environment via streetscape improvements.

The formation of walkable communities is achievable in developing areas. The Development Plan (and more detailed Local Area Plans) can provide a comprehensive set of criteria for the development of new communities. Increasing walkability where new development adjoins established areas, or where retrospectively applied in established areas is more challenging.

Major issues arising from the previous design of streets and street networks include:-

- Many communities have been built in large blocks with few connections to adjoining areas. These estates are characterised by a high proportion of cul-de-sacs. This often results in long walking distances to basic services, even though they are in close proximity to residents (see figure 4.4).
- Many communities are surrounded by busy roads that act as barriers to pedestrian movement. These roads are characterised by a hostile environment to pedestrians. No overlooking by houses, narrow footpaths, fast vehicle speeds, delays at large complicated crossings and a lack of route choice can all combine to reduce the attractiveness of walking (see figure 4.5).
These problems are particularly acute for the most vulnerable or disadvantaged users, such as the poorest and most vulnerable in society, including children, the elderly and the disabled for whom car travel is less of an option.

A significant amount of work is ongoing in the County to improve conditions for pedestrians and cyclists (e.g. figure 4.6). Such projects provide safe, attractive and direct links for local communities to shops, schools and/or public transport services. A post user survey of the completed Dargle Wood Link indicated that a total 1,451 people used the route in a 23.5 hour period over 3 days.³

When Local ‘Permeability’ Projects are proposed to create additional pedestrian and cycle links, concerns include a mistrust of ‘strangers’ from adjoining areas, fears of an increase in anti-social behaviour and a loss of privacy.

Measures such as the reallocation of road space for pedestrians, new and/or improved pedestrian crossings and reduced speed limits can also be the subject of opposition where they may cause delay (or even perceived delay) for motor vehicles.

To address local concerns and promote a more holistic view of the benefits of a proposal it will be necessary to:

- Identify a comprehensive package of schemes that create a network of walking and cycling routes with clear links between communities, services and employment opportunities.
- Target a broader range of communities such as those where a higher proportion of residents cannot drive.
- Target access to a broader range of services and facilities, such as employment lands.
- Include broader improvements that will serve to regenerate areas, such as town/village centres, parks and other public spaces.
- Directly link improvements to the provision of new community facilities (such as schools) and/or services (such as new/upgraded public transport routes).

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³ Survey carried out on Tuesday 18th September 2012 from 13:30 to 19:30, on Wednesday 19th September 2012 from 08:00 to 19:30 and on Saturday 22nd September 2012 from 11:00 to 17:00.

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Figure 4.6: Dargle Wood Walking and Cycling Link, Knocklyon has provided a new link through a large area of open space connecting local community to local shops and schools.
4.2 Cycling

Trips by bicycle have the potential to replace motor vehicles as an alternative means of transport for short to medium range trips. Figures 4.7 and 4.8 show a general relationship with Dublin City for trips to work and education where the closer an ED is located to the city centre the higher the share of trips by bicycle. This generally contrasts with EDs located outside of the M50 where the share of cycling trips is lower. This includes areas adjacent to major service/employment centres such as Citywest, Tallaght and Clondalkin where the mode share should be much greater given the population base surrounding them.

A significant amount of work has been carried out within the County to improve the cycling network. The provision of dedicated cycle facilities, such as segregated cycle paths that build up a network, are critical to improving the number of cycling trips. These are facilities that are provided separate to the vehicle carriageway either in parallel or via an a fully segregated alternative route (see figure 4.8).

Just as there are a number of overlapping benefits in the provision of cyclist and pedestrian facilities there are also legacy issues. With regard to South Dublin County the (Draft) GDA Transport Strategy notes:

- New cycle tracks in developing areas are better in quality but have a very low level of usage.

- In more established areas, cycle tracks are generally of poor quality (narrow, intermittent, too close to fast moving traffic, or nonexistent).

- Green Routes through public parks or along the Grand Canal and the River Dodder offer an amenable experience but there are problems accessing these routes due to the use of severely restrictive gates at the entries.

- The M50 motorway severs the County in two and forms a barrier to the movement of cyclists.

There has been some public opposition where new cycling links are provided within established communities. Issues can also arise where road space is transferred from motor vehicles to cyclists.
As with walking, a targeted and packaged approach to the creation of a cycle network is required. A substantial amount of work has already been undertaken with the production of the (draft) GDA Cycle Network Plan (2013), in terms of the formation of a highly connected cycle network. The necessary approaches overlap with those highlighted above in relation to pedestrian movement, such as the reallocation of road space, new and improved crossings and reduced speed limits. In addition, support facilities such as secure parking and changing/showering facilities at places of employment will be key to encouraging more people to cycle.

4.3 Public transport

As noted above in Table 3.2, there has been an overall decline in the use of public transport services during the previous Census periods. In this regard it should be noted that:

- The economic downturn has resulted in fewer people travelling to work.
- The 2011 Census pre-dates new services such as the Red Line extension to Saggart or Real Time Passenger Information.

Figures 4.10-4.11 illustrate a trend where the proportion of trips made for work and school by public transport are:

- Higher in areas where there are direct and frequent services provided to Dublin City Centre.
- Lower in urban fringe/peripheral areas (including newly developed areas such as Citywest, Ballycullen and Oldcourt but not including Adamstown).
- Lower in areas where people face difficulties reaching bus/LUAS stops by foot (as highlighted above).
- Trips are low in parts of the County where there are no services, or where services are infrequent (see also figure 4.12).
The County Development Plan will be a catalyst for the continued identification of where new routes are needed and where existing routes are in need of improvement:

- A significant proportion of the County’s workforce resides within it. This suggests a need for orbital services that link major centres of employment such as Tallaght, Clondalkin and Liffey Valley.
- Additional/extended routes are required to service newly developed areas. These may also need to be designed to pick up other areas where gaps in service exist.
- The formation of transport hubs, where connections between services can occur (such as between orbital and radial routes and/or core and feeder routes), to form a ‘web’ like network.

The County Development Plan is a means to link urban growth to the provision of public transport services. Successive development plans have embraced this approach by directing higher density forms of development toward public transport nodes and routes.

The changing housing market has resulted in significant pressures to moderate densities throughout the County. This has resulted in a need to ensure an appropriate balance whereby:

- If density requirements remain weighted toward the provision of higher densities, the land is unlikely to be developed in the foreseeable future and it may be ‘land banked’.

Alternatively:

- If densities are too low the development of lands would be a wasted resource and would occur at levels that won’t sustain quality public transport services.

A critical balance therefore needs to be reached. For example, this has been sought within the recently amended Adamstown SDZ Planning Scheme and via other Local Area Plans such as the Fortunestown LAP (which is centred around the Red Line extension to the Luas). The Development Plan will seek to ensure that there is a consistent approach applied across the County, that enables appropriate densities relative to public transport provision.

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**Proximity and Frequency of Public Transport Services (2010)**

- Within 400m of higher frequency service
- Within 800m of higher frequency service
- Within 400m of medium frequency service
- Within 800m of medium frequency service
- Within 400m of low frequency service
- Within 800m of low frequency service

Figure 4.12. Illustration of proximity and frequency of public transport services based on walking catchments (2010)
4.4 Private Vehicles

4.4.1 Local Traffic

Local traffic refers to private car use that is generated by residents of the County. Figures 4.13 and 4.14 show the mode share for car trips to work and education, respectively, by ED. These figures illustrate that there has been no significant reduction in car use in the County during the census period. This is consistent with the GDA, which notes that Census data going back to 1996 shows a growing reliance on the private car.

The reasons for the high use of cars in the County are complex, but in general car use tends to be highest in areas that are characterised as:

- Newly developed areas on the urban fringe such as Ballycullen and South Lucan.
- Towns and rural areas located outside of the Dublin built up area where there are few public transport options, such as Newcastle, Rathcoole and Saggart and the mountainous and agricultural parts of the County.
- Areas within the urban area where there are gaps in services and/or poor levels of accessibility, such as parts of Lucan and West Tallaght.
- Areas where workforce participation and car ownership are higher, such as Rathfarnham, Knocklyon and parts of Lucan.

Other issues related to car use can be attributed to travel patterns and individual circumstances, such as:

- The car being the only practical means of transportation, particularly for those in outlying areas or travelling cross county/cross city.
- Limited schooling options (nos. of schools, capacity, enrolment difficulties) which require young children to be driven longer distances.
- The need to multi-task work and school trips.

High levels of car use within the County lead to traffic congestion problems. Although traffic congestion is worst on the major national routes that run through the County (and their approach routes, see below) there are parts of the road network where the volume of locally generated traffic is also causing congestion problems.
Recent data gathered on behalf of the National Roads Authority (NRA) indicates that (see also figure 4.16):

- There is significant local movement within the Tallaght area.
- There is significant movement between Lucan, Grange Castle, Clondalkin and Neilstown.
- There is little movement between Lucan and Tallaght, however Clondalkin has strong links to both areas.
- The largest generators/attractors of traffic within the County are the Citywest/Jobstown, Clondalkin, Grange Castle/Baldonnell and Killinarden areas.

It is noted that there are significant delays throughout the road network within the AM peak due to the volume of traffic and a number of local ‘hot spots’ where junctions are operating at or over capacity. The extent of these ‘hotspots’ presents a significant issue for SDCC as, in general, the scope for increasing capacity at these junctions is limited. Most major junctions within the County are already designed to optimise vehicle movement.

Ongoing SDCC work with the NRA will be used to inform the development of policies for managing traffic on the local road network. For example the modelling of key desire lines for vehicle travel assists in identifying those areas where providing infrastructure to support sustainable means of travel (walking, cycling, public transport) may be best targeted to reduce the demand for vehicle use.

4 Delays are on average 70% longer in the AM peak (8am to 9am) than during the inter-peak period (12pm to 1 pm).

Figure 4.16: AM peak traffic: desire lines within the County in vehicle units (source NRA)
4.4.2 Economic and Employment Related Traffic

Economic and employment related traffic can be viewed in the context of:

- Access to industrial and logistical premises by Heavy Goods Vehicles (HGVs).
- Access to business and enterprise premises by employees.
- Access to retail areas by consumers, employees and service vehicles.

The County is reliant on road vehicles for movement of goods. To ensure competitiveness and the efficient movement of goods, access needs to be direct and relatively congestion free. This creates a demand for employment lands on the periphery of the built up area and adjacent to the national road network.

With the built up area, areas containing industrial and logistics related uses have been subsumed into the urban fabric (for example Naas Road, Walkinstown). A greater range of activities have moved into such areas including offices, retail and residential. As a consequence, rising land values in such areas mean that more logistic or industrial based activities have moved to new lands outside the built up area.

The County Development Plan has facilitated this movement by zoning large areas of land:

- EP3/EP2 on the periphery of urban areas to facilitate warehousing, manufacturing and other industry that requires good access to the major road network.
- EP1 zone within more urbanised areas to facilitate more intensive employment complemented by mixed use development.

Notwithstanding these policies, relocation of employment uses within the County has remained stagnant in recent years. As a result large volumes of HGV traffic still move through built up areas which is undesirable due to:

- Higher levels of congestion as large, slower moving vehicles fill the street.

In more peripheral employment areas the scattered nature of the workforce (i.e. orbital or cross city travel patterns), results in few or less attractive public transport to options. In addition many areas (i.e. industrial and logistical businesses) also have a very low employee/floorspace ratio. The low density nature of these lands make it difficult to sustain frequent public transport services. Employment areas may also be physically disconnected from residential populations where a significant proportion of employees live.

This is of particular relevance, as an analysis of the nine largest areas of employment within the County also indicated that the highest concentrations of employees within each area tend to come from within the same ED or those immediately adjacent (see figure 4.17).

Traffic management around retail centres, and in particular large shopping centres, is a significant issue as:

- The mix of service vehicles, employees traffic and shoppers can result in the streets around these centres being some of the most congested parts of the road network with congestion extending outside of the usual morning/evening peaks into afternoon peaks (and into weekends).
- The issues associated with HGVs access in these areas tends to be particularly acute as they are at the heart of many communities and have the highest concentrations of pedestrian and cyclist activity.

Within the County as a whole, the major retail centres throughout tend to be the best served by public transport and are surrounded by well established communities (however direct links are not always provided). Demand for local traffic access can still be high as many customers prefer to drive to these centres, particularly where the ‘weekly shop’ and/or the purchase of bulky goods necessitates the use of a vehicle.

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5 TRL report PPR 445 notes that in the UK are over-represented in cyclist fatalities (18% of fatal cycle accidents involved an HGV, compared with 4% of serious accidents).
It is therefore a critical issue to effectively manage traffic in the major centres throughout the County. This has been the subject of numerous studies in recent years. Most recently Movement Framework Plans have been developed for Tallaght and are under preparation for Lucan and Clondalkin. These differ from previous approaches as they focus on the provision of a range of measures to deal with traffic congestion. They also take account of servicing requirements in order to reduce the impacts of HGV movement.

4.4.3 Through Traffic

Through Traffic refers to vehicles passing through the County with origins and designations elsewhere. This movement primarily occurs along the three national roads (N4, N7 and N81) and the M50 Motorway. Recent NRA data notes that once traffic enters the County from the west during the AM peak approximately two thirds of it continues through the County along the and N4 and N7, respectively, as follows (see also Figure 4.18):

- Trips into the County from the west along the N4 are distributed evenly between the M50, city centre and Lucan/Clondalkin Area.
- Trips into the County from the west along the N7 are also split evenly between the M50, city centre and Tallaght Areas.

Major junctions along the N4 and N7 experience the most severe congestion within the County (see also Figure 4.15, above). Congestion along these routes has a major impact on the County road network and long tail backs are common on many approaches where locally generated traffic seeks to join or cross these routes.

Traffic congestion is not likely to improve significantly in the foreseeable future as traffic along the main radial routes into Dublin City is expected to grow. The (Draft) GDA Transport Strategy projects that both population and employment are expected to grow by a further 39% in the period up to 2030 within the GDA. The majority of jobs (85%) will continue to be located in the Metropolitan area, with particularly strong growth in Dublin city centre.
The M50 and other National routes are the responsibility of the National Roads Authority (NRA). The NRA will seek to address the future capacity of these routes and the management of the broader network. SDCC will seek to ensure that all options that may impact on the County’s road network are taken into account. The County Development Plan will be informed by this and the likely consequences for the County.

4.4.4 Car Parking

The approach to the provision of parking has been to predict the number of spaces required for a particular development. The number of spaces is determined by a rate which is generally based on a quantum of land use. The current County Development Plan applies these rates as:

- A maximum where a development is well served by public transport.
- A minimum in areas less well served by public transport.

The County Development Plan also allows for reduced standards where set criteria are met. The onus is on the applicant to demonstrate reduced need and most land uses attract a set minimum standard (i.e. no range is given). There has been little change in car parking rates over successive County Development Plans.
The availability and cost of parking has a major impact on the traffic that is generated by a development and/or is attracted to an area. Car parking can also become the dominant feature of the urban landscape with major implications for the accessibility of other modes and the creation of quality urban environments (see also Figure 4.19).

An approach that would be more consistent with sustainable transport policy would not be based on whether or not a minimum standard is achieved, but whether or not the proposed number of spaces is justified. The placement of restrictions on parking can be used to reduce overall demand. For example the (Draft) GDA Transport Strategy notes the success of restrictions in city centre parking, combined with improvements in public transport, cycling and walking. This has resulted in the share of journeys undertaken by sustainable modes growing from 50% in the late 1990s to 65% in 2007 during the morning peak.

Getting the balance right presents a particular challenge as much of the County’s population lives or works on the periphery of the city where travel distances are typically greater and public transport services more limited. It is a concern that under provided, strictly allocated or poorly designed parking may also encourage poor parking practices (including illegal ones) such as kerb mounting, parking on footpaths and within areas of open space.

To address these issues it is intended to review current parking standards. This will:

- Take into account current and planned mobility improvements throughout the County.
- Be applied according to geographic location (such as proximity to services and existing centres).
- Enable reductions where there are overlaps between uses (i.e. to take account of multi-trips and/or day and night time uses).

Figure 4.17: Large areas of surface parking around The Square, Tallaght. These present an obstacle to access for pedestrians, the integration of more urban forms of development and detract from the urban landscape.
5.0 Conclusions

5.1 A Balanced Approach

Overriding planning and transport policies have long recognised that the only comprehensive way to manage transportation requirements into the future is to influence travel patterns and affect behavioural change. One of the biggest challenges faced by the County is to free up road space for travel by means other than the car, particularly for access to centres and areas of employment.

The long term nature of this commitment is often difficult to maintain where demands arise to address peak traffic congestion ‘hot spots’ via one-off or localised road works. These present short term solutions that are often become self defeating. As noted at the European Conference of transport Ministers in 2007:

‘Most traditional congestion relief measures either free up existing capacity or deliver new road capacity, which is likely to be rapidly swamped with previously suppressed and new demand, at least in economically dynamic cities’.

5.2 Emerging Strategies

The County Development Plan will therefore seek to present an integrated transport and mobility policy that promotes change in travel patterns and behaviour. The key to the successful implementation of this policy will be the development of a targeted range of strategies that are measurable and actionable. In this regard four key areas of policy focus are emerging:

Support and guide national agencies in delivering major improvements to transport network.

The Council has a strong track record of working in partnership with national agencies to secure and develop major improvements to the transport network. The County Development Plan process presents an opportunity for further engagement.

The delivery of major transportation projects are pivotal to the County Development Plan. The Plan must not only be framed around plans published by national agencies, but should also identify and guide the development of future routes.

Focus of improvements to the local road/street network on better utilising existing road space and promote a transition toward more sustainable modes of transportation.

Creating more road space to cater for traffic, particularly in existing areas, is expensive and may serve to attract more cars to the network. The Development Plan will seek to address issues related to traffic congestion by promoting a transition to more sustainable modes of transportation by focusing resources on making improvements to the walking, cycling and public transport networks.

A substantial amount of work has been undertaken in recent years in this regard and will continue through developing and delivering Local Permeability Projects and the County wide Cycling Network.

Spatially arrange activities around existing and planned transport infrastructure.

This approach will be a continuation of those policies contained within the current County Development Plan, with more intensive land uses and residential densities developed in close proximity to services. This strategy needs to differ from previous plans in response to current economic conditions.

Utilising the experiences gained in undertaking reviews of the Adamstown SDZ Planning Scheme and other recently produced LAPS, the County Development Plan will seek a comprehensive review of base line densities and land use requirements. The focus of this review should be on urban consolidation around existing services.

The Plan review will also look at other transport related issues that are closely linked to land uses, densities and proximity to services.
Focus new road construction on providing access to new communities and the economic development of the County.

Whilst the County Development Plan will seek to promote sustainable modes of transport, it will also seek to provide a broader movement strategy that allows for the expansion of the road network where access to newly developed lands and to support the economic development of the County is required.

The development of new streets and roads within mixed use or residential communities will largely be determined by more detailed areas plans, such as SDZ Planning Schemes or LAPs. Additional strategic connections may be required, but should be limited to minimise the number of new car journeys undertaken on the network. It will be necessary to demonstrate how these links can be provided to access and service new areas, without attracting additional car journeys from existing areas.

A similar approach will need to be taken regarding the future provision of new roads required to support areas of economic activity so as to ensure they do not become congested with localised traffic. As these roads are likely to provide direct connections to the national road network, a strategy will also be required to ensure they do not become alternative routes for through traffic.

Base car parking standards on whether or not the proposed number of spaces is justified, rather than achieving a minimum standard alone.

The ‘minimum standard’ model will be reviewed in the context of a transition toward more sustainable modes of transport. The causal relationship between parking rates and the number of vehicles attracted to the road network requires a balanced approach. Parking rates should take into account location, access to public transport services and turnover rates.

The design of car parking areas and the impact they can have on the quality of urban spaces also need to be addressed. A varied approach is required to ensure that parking does not dominate the urban landscape and to promote a safer and more comfortable environment for pedestrians and cyclists.
Infrastructure
1.0 Background & Context

This paper focuses on water supply and drainage services, waste management and telecommunications and energy networks. The availability of high quality infrastructure networks and environmental services will play a key role in securing economic investment, creating sustainable and attractive places, in ensuring health and well-being and in safeguarding the environment. While South Dublin County Council is not directly responsible for all aspects of sustainable infrastructure provision, the County Development Plan 2016 – 2022 will be a starting point for infrastructure planning within the County.

2.0 Water Supply & Drainage

The capacity of the County to accommodate future growth is dependent on the capacity of water supply and drainage in the Dublin Metropolitan area.

In January 2014, Irish Water took over responsibility for the provision of public water services from the 34 local authorities. The establishment of Irish Water is part of a reform of water services in Ireland which seeks to ensure a more strategic and streamlined approach to public water services nationally. In order to maintain continuity of service, Irish Water has entered into Service Level Agreements (SLAs) with the 34 local authorities for the operation of Irish Water’s assets for the next twelve years. This means that the role of the local authority in water supply and waste water has changed. South Dublin County Council is now an agent for Irish water with responsibility for operational matters. Investment decisions will be centralised and as such, it is critical that the Irish Water investment programme is informed by the County’s long-term growth strategy.

Irish Water has indicated that a medium term Capital Investment Programme (CIP) (€1.77 billion) will run from 2016-2021. Investment in this initial programme will deliver the most urgently needed improvements in drinking water quality, leakage, water availability, wastewater compliance, efficiencies and in customer service. It represents the transition between the capital programmes previously overseen and funded by the Department of Environment, Community and Local Government (DECLG) and Irish Water’s full price control period investment plans. Of the 380 projects listed, the Saggart to Leixlip strategic watermain and a number of other regional projects that will improve water supply and drainage services in South Dublin County are included.

In the longer term, significant improvements are required to the waste water collection and treatment infrastructure in the Dublin Region and Irish Water has commenced consultation on its long-term investment plan to 2030.

The Greater Dublin Strategic Drainage Study (GDSCS) which was completed in 2005, has identified deficiencies in the capacity of the region’s sewerage system as a potential constraint on the level of development envisaged in the Greater Dublin area. Consultation between Irish Water and the Dublin Local Authorities will ensure that effective measures are put in place to cater for the projected needs of the city and to meet the water quality requirements of the EU Water Framework Directive (2000) and other relevant EU Directives. The GDSCS recommended a new regional waste water treatment plant at a site in the northern part of the Greater Dublin Area with associated coastal outfall and an orbital sewer, which increases capacity in the Region.

The foul drainage network in South Dublin County comprises two main areas, the area draining to the Grand Canal Sewer and the area draining to the Dodder Valley Sewer. The area draining to the Grand Canal Sewer is served by the ‘9B’ Sewer and is broadly the area north of the Naas Road. The area south of the Naas Road drains to the Dodder Valley Sewer. The Council has planned works in these two catchment areas. The schemes will provide for future development and reduce the frequency of overflows to receiving waters by the provision of additional pipelines, pumping stations and retention tanks. The Saggart/ Rathcoole/ Newcastle Drainage Collection system will provide local foul and surface water infrastructure to these towns.

South Dublin County Council receives 68.5ML/day of treated water from Dublin City Council’s water treatment facility at Ballymore Eustace and approximately 1.5ML/day from Fingal County Council’s water treatment plant at Leixlip. This water is distributed throughout the County via 1,450km of water mains and from main storage reservoirs at Belgard, Pearmount, Kiltalown, and Saggart. The water is distributed to over 86,500 households and over 5,400 metered commercial customers.

South Dublin has one public water supply from a borehole in Brittas which supplies approximately 120m/3 per day. Most of the treated water supply in South Dublin County is currently supplied from Ballymore Eustace via the Belgard Reservoir.
The Lucan/ Palmerstown Water Supply Scheme in the north and west of the County and the Boherboy Water Supply Scheme in the south of the County added two new storage reservoirs in the County. The net effect of the two schemes was to reduce the area supplied from the Belgard Reservoir and improve the security of supply in the whole County. A new strategic main from Saggart to Leixlip is also to be provided under the current Irish Water investment plan and will ensure a secure strategic supply to industries in Grange Castle and North Kildare.

In accordance with the EU Water Framework Directive, the Eastern River Basin Management Plan will form the basis for the development of a programme of measures which will be used to deliver water quality targets set out in the plan.

Surface water drainage remains primarily the responsibility of South Dublin County Council with the OPW having responsibility for flood risk management nationally and regionally. A number of surface water schemes have been completed on the Camac, Griffeen and Tobermaclugg rivers. Further works are planned for the Dodder, Camac, Griffeen, and Poddle catchments. In conjunction with adjoining local authorities and the OPW Catchment Flood Risk Assessment and Management Studies (CFRAMS) were competed for the River Liffey and River Dodder catchments and recommendations of the CFRAMS are currently being implemented in the Dublin City area.

The changing context of water and drainage services presents a challenge for the County. Constraints for both drainage and water supply are identified at a Regional and Local level and the provision of infrastructure to address capacity issues is outside of the control of South Dublin County Council. It is noteworthy that all investment plans by Irish Water must take account of the National Spatial Strategy, Regional Planning Guidelines & County Development Plans.
3.0 Waste Management

National policy on waste management is set out in A Resource Opportunity, published by the DoEHLG in July 2012, and which sets out the measures through which Ireland will progress to become a recycling society, with a clear focus on resource efficiency and the virtual elimination of landfilling of municipal waste. The policy advocates a regional approach to waste management. A total of three Regional Waste Management Plans will be prepared for the Country arising out of this policy. A draft Waste Management Plan for the Dublin and Eastern Regions, covering a population of 2.2 million, is expected in late 2014.

With the privatisation of municipal waste collection and disposal Local Authorities have moved to a policy making and regulatory role, this includes responsibility for creating a Local Waste Management Plan arising out of the Regional Waste Management Plan and for dealing with any instances of illegal disposal of waste in their area and taking the appropriate enforcement action.

The EPA licences activities in the waste sector including landfills, transfer stations, hazardous waste disposal and other significant waste disposal and recovery activities. There are 25 companies holding 36 EPA Licences in South Dublin County, with clusters of licensed facilities in Ballymount and Greenogue. This represents approximately 45% of total EPA licenses in the Dublin region. The EPA licensed facilities in South Dublin County are for waste transfer or recovery activities primarily and there are there is no landfill or waste to energy sites.

The National Waste Collection Permit Office (NWCPPO) established in 2012, issues and reviews waste collection permits nationally. A large number of private companies are registered to collect waste in South Dublin County.

The Council continues to manage Bring Banks and there are currently 63 bring banks locations in the County. The Ballymount Civic Amenity Centre also accepts recycling waste.

4.0 Telecommunication

Telecommunications infrastructure is provided on a private basis primarily and is regulated by ComReg. Mobile phone network infrastructure is considered capable of supporting projected growth in the sector. Broadband infrastructure will require enhancement to extend network coverage and to improve broadband speeds.

Telecommunication infrastructure is provided in three main categories; Fixed (e.g copper cables of Eircom, UPC etc), Mobile (e.g 3) and Fixed Wireless (more for rural locations e.g. Digiweb etc). The technology of the industry continues to advance. Due to the existing concentration of enterprise and population and proximity to Dublin, the County is well placed to benefit from the roll out of advancing technology in the industry. In recent years, new technology in both mobile (4G) and fixed line (Fibre to the Home/ Premises (FTTH)) have rolled out across the County. Advancing technologies can require new infrastructure and facilitation of upgrades is a key consideration, given the importance of telecommunications for enterprise and learning. The roll out of the fast connection Fibre to the Home (FTTH) technology has resulted in a demand for additional cabinets on the street and increased underground ducting and cables in roads etc.

High quality high speed broadband is seen as an essential requirement for enterprise. In South Dublin, 76% of households had broadband access in 2011, relative to 65.3% of nationally. South Dublin County Council is providing public WIFI roll out at Council locations, including all SDCC Libraries, Community Centres, Villages, Council Office HQ, Grange Castle Golf Course, Corkagh Park and Tallaght Stadium.

The Department of Environment, Community and Local Government issued a new policy circular in October 2012. The circular revised part of the outdated Telecommunications Antennae and Support Structures Guidelines (1996) in relation to temporary permissions, separation distances, bonds, health and safety and development contributions. These national policy changes will be considered in the formulation of the County Development Plan.

A key consideration for the continued roll out of a high quality telecommunications infrastructure will need to strike a balance between providing for growth across sectors while safeguarding the character and visual amenities of the County.
5.0 Energy Networks

In Ireland, the electricity Transmission System Operator (TSO) is state owned EirGrid. Bord Gáis, a semi-state company is responsible for the supply, transmission and distribution of natural gas.

The White Paper 'Delivering a Sustainable Energy Future for Ireland' sets out the Government's Energy Policy Framework 2007-2020 to deliver a sustainable energy future for Ireland. The White Paper identified reliable, secure and competitively priced electricity supply as vital to the competitiveness of Irish industry and to Ireland’s long-term economic and social development. In the coming years, the Irish electricity grid will need to meet growing demand and incorporate higher penetration of renewable energy sources. This combination of requirements presents new network management challenges that will also have an impact on the existing and future electricity network in South Dublin County. The existing distribution of 38kv, 110kv and 220kv electricity infrastructure across South Dublin County is shown in Figure 3.

EirGrid launched Grid25 in 2008, a comprehensive strategy for essential infrastructure upgrades that will invest €3.2 billion in major grid reinforcements and transmission projects over the coming decade. EirGrid estimates that the demand for electricity in the East region is expected to increase by over 80% by 2025 and will then be 30% of the electricity demand of the island. Up to 240 MW of wind generation is expected to be connected to the Grid in this region.

In the period from 1990 to 2010, natural gas more than doubled as a share of Ireland’s primary energy requirement. Ireland currently imports almost all of its gas supply through two interconnectors with Britain.

As the County becomes more urban a key challenge will be to integrate telecom and energy infrastructure (including overhead cables, high pressure gas lines, and renewable energy installations) with a more intense form of development and to protecting the visual and environmental amenities of the County.

6.0 Conclusions

While sustainable infrastructure and environmental services are not the directly responsibility of South Dublin County Council it is important that investment is informed by a clear spatial planning framework for the County. The County Development Plan review provides an important opportunity to consult with key stakeholders and to discuss challenges and opportunities.
Figure 3: Existing electricity infrastructure in South Dublin County
Green Infrastructure
1.0 Background:
South Dublin County has valuable natural resources in its landscapes, its rivers, its flora and fauna. The County Development Plan review presents an opportunity to ensure that these quality features are protected and utilised in sustainable ways to improve human well-being in all aspects of life.

2.0 What is Green Infrastructure?
The European Union defines Green Infrastructure (GI) as “a strategically planned network of high quality natural and semi-natural areas with other environmental features, which is designed and managed to deliver a wide range of ecosystem services and protect biodiversity in both rural and urban settings.”

The term Green Infrastructure is used to describe the interconnected networks of land and water all around us that sustain environmental quality and enrich quality of life. This includes the nature conservation areas, parks, open spaces, gardens, rivers, streams, floodplains, wetlands, woodlands, farmland and mountainous areas which surround and are threaded through villages, towns and urban areas.

Green infrastructure provides space for the essential services that provides systems that regulate temperature in our urban areas, reduce storm water flows, provide us with clean water and air, and a multitude of other benefits that are referred to as ecosystem services.

The emergence of green infrastructure planning is a response to the growing recognition of the many necessities of life which nature provides to society and of the need to plan for its protection, provision, management, and integration into plans for growth and development.

Legislative Context
The National Spatial Strategy 2002-2020 (NSS) calls for a Green Structure to be put in place to prevent urban sprawl, to reduce the loss of agricultural and other land to urban uses, to protect rural identity, to create a green setting for cities and towns, to conserve and enhance biodiversity and to protect buildings, structures and other physical elements of the cultural heritage.

The Regional Planning Guidelines for the Greater Dublin Area 2010-2022 advocate the development of a green infrastructure approach at all levels in the planning system and the preparation of Green Infrastructure Strategies at County/City level. Green infrastructure planning is also crucial in meeting the growing and increasingly complex and inter-related demands of environmental legislation, assisting in achieving obligations listed under a range of EU Directives such as the Habitats, Birds, Floods, Water Framework, Strategic Environmental Assessment (SEA) and Environmental Liability Directives.

One of the key benefits of Green Infrastructure is its multi-functionality, performing several, layered functions in a single shared space. It provides ecological, economic and social benefits through natural solutions. It complements, sometimes replacing, conventional built infrastructure through the use of natural solutions to carry, store, absorb and treat water and has the ability to perform several functions in the same spatial area. For example the Griffeen River winds its way through agricultural and urban areas of the County linking undeveloped agricultural lands at its origin with the Grand Canal and the River Liffey which it joins at Lucan. It acts as a conduit for species through this landscape and its constructed wetlands section north of the railway line at Tullyhall acts to slow surface water drainage.

The Benefits of Green Infrastructure - Multi-functionality
Green Infrastructure should be of high quality, offering a range of biodiversity interests and protection. It should interconnect with a wider network and be capable of delivering more than one benefit.

1 Building Green Infrastructure for Europe, European Commission, 2013.
2 Ecosystem services are the necessities people obtain from ecosystems. These include provisioning services such as food, water, timber, and fibre; regulating services that affect climate, floods, disease, wastes, and water quality; cultural services that provide recreational, aesthetic, and spiritual benefits; and critical supporting services such as soil formation, photosynthesis, and nutrient cycling.

3 Building Green Infrastructure for Europe, 2013
Benefits Provided by Green Infrastructure

<table>
<thead>
<tr>
<th>Environmental Benefits</th>
<th>Social Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provision of clean water</td>
<td>Better health and human well-being</td>
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<tr>
<td>Removal of pollutants from air and water</td>
<td>Creation of jobs</td>
</tr>
<tr>
<td>Pollination provision</td>
<td>Diversification of local economy</td>
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<tr>
<td>Protection against soil erosion</td>
<td>More attractive, greener cities</td>
</tr>
<tr>
<td>Rainwater retention</td>
<td>Higher property values and local distinctiveness</td>
</tr>
<tr>
<td>Increased pest control</td>
<td>More integrated transport and energy solutions</td>
</tr>
<tr>
<td>Improvement of land quality</td>
<td>Enhanced tourism and recreation opportunities</td>
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<tr>
<td>Mitigation of land take and soil sealing</td>
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<table>
<thead>
<tr>
<th>Climate Change Adaptation and Mitigation benefits</th>
<th>Biodiversity Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flood alleviation</td>
<td>Improved habitats for wildlife</td>
</tr>
<tr>
<td>Strengthening ecosystems resilience</td>
<td>Provision of ecological corridors</td>
</tr>
<tr>
<td>Carbon storage and sequestration</td>
<td>Landscape permeability</td>
</tr>
<tr>
<td>Mitigation of urban heat island effects</td>
<td>Reducing habitat fragmentation</td>
</tr>
<tr>
<td>Disaster prevention (storms, landslides)</td>
<td>Providing a buffer against climate change for habitats and species</td>
</tr>
</tbody>
</table>
3.0 Green Infrastructure in South Dublin County

3.1 Green Infrastructure - Surface Water

Background:

Six main river systems, which form part of a regional network, traverse the County: the Liffey, the Griffeen, the Camac, the Poddle, the Dodder and the Owendoher. Multiple streams and ditch systems also criss-cross the entire County (Map 2). Water flows directly off the Dublin Mountains, eventually collecting into the County’s river systems. These rivers eventually flow into Dublin Bay. The Grand Canal, a major body of water, crosses the north of the County linking Kildare, SDCC and Dublin City and has a host of flora and fauna existing along both banks. These water courses are important GI corridors and habitats, providing multi-functional eco-system services such as land drainage, recreational amenity, clean/cool air and wildlife corridors. The County has reservoirs at Bohernabreena and Leixlip which provide water supply for the Dublin area in addition to managing surface water.

Surface Water Management:

In the past, surface water management has tended to focus on intervention with the use of methods such as piping, culverting and installation of underground attenuation tanks, all of which are expensive to put in place, can be costly to maintain and can have a major impact on the natural and built environment. Many streams and their associated biodiversity were lost. This has had a negative impact on humans through the diminishment of the quality of their natural environment and the loss of recreational space. More importantly, the cost to the Council of maintaining these engineering works combined with having to provide alternative quality places for recreation elsewhere within the County can be immense.

Using natural solutions to manage surface water can be cost effective and yields results that improve the environmental quality for people. Drainage can occur naturally at surface level by utilising existing drains, the slope of the land, ponds and natural wetland areas. Nature can be used in conjunction with and even sometimes instead of hard engineering solutions.


Examples of SUDS features in SDCC can be found within public parks, for example Corkagh Park, Griffeen Valley Park, Tymon Park and in some private developments, such as Citywest where these systems are complemented by other measures for example permeable paving. To date, while there is no overall integrated SUDS network within the County, there are opportunities to increase the implementation of SUDS on both Council lands and in private developments.
Map 2 - The County’s Water Bodies
3.2 Green Infrastructure – Parks and Recreation

Background:
The County has approximately 975 hectares of publicly owned parkland located throughout the County. Substantial sections of this parkland are located alongside or in close proximity to the County’s river systems such as Liffey Valley Park, Griffeen Valley Park and the Dodder Linear Park. The parks contain numerous eco-system services benefiting wildlife protection and enhancing human activity for example through the provision of cool/clean air corridors, ecological corridors and recreational amenities. The parks contain recreational facilities such as playing pitches (103 hectares), ponds, walking routes as well as biodiversity rich areas. There is, an opportunity to designate parks to the west and south of the County where the rural areas have not yet been developed. There is also an opportunity to review Green belts designation within the County and effective it has been at protecting the natural environment from development.

Parks and Recreation:
The County’s parks are extensive and offer good amenity but they are disjointed, with little interrelationship between the parks. The County requires a way of connecting the various parks to create continuity of the wider network. In particular to the west and south of the County, but also alongside existing water bodies. A significant portion of the parks/open space within the County consist of open grassland with low biodiversity potential or amenity interest. Areas like this would need to be enhanced before being considered useful contributor to a multifunctioning GI network.

Challenges for the County:
There are a number of challenges facing the provision and implementation of a Green Infrastructure network. The most important will be the need to balance the importance of biodiversity protection and enhancement with the need to provide for recreation. For example, all weather pitches ensure the use of recreational spaces all year round but they contribute to soil sealing⁴ and loss of biodiversity. Another challenge will be the retro-fitting of multi-functionality within existing spaces, such as open grasslands.

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⁴ Soil sealing is the covering of soil surface with impervious materials as a result of urban development and infrastructure construction
Map 3 – The County’s Parks

Legend
- County Boundary
- Motorway
- Major Roads
- Local Roads
- Grand Canal
- Railway Line
- SDCC Parks
3.3 Green Infrastructure – Biodiversity

**Background:**
There are areas within the County where there is a wealth of biodiversity and other areas where habitats have been so fragmented that it may be difficult for biodiversity to thrive or be reinstated. The road network in general, large industrial areas (such as Greenoge), shopping centres (such as Liffey Valley and Tallaght) and residential estates have all contributed to the fragmentation of habitats and the loss of species, thereby weakening the Green Infrastructure and its provision of eco-system benefits to us.

The European Union require the reestablishment of previously fragmented habitats to ensure the integrity of the Nautura 2000 sites. South Dublin County will have a part to play in this reestablishment.

The County lacks significant woodland and because of this the County’s hedgerows will be a valuable source of biodiversity to help to sustain the existence of many species, including our own. Hedgerows are not only wildlife corridors but they also act as habitats for organisms such as bees and other pollinators, insects which are critical for the pollination of our food crops.

A landscape with a variety of habitats such as hedgerows, semi-natural grasslands, wetlands and river banks, forests and forest walks, can also support eco-tourism initiatives (income generator) through attracting particular groups of people such as bird-watchers, fishermen, artists, and other more active outdoor interest groups.

**Biodiversity along Streams:**
The County’s streams and water bodies are abundant in biodiversity and act as important conduits for the movement of both flora and fauna. Intervention by way of culverting, removing vegetation to make way for paths or to make the banks easier to maintain can have a damaging effect on the established eco-systems and as previously discussed, resulting in a loss of natural habitat and species while also greatly diminishing the quality over the environment for human beings.

**Food Growing Areas:**
The County has farming land to the south and west and opportunities to retain the ability to grow food should be encouraged, especially with the end of the EU agricultural quota system after 2014/2015. As a first choice, rural lands should be retained for agricultural or market garden purposes. Locally grown food supports local growers and distributors, has fewer air miles, lower carbon emissions and offers greater food security to us as a nation. A second choice would be the allocation of open lands in addition to existing parks and open spaces within the urban area for use as allotments and land to grow food.
Map 4 - The County's Biodiversity

Legend
- TPO: Tree Preservation Order
- County Boundary
- Motorway
- Major Roads
- Local Roads
- Grand Canal
- Railway Line
- Forestry
- Hedgerows
3.4 Green Infrastructure - Climate Change

The full impact of the degradation of the world’s natural environment (by humans) on human existence has not yet been fully realised. Proof that Ireland’s climate has changed is that this island is now attracting, and can sustain, animal species which are not native to this country such as the White Egret and the Harlequin Ladybird.

South Dublin County has already experienced some of the negative impacts of climate change such as increased flooding, heat islands within our urban environment and the encroachment of non-native invasive species. The cost implications of dealing with any of these issues are immense, for example the spread of Japanese Knotweed, which contributes to the loss of native biodiversity and an increase in river-bank erosion, will cost millions of Euro to eradicate. Recent legislation puts obligations on us to prevent the spread of such species.

The development of urban areas, in the absence of mitigation measures against climate change has contributed to the heat island affect (the warming of the urban environment) as well as increasing the volume of pollutants in the air and increased flooding potential. Mitigation measures include planting of trees, hedgerows and woodlands as clean/cool air corridors and to assist with carbon sequestration, and the construction of surface water retention features such as ponds, lakes, or swales. The impacts of climate change are detrimental to human existence and are expensive and complicated to manage and will become more so in the future. Green infrastructure can be used as a tool within this County, and beyond, to alleviate some of the negative impacts of climate change and in some ways contribute to the prevention or slowing-down of this change.

The County cannot solve climate change but can go a long way to help mitigate further impact on the environment through ensuring that future development takes cognisance of the natural elements of sites and incorporates them within design and connects into the wider GI network.
3.5 Green Infrastructure - Within the Urban Environment

It is important to recognise that the Green Infrastructure network extends beyond protected sites, rivers or parklands and operates at a range of levels. Areas within the urban environment have also a role in contributing to the GI networks such as gardens, residential open spaces, SUDS and streetscapes. These are capable of supporting a range of species as well as playing an important role individually and collectively in supporting and linking habitats.

Past development trends resulted in the substantial soil sealing of large tracts of lands, affecting surface water run-off, contributing to flooding and deterioration in water and air quality. Hedgerows and existing field boundaries were systematically removed and streams culverted to create a blank canvas on which to place development. As a result, biodiversity was lost or fragmented; wildlife and river corridors disappeared; natural soil drainage patterns disrupted, and quality of life within the urban environment for wildlife and human beings was lost.

There are many different facets to GI that can be incorporated into developing areas and retrofitted in established areas, ranging from major infrastructural items such as the creation of wetlands and ponds and the opening up of culverted streams, to works as simple as retaining and maintaining hedgerows and tree stands within new developments. No differentiation should be made between the type of development - residential, community, business and industrial. GI should transcend all types of development and should form a starting point for all development within the County.

Green Infrastructure within Residential Developments:

In the past, the ‘greening’ of residential areas concentrated on the requirement to provide a percentage of open space, back gardens/balconies, privacy strips and street planting. Quantity took precedence over quality and function. Levelled areas of grasslands - for ease of maintenance - with no eco-system benefits were provided in place of established quality features.

Open spaces and residential developments can be enriched by retaining and enhancing existing natural features as well as introducing additional features including function. The challenge for the future will be to ensure quality takes precedence through the incorporation of eco-system benefits alongside established quality features.

For example, the provision of playing pitches does not mean the preclusion of biodiversity retention. Similarly, the provision of edges rich in biodiversity such as hedgerows, wetland areas or meadow planting can be provided in conjunction with recreational amenity facilities.

Green Infrastructure within Industrial or Enterprise Zones:

The provision of opportunities for employment is key to a vibrant County. Lands zoned for industrial or enterprise use need not be devoid of biodiversity or amenity opportunities. The retention and enhancement, where possible, of existing natural features such as hedgerows and associated ditches and streams in such zoned lands offers the potential to incorporate SUDS measures and retain wildlife corridors through these developments. The addition of surface attenuation ponds, green roofs and living walls in these developments would transform an environment which would normally be perceived to be devoid of biodiversity into one which offers significant opportunities for wildlife while providing a high quality working environment for its workers.
4.0 SDCC Green Infrastructure Strategy

In practical terms, green infrastructure planning means the development of map-based strategies. These strategies map existing green infrastructure resources, assess future needs and indicate where management measures are needed and where new green infrastructure is to be provided in the future. Strategies are evidence-based and generally use Geographic Information Systems (GIS) to collate, map and analyse information. This map-based approach can be readily understood and is easily communicated to a wide audience. This, in turn, provides a good basis for engaging key partners in the process. It allows a focus on maximising benefits in the creation of a connection and multi-functional green infrastructure network.

Local Area Plans and SDZ Planning Schemes prepared by South Dublin County Council over the past 6 years have been based around Green Infrastructural networks, unique to their locations and offering various eco-system services.

The Green Infrastructure Strategy for the County should ensure that the natural environment be used in a way that benefits those living, working and visiting the County and offers multiple eco-system services within all the Green Infrastructure networks.

Key Aim:
Develop a strategy that can underpin the creation of an integrated and coherent green infrastructure for the County which will link with adjoining jurisdictions, protect and enhance biodiversity, provide for accessible parks and open space, maintain and enhance landscape character including historic landscape character and provide for sustainable water management by requiring the retention of substantial networks of green space in urban, urban fringe and adjacent countryside areas to serve the needs of communities now and in the future including the need to adapt to climate change.
Heritage Amenities and Landscape
1.0 Introduction
South Dublin County benefits from a relatively rich and varied natural and built heritage together with attractive landscapes. Many built and natural heritage features and places within the County are protected as designated sites and features that are recognised as valuable tourism and recreational amenities. These features and places also contribute to a varying and historic landscape.

The importance of heritage is acknowledged under the National Heritage Plan (2002), which recognises that conservation and management of heritage plays an essential role in maintaining a high quality of life and is economically important particularly because of the role it plays in the tourism and hospitality sectors.

According to Fáilte Ireland, more than three out of five (64%) oversees holidaymakers coming to Ireland consider history and culture to be an important factor in choosing to holiday in Ireland. Research carried out by the Heritage Council indicates that heritage sites are worth approximately €1.5 billion per annum to the Irish economy and directly support 25,000 jobs with indirect support for a further 40,000 jobs.

Within this context, Ireland is a party to most major international agreements concerned with the protection of heritage. In terms of natural heritage these include the Convention on the Conservation of European Wildlife and Natural Habitats (Berne), the Convention on the Conservation of Migratory Species of Wild Animals (Bonn), the Convention on Wetlands of International Importance (Ramsar), the Conservation of African- Eurasian Migratory Waterbirds (Hague) and the Convention on Biological Diversity. In terms of Built Heritage, Ireland has ratified the European Convention for the Protection of the Archaeological Heritage (Valetta) and the Convention for the Protection of the Architectural Heritage of Europe (Granada). In terms of Landscape, Ireland has also ratified the European Landscape Convention (Florence).

2.0 Built Heritage & Architectural Conservation
Architectural and archaeological heritage both form intrinsic parts of Built Heritage. Architectural and architectural heritage are not mutually exclusive and certain structures may appear on both records for architectural and archaeology features (Record of Monuments and Places and/or Record of Protected Structures). According to the Architectural Heritage Guidelines for Planning Authorities (2011), built heritage is a unique resource and an implaceable expression of the past and cultural significance. Furthermore, built heritage can yield many aesthetic, environmental and economic benefits especially from a tourism perspective.

South Dublin comprises an amalgamation of the previously industrial villages of Lucan, Palmerstown, Templeogue and Rathfarnham, the once rural villages of Tallaght and Clondalkin and the villages of (inter alia) Newcastle, Rathcoole and Saggart. Furthermore, most villages are located on the sites of important early Christian ecclesiastical settlements including Tallaght, Clondalkin, Newcastle, Saggart, and Rathfarnham. Within this context, South Dublin benefits from a vast and varied array of built heritage.

There is also ample archaeological evidence of prehistoric presence in South Dublin, with the best surviving examples including burial cairns and mounds that formed passage, portal and wedge tombs.

2.1 Archaeological Heritage
The archaeological heritage of the County is protected by the National Monuments Acts 1930-2004. Further to the European Convention on the Protection of Archaeological Heritage (Valetta ratified by Ireland in 1997), the Department of Arts, Heritage, Gaeltacht and the Islands have issued the Framework and Principles for the Protection of Archaeological Heritage (1999). This document sets out the basic principles of national policy on the protection of archaeological heritage.
2.1.1 The Record of Monuments and Places

Structures, features, objects or sites listed in the Record of Monuments and Places (RMP) are known as Recorded Monuments. The RMP was established under the National Monuments (Amendment) Act 1994 and relates to all known archaeological sites largely dating to before 1700 AD.

Recorded monuments are denoted by a circle defining a Zone of Archaeological Potential (ZAP) or Area of Archaeological Potential, which is extended to include areas in proximity to the Recorded Monuments and is essentially included as part of the Recorded Monument but does not necessarily define the full extent of the site or monument.

Some items and zones included in the RMP may also be included in the Record of Protected Structures (RPS) contained in a County Development Plan. Accordingly, these structures are protected by both the National Monuments and the Planning and Development legislation.

Sites may be grouped together into a single ZAP where they form part of a recognisable archaeological landscape or townscape. These can be extended to encompass a historic village, town or city. Tallaght, Newcastle, Clondalkin, Lucan, Saggart and Rathcoole have been designated within zones of archaeological potential essentially making them Recorded Monuments.

All 154 Recorded Monuments within the County are listed in Schedule 1 of the South Dublin County Council Development Plan 2010 – 2016. Each Recorded Monument is identified on Development Plan Maps with a symbol and reference number. It is policy of the current County Development Plan to ensure that development within the vicinity of a recorded monument or zone of archaeological potential does not seriously detract from the setting of the feature and is sited and designed appropriately (Policy AA4).

Reasons for refusal that relate to developments that would injure or interfere with a National Monument cannot attract compensation under planning and development legislation. National Monuments within South Dublin include:

- Round tower (and cross), Clondalkin
- Tully’s Castle (in ruins), Clondalkin
- Rathfarnham Castle
- Portal Tomb, Brenanstown
- 2 Chambered Cairns & 2 Barrows, Knockananiller Summit, Slievethoul
- Monastic enclosure, Tallaght
- Cairn Passage Grave and Barrow, Crockaunadreenagh

2.1.2 National Monuments

Data on National Monuments is largely based on records from the late nineteenth or early twentieth centuries. Each monument is entered in the RMP.

When a monument is taken into State ownership or guardianship its details are also added to a National Monuments Register. Akin to some archaeological sites, some National Monuments included in the RMP may also be included in a RPS and thus avail of protection under the National Monuments Acts and the Planning and Development Act, 2000 (as amended).

2.1.3 Unknown Archaeology

All previously unknown archaeology that becomes known (e.g. through ground disturbance, fieldwork, or the discovery of sites underwater) forms part of our natural heritage and is protected by the National Monuments Acts 2010-2016.

Policy contained in the South Dublin County Council Development Plan (Policy AA2) sets out to secure the preservation of sites and features of historical and archaeological interest by preservation in-situ or, as a minimum, by record. Policy AA3 favours in-situ preservation.


2.2 Architectural Heritage

The Convention for the Protection of the Architectural Heritage of Europe (The Granada Convention) was ratified by Ireland in 1997. National legislative for the protection of architectural heritage was subsequently introduced under the Planning and Development Act, 2000 (as amended). These legislative measures are supported by the National Inventory of Architectural Heritage.

The Department of the Environment, Heritage and Local Government have also issued the Architectural Heritage Protection Guidelines for Planning Authorities (2011), which includes criteria for selecting proposed protected structures for inclusion in the RPS.

Given that the scope of the National Monuments Acts includes monuments of architectural, historical or archaeological interest, this allows for overlap with the Planning and Development Act.

2.2.1 National Inventory of Architectural Heritage

The National Inventory of Architectural Heritage (NIAH) was established under the provisions of the Architectural Heritage (National Inventory) and Historic Monuments (Miscellaneous Provisions) Act 1999. Its purpose is to identify, record, and evaluate post-1700 architectural heritage.

The NIAH is intended to provide the basis for recommending the inclusion of structures in the RPS for each planning authority and has been carried out on a county by county basis. Structures which have been attributed a rating value of international, national or regional importance are normally recommended for inclusion in an RPS.

A survey of South Dublin’s Architectural Heritage was carried out in 2003 and forms the basis for the current RPS contained in the South Dublin County Council Development Plan, 2010 – 2016.

2.2.2 Record of Protected Structures - RPS

Under the Planning and Development Act, each development plan must include policy objectives to protect structures or parts of structures of special interest. The primary means of achieving this is for a Planning Authority to compile and maintain an RPS. Under the same Planning and Development Legislation each owner and occupier must ensure that a protected structure or any element of a protected structure is not endangered through ham, decay or damage through neglect or through direct or indirect means.

A structure not included in the RPS may become a Proposed Protected Structure where the owner or occupier has received notification. Most of the protective mechanisms under the Planning and Development Act apply equally to Protected Structures and Proposed Protected Structures. Where a structure is protected, the protection includes the structure, its interior and the land within its curtilage and other structures within that curtilage (including their interiors) and all fixtures and features which form part of the interior or exterior of all these structures.

According to the Architectural Heritage Protection Guidelines, it is only considered appropriate to give protection through the RPS to RMP sites that also constitute architectural heritage (post-1700 AD). Examples given include upstanding remains such as buildings, standing walls and enclosed spaces that may be subject to re-use. It is advised that, while this may create an overlap, inclusion in the RPS usefully supplements and expands the protection afforded under the National Monuments Acts.

Certain works that are normally exempt from requiring planning permission may only be carried out where they do not materially affect the character of a Protected Structure or an element of such a structure. An owner or occupier of a Protected Structure may seek a declaration from the relevant planning authority to determine works that may be carried out as exempted development. When considering a planning application in relation to a Protected Structure or Proposed Protected Structure, the planning authority or the Board on appeal are obliged (under Planning and Development Legislation) to have regard to the protected status of the structure and shall not grant permission for the demolition or the structure save in exceptional circumstances. Reasons for refusal that relate to developments that would materially affect a Protected Structure cannot attract compensation.

A planning authority is obliged to include every structure in the RPS that, in its opinion, is of special interest. This normally involves a review of the RPS during the review of a County Development Plan with a view to making additions or deletions.

All 544 Protected Structures in South Dublin are listed in Schedule 2 of the South Dublin County Council Development Plan 2010 – 2016. Some of these relate to groups of protected structures recorded under one reference. Each Protected Structure is given a reference number that is accompanied by an address/location and description. Each protected structure is identified on Development Plan Maps with a symbol and reference number. It is policy of the current County Development Plan to:
• Encourage appropriate use and re-use of Protected Structures;

• Discourage demolition and unnecessary alteration of Protected Structures;

• Ensure that proposals to extend, alter or refurbish a Protected Structure are sympathetic to its essential character and in accordance with good conservation principles and practice; and

• Ensure that all significant development proposals for Protected Structures or that would affect the setting of such structures are referred to the appropriate prescribed bodies, and the Council will have regard to the advice and recommendations received.

South Dublin County Council will review its RPS under the Development Plan Review with a view to adding or deleting structures.

2.2.3 Architectural Conservation Areas - ACA

Under the Planning and Development Act, each development plan must include policy objectives to preserve the character of an ACA within its functional area. An ACA is defined as a place, area, group of structures or townscape that is of special interest or that contributes to the appreciation of a Protected Structure. An ACA may coincide with a zone of archaeological potential.

Under Planning and Development Legislation the carrying out of exterior works in an ACA can only be exempt where it is considered that the works would not materially affect the character of the area and where the works are consistent with the appearance of the structure itself and neighbouring structures. It is a requirement for a Planning Authority (or An Bord Pleanála on appeal) to take any material effect on the character of the ACA into account when considering an application for permission for development in an ACA. Reasons for refusal that relate to developments that would adversely affect an ACA cannot attract compensation.

Five ACAs are designated within South Dublin under the South Dublin County Council Development Plan, 2010 – 2016, which are as follows:

• Clondalkin Village
• Lucan Village
• Palmerstown Lower (Mill Complex)
• Rathfarnham Village including Willbrook
• Tallaght Village

Policy contained in the current County Development Plan sets out to prevent the loss of distinctive features from each ACA and ensure that new development will only be permitted where it conserves or enhances its character. Development Plan maps outline the boundary of each ACA and guidance leaflets have been prepared by South Dublin County Council.

The designation of an ACA takes place as part of the making or the review of a development plan or as a variation to an existing development plan. The Architectural Heritage Protection Guidelines advise that in preparing a draft development plan, a planning authority should evaluate all potential ACAs or Candidate ACAs and take the opportunity to review structures currently in the Record of Protected Structures and determine whether an ACA designation would be a more appropriate form of protection or vice-versa.

South Dublin County Council will examine further possible areas for designation as Architectural Conservation Areas under the Development Plan Review. This will include the examination of groups of protected structures and structures of historic character.
### 2.2.4 Areas of Special Planning Control

Planning and Development Legislation allows planning authorities to prepare a scheme setting out development objectives for the preservation and enhancement of all or part of an ACA that is considered to be of special importance. The designation of an Area of Special Planning Control (ASPC) may only be applied in cities or larger towns that have a population in excess of 2,000.

Given that the designation of an ASPC has the potential to impose considerable burdens on the owners and occupiers of buildings and allows for the payment of compensation, it is advised under the Architectural Heritage Protection Guidelines that the designation of an ASPC would generally only be suitable in very particular circumstances. There are currently no ASPCs designated in South Dublin.

### 2.2.5 Other Items of Built Heritage

Built heritage is not constrained to prehistoric and medieval structures, period buildings or to grand neo-classical buildings and grand streetscapes. Modest rural, urban and suburban houses that date from the early to mid twentieth century (and prior to this) such as cottages, townhouses, street-houses, modernist houses and farmhouses can also be visually attractive and can significantly contribute to the character of a place. Such areas will be examined under the Development Plan Review in terms of the designation of any additional ACAs.

Other important elements of built heritage include less obvious items. Gates, piers, old walls, old village pumps, lamp standards, cast iron fittings, street signs, post boxes, paving, kerb stones, gates and other items of street furniture can all contribute to local identity and character of an area whether in an urban, suburban or rural setting. It is policy under the South Dublin County Council Development Plan, 2020 – 2016, to protect and conserve such historic milestones, street furniture and other significant features (Policy AA9).

Old ditches and embankments, often capped with a combination of hedgerows and old walls, can also often mark old townland, parish, barony or estate boundaries that are of cultural value in terms of local history and identity.

### 2.3 Conclusion

South Dublin benefits from a varied array of built heritage, which is evident by the extent of designated sites, features, structures and places that are spread across the County and also clustered around its historic villages. These features and places are considered to be of significant economic importance, particularly for tourism, and also contribute to the history, character, quality and identity of areas across the County and the County as a whole. This creates a challenge to find appropriate ways to continually safeguard and find appropriate uses for built heritage features while retaining their character and special interest. Protection for these structures and places is provided through Planning and Development Legislation and/or National Monuments Legislation.

The County also includes many items and structures of local architectural importance that contribute to the diverse character and identity of the County. These structures and items, however, may not be designated for protection under any legislation and may be vulnerable to gradual erosion and removal. The County Development Plan review creates an opportunity to address this situation.
Map 1: Designated Built Heritage Features In South Dublin

Legend
- Architectural Conservation Areas
- Record of Protected Structures
- Areas of Archaeological Potential
- Record of Monuments and Places
- County Boundary
4.0 Natural Heritage


According to The Status of EU Protected Habitats and Species in Ireland (NPWS, 2008), the Habitats Directive has become the single most important piece of legislation governing the conservation of biodiversity in Europe. In Ireland, the European Union (Natural Habitats) Regulations have subsequently been revised and consolidated in the European Communities (Birds and Natural Habitats) Regulations, 2011.

4.1 NHAs – Natural Heritage Areas

NHAs are designated and legally protected from damage under the Wildlife Amendment Act (2000) and constitute the most basic designation for habitat conservation in Ireland.

The National Parks and Wildlife Services of the Department of Environment, Community and Local Government are the responsible authorities for NHA designation. Such areas normally relate to habitats that are considered to be important or areas that hold species of plants and animals whose habitat are considered to need protection. Many NHAs also have overlapping designations with SAC and/or SPAs. Any development that would have an adverse impact on a NHA cannot qualify as exempt development. Each pNHA is assigned a Site Code and Site Synopses, which are contained on a register maintained by the National Parks and Wildlife Service.

Prior to statutory designation, NHAs are referred to as being proposed NHAs (pNHAs) and are subject to limited protection. Generally, they are recognised and afforded some protection by Planning Authorities under development plan zoning or specific objectives.

There are no statutorily designated NHAs located in South Dublin, however, the following six pNHAs are designated within the County:

• Glenasmole Valley
• Liffey Valley
• Grand Canal
• Dodder Valley (part)
• Lugmore Glen
• Slade of Saggart & Crooksling Glen

According to the South Dublin County Heritage Plan 2010 – 2015, the above sites represent important areas of river, wetland and woodland interest for the County. The pNHAs are identified on the County Development Plan Map and it is Development Plan policy to protect and preserve pNHAs (Policy LHA8).

4.2 Natura 2000 Sites

Special Areas of Conservation and Special Protection Areas are known as European Sites and collectively form part of a ‘Natura 2000’ network of protected areas. When making a decision in relation to a planning application, a planning authority must have regard to any European Site under the Planning and Development Act. No compensation is payable in respect of refusal of planning permission for development that would materially contravene a County Development Plan objective in relation to a Natura 2000 site. Furthermore, any development that requires an Appropriate Assessment (see below) cannot qualify as an exempt development.

Under the Habitats Directive and Planning Legislation, any plan or project not directly connected with or necessary to the management of the Natura 2000 network but likely to have a significant effect on the site, either individually or in combination with other plans or projects, is required to be subject to Appropriate Assessment. It is policy under the South Dublin County Council Development Plan 2010 – 2016 to ensure that projects giving rise to significant direct, indirect or cumulative impacts on Natura 2000 sites shall not be permitted except (as provided under Article 6 of the Habitats Directive) where there are (a) No alternative solution available; (b) Imperative reasons of overriding public interest; and (c) Adequate compensatory measures in place.
4.2.1 SACs - Special Areas of Conservation
The main aim of the Habitats Directive is to achieve and maintain favourable conservation status for habitats and species that are considered at risk. This is achieved by designating key sites as SACs. SACs are therefore considered to be prime wildlife conservation areas that are important at a European and national level. The Annexes to the Habitats Directive contain the following information for the designation of SACs:

• ANNEX I: Habitat types whose conservation requires the designation of SACs. Priority habitats are those which the EU considers to require particular protection because their global distribution largely falls within the EU and they are in danger of disappearance.

• ANNEX II: Animal and plant species whose conservation requires the designation of SACs.

• ANNEX III: Criteria for selecting sites eligible for identification as sites of importance and designation as Special Areas of Conservation.

Sites that meet the criteria laid down under Annex III of the Habitats Directive have been identified by the Department of Arts, Heritage and the Gaeltacht (now responsibility of Department of Environment, Communities and Local Government) across the country. Each SAC has been given a Site Code that is accompanied by a Conservation Statement and a Site Synopses contained on a register maintained by the National Parks and Wildlife Services. Conservation Management Plans have been drawn for some of the designated SACs. Generic conservation objectives have been compiled for the remaining SACs.

Two SACs are designated within the administrative boundaries of South Dublin:

• The Glenasmole Valley

• Wicklow Mountains (includes portion of Dublin Mountain range)

The Glenasmole Valley SAC has three Annex I habitats, two of which are priority habitats - petrifying springs & orchid rich calcareous grasslands. The Wicklow Mountains SAC has approximately 11 Annex I habitats. These SACs are identified on the Development Plan Maps that accompany the South Dublin County Council Development Plan 2010 – 2016. It is policy under the current Development Plan to protect and preserve SACs (Policy LHA8).

Plans and projects within the administrative boundaries of South Dublin County Council also have the potential to have downstream and trans-boundary impacts on Natura 2000 sites located outside of the Council’s administrative area, particularly in Dublin Bay. All plans and projects must therefore be screened for possible negative impacts on the Natura 2000 network.

4.2.2 SPAs - Special Protection Areas
The EU Birds Directive (Directive 2009/147/EC on the conservation of wild birds) provides a framework for the protection, management and control of all wild birds naturally occurring in the EU. According to the National Parks and Wildlife Services, this directive places a broad requirement on countries to take necessary measures to maintain the populations of wild birds and identify Special Protection Areas (SPAs) for:

• Annex I listed rare and vulnerable species that require protection of their habitats.

• Regularly occurring migratory species.

• Wetlands, especially those of international importance, which attract large numbers of migratory birds each year.

Sites that meet the criteria laid down by the Birds Directive have been identified by the Department of Arts, Heritage and the Gaeltacht (now responsibility of Department of Environment, Communities and Local Government) and are each protected by Statutory Instrument under European Communities (Conservation of Wild Birds) Regulations, 2010. Each SPA has been given a Site Code that is accompanied by Conservation Objectives and a Site Synopses contained on a register maintained by the National Parks and Wildlife Services.

The Wicklow Mountains SPA is the sole SPA site that is located (partially) within the administrative boundary of South Dublin County Council. This SPA has been designated on the basis of the presence of 2 Annex I bird species (Merlin and Peregrine). Plans and projects within the administrative boundaries of South Dublin County Council also have the potential to have downstream and trans-boundary impacts on SPAs outside of the administrative area of SDCC and must be screened for any potential negative impacts.
4.3 Liffey Valley Special Amenity Area Order

Planning authorities and the Minister for the Environment, Community and Local Government, are empowered under the Planning and Development Act 2000 to make a Special Amenity Area Order (SAAO) for an area by reason of outstanding natural beauty or its special recreational value and having regard to any benefits for nature conservation.

An SAAO may state the objectives of the planning authority in relation to the preservation or enhancement of the character or special features of the area, including objectives for the prevention or limitation of development in the area. A planning authority may, at any time, review an SAAO for the purpose of deciding whether to revoke or amend the order.

Certain categories of development within an SAAO that would normally be exempt from requiring planning permission are removed from exemption. Furthermore, no compensation is payable in respect of refusal of planning permission in an area to which an SAAO relates.

An SAAO was made for the Liffey Valley by Dublin County Council in 1990 and now straddles the administrative boundaries of South Dublin County and Fingal County Council. A copy of the SAAO is included as Appendix 4 in the South Dublin County Council Development Plan, 2010 – 2016 and the extent of the area covered by the SAAO within the County is mapped on Development Plan Maps. The SAAO includes objectives that largely limit development to the replacement and extension of existing structures, the provision of shed/greenhouse/garage structures incidental to houses and the use of land for recreational purposes.

It is also policy of the County Development Plan to:

- Investigate the feasibility of extending the Liffey Valley SAAO and pursue its expansion (Policies LHA4 & LHA5)
- Seek to secure the preservation of the Liffey Valley and have the lands brought into public ownership (Policy LHA6)
- Promote and develop a Liffey Valley Park (LHA7)
- Prohibit any new development not related directly to the amenity potential of Liffey Valley (Policy LHA13)

Further to the publication of Towards a Liffey Valley Park (2007), Waterstown Park Liffey Valley was opened in May 2009. The park lies within the area covered by the Liffey Valley SAAO and its opening is considered to be a further milestone in the development of an overall Liffey Valley Park. Plans to create a new 20km Liffey Valley Way between Islandbridge and Celbridge have also been muted at Government level.

4.4 Conclusions

The designated natural heritage habitats that can be found across the County are subject to varying means and levels of protection under Planning and Development Legislation.

Designated habitats in the County are mainly concentrated in rural and mountain areas of the County with the exception of a section of the Dodder Valley and sections of the Grand Canal. The three European/Natura 2000 sites in the county are located in the Mountain area. This further emphasises the need to protect the rural and mountain areas of the County from development that would have a significant affect on the environment either individually or cumulatively. There is also a need to ensure that development within the County does not significantly affect designated sites located outside the County particularly those located within Dublin Bay and the Wicklow Mountains.
5.0 Landscapes

Landscapes comprise a dynamic mix of ingredients that respond to natural cycles, weather events, water and climate, and economic factors relating to agriculture, industry, energy, transport, settlement and tourism. The varied geology and activities throughout the County (see landcover map below) and Ireland has produced very many diverse landscapes, some internationally renowned for their aesthetic qualities.

Managing and planning the use and development of finite as well as renewable natural resources creates a challenge for Planning Authorities. Development and activities can contribute to environmental resources becoming degraded or polluted, or can leave outdated infrastructural systems in place. Many aspects of industrial development and housing, agriculture, forestry, infrastructural development, and recreation activity, if not carefully managed, can drive habitat degradation and biodiversity loss in a manner that significantly impacts upon landscapes.

According to A National Landscape Strategy for Ireland (Department of Arts, Heritage and the Gaeltacht, 2011), sustainably managing and planning the landscapes of rural areas, towns and cities can be done more effectively by carefully managing natural resources such as water, open space and ecosystems. Key to maintaining such ecosystems and biodiversity is protection and management of designated sites for nature conservation.

Many of the designated natural and built heritage sites, features, structures and areas that have been dealt with under this paper can form vital components of the County’s various landscapes. Further aspects of landscape assessment and landscape conservation are described below.

5.1 Landscape Character Assessment

The Council of Europe’s European Landscape Convention (ELC) was published in 2000. As a party to the Convention, Ireland has agreed to promote landscape protection, management and planning, and to define landscape quality objectives.

The Planning and Development Act, 2000 (as amended) also requires each Development Plan to include objectives for the provision of a framework for identification, assessment, protection, management and planning of landscapes having regard to the ELC.

Subsequent to the ratification of the ELC, the Landscape and Landscape Assessment Consultation Draft of Guidelines for Planning Authorities (June 2000) were published by the Department of the Environment and Local Government. The Draft Guidelines recommend that landscapes be assessed by way of Landscape Character Assessment (LCA). This should comprise the discernment of the character of the landscape based initially on landcover (trees, vegetation, settlements, water etc.) and landform. Added to this first level of assessment it is recommended to include a second layer, which takes historical, cultural, religious and other understandings of the landscape into account.

According to Proposal’s for Ireland’s Landscapes (The Heritage Council, 2010) the LCA process should generally be carried out using Geographic Information Systems that allow for the use of layers and overlay of spatial data such as maps and aerial photographs. It is further advised that field survey and local participation and input are vital elements of any LCA.

An LCA is included in Schedule 7 of the South Dublin County Council Development Plan 2010 – 2016. The same LCA was utilised in the previous County Development Plan (2004 – 2010). The County Development Plan creates an opportunity to carry out a revised Landscape Character Assessment for the County and to frame policy that responds to the assessment.

It is policy of the current County Development Plan (Policy LHA1) to protect the character of the landscape in accordance with the policies and objectives of the Landscape Assessment Guidelines. The landscape, natural heritage and amenity strategy for the County as set out under the Development Plan also sets out to implement the LCA and develop a Landscape Character Strategy that will preserve the quality of the rural landscape and open space in the County.

5.2 Geology

The geological history of South Dublin is mixed. The upland or southern areas of the County comprise granites and Silurian or Ordovician meta-sediments while the lowland areas are mostly comprised of limestone. This geological base has provided the raw material for quarrying industries in the region down through the centuries and this is reflected in the high number of sand pits, gravel pits, quarries and kilns recorded in the County.
Additional features of Geological interest include remaining fragments of esker which, though small in length and height, point not only to the area’s geological history, but also to its historical and cultural heritage, to a time when these landscape features provided the ancient roads or routes through the County, in particular through the northern part of the County.

5.3 Views and Prospects
The Planning and Development Act, 2000 (as amended) requires each Development Plan to include objectives for the preservation of the character of the landscape including views and prospects and amenities of places and features of natural beauty or interest.

Policy LHA2 of the South Dublin County Council Development Plan 2010 – 2016 sets out to protect views and prospects of special amenity value or special interest. Development Plan maps identify views and prospects that are designated for protection and preservation. Prospects are further listed in the written statement.

Under Planning and Development Legislation, development that would normally be exempt from requiring planning permission is removed from exemption where it would interfere with the character of landscape or with a view or prospect of special amenity value or natural interest or beauty. Furthermore, no compensation is payable in respect of refusal of planning permission for such development.

5.4 Dublin Mountains and Regional Parks
The Dublin Mountains occupy the majority of the southern side of the County and offers a significant amenity resource that includes popular walking and mountain bike trails, many of which are managed by the Dublin Mountain Partnership. Public roadways also form important recreational walking and cycling routes. The Dublin Mountains Partnership, which includes South Dublin County Council, is developing an integrated plan for the Dublin Mountains through linking (in the form of the Dublin Mountain Way) existing and potential outdoor recreation components in forests and other public or state owned lands. This partnership is considered to be important in terms of improving the recreational and tourism potential of the Dublin Mountains and the County as a whole.

The eastern and northern sides of the County also have a good distribution of recreational amenities in the form of regional parks at Tymon, Corkagh, Griffeen Valley, Dodder Valley and Waterstown Liffey Valley. Further to their important recreational functions, the Dublin Mountains and regional parklands create large green buffers between built up areas and contribute to the identity of the County’s constituent areas. The Dublin Mountains in particular also form an important element of the County’s landscape, biodiversity and amenity network.

A specific local objective (SLO 33) contained in the South Dublin County Council Development Plan, 2010 – 2016, promotes the provision of a regional park on the western side of the County. This County Development Plan review presents the opportunity to designate such a park, which could serve and link the historic village of Newcastle with the Grand Canal including the Grand Canal Way. Such a park could further yield tourism, amenity and recreational benefits by linking and capitalising on the rural, historic and canal heritage and associated amenities on the western side of the County. This could also create a buffer to kerb the sprawl of further low intensity development in this area of the County.

5.5 Public Rights of Way
The Planning and Development Act, 2000 (as amended) requires the inclusion of objectives in a development plan for the preservation of public rights of way that give access to mountain, lakeshore, riverbank or other places of natural beauty or recreational utility. It is a requirement that such rights of way be marked on development plan maps and included on a list appended to the Development Plan.

Where a planning authority proposes to include the preservation of a specific public right of way in a development plan for the first time, notice must be given to the owner or occupier of the lands who has a right of appeal to the Circuit Court. It is stated under the Planning and Development Act that the validity of a public right of way shall not be affected because it is not included in a development plan and, unless the contrary is shown, the inclusion of a public right of way in a development plan shall be considered sufficient evidence of its existence.

It is advised that the identification of a public right of way requires proof of the right of way, normally in the form of statement of permission from the landowner or ‘dedication’ at some point in time. Proof of permission from the landowner also needs to be clear and precise in terms of what land is involved and for what purpose the right of way exists. The burden of proof in relation to identifying a public right of way during a development plan review therefore rests with the local authority.
Identifying a public right of way can encounter complex and lengthy legal proceedings such as the Lissadell House case. It can be claimed, however, that any road or pathway that was and is still used by the public since before time immemorial, that is before 1189, is a public way.

The South Dublin County Council Development Plan 2010 – 2016 does not identify specific rights of way for preservation. It is policy of the County Development Plan (Policy LHA35), however, to preserve and/or extend and enhance existing rights of way and to create new rights of way as opportunities or needs arise.

A more successful arrangement can involve the creation of ‘Permissive Paths’ such as the Dublin Mountain Way and the Western Greenway in Mayo, which do not constitute public rights of way but require landowners to give permission for the route across their property. Landowners are normally indemnified against any claim by a user of the permissive path and may, with reason, withdraw permission after giving reasonable notice. Permissive paths cannot be identified as public rights of way.

These permissive paths are considered to be extremely successful from a tourism, recreation and amenity perspective. Promoting permissive paths across the County through the Development Plan such as a Dublin West Way between the Grand Canal Way and the Dublin Mountain Way or the mooted Liffey Valley Way could therefore represent a more viable alternative to attempting to identify public rights of way.

5.6 Conclusions

Landscapes comprise a dynamic mix of elements that respond to natural events and economic factors relating to agriculture, industry, energy, transport, settlement and tourism. The Planning and Development Act, 2000, requires each development plan to include objectives for the provision of a framework for identification, assessment, protection, management and planning of landscapes having regard to the European Landscape Convention. It is also a requirement for each development plan to include objectives for the preservation of the character of landscapes including views and prospects.

Many aspects of development can significantly impacts upon landscapes including views and prospects located within and around rural areas, towns and cities. This creates a challenge in terms of balancing the management of development with the protection of landscapes. Sustainably managing and planning landscapes can be done by carefully managing natural resources such as water, open spaces and ecosystems. Key to maintaining ecosystems and biodiversity is protection and management of designated nature conservation sites.

The County Development Plan review creates an opportunity to carry out a revised Landscape Character Assessment for the County that will help frame policy for the sustainable management and development of the County’s Landscapes.
6.0 Cultural Heritage

6.1 Definition
The 2003 UNESCO Convention (Intangible Cultural Heritage) defines Cultural Heritage as the practices, representations, expressions, knowledge, skills as well as the instruments, objects, artefacts and cultural spaces that communities, groups and, in some cases, individuals recognise as part of their cultural heritage. The definition states that Cultural Heritage is transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity. This is said to manifest in the following domains (a) oral traditions and expressions, including language; (b) performing arts; (c) social practices, rituals and festive events; (d) knowledge and practices concerning nature and the universe; and (e) traditional craftsmanship.

6.2 Cultural Heritage in South Dublin
The South Dublin County Heritage Plan, 2010 – 2015, advises that the cultural heritage of the County is rich and varied and reflects the different origins, distinct cultural identities, and development patterns of the villages that make up the County. The Heritage Plan notes that the County comprises an amalgamation of the previously industrial villages of Lucan, Palmerstown, Templeogue and Rathfarnham, the once rural villages of Tallaght and Clondalkin and the villages of (inter alia) Newcastle, Rathcoole and Saggart.

Recognised authors, musicians, artists, poets, scientists and those involved in political and military events that have lived and worked in the County include Katherine Tynan, Austin Clarke, Patrick Pye, the Pearse brothers and Robert Emmet. Other well known political figures that resided in the County included the Speaker Connelly and Countess Markievicz. The County Heritage Plan notes that the more recent inward movement of people from other parts of Dublin, Ireland and other parts of the world have added to the County’s cultural mix.

Within this context, policy contained in the South Dublin County Council Development Plan, 2010 – 2016 sets out to:

- Encourage and assist in the development of the arts and to support the ongoing development of cultural infrastructure throughout the County. (Policy SCR7)
- Work towards establishing an environment for promoting cross-cultural understanding, racial harmony, mutual understanding and appreciation of all religious and ethnic traditions across the County, and to promote the provision of facilities for cultural events/festival celebrations. (Policy SCR2)
- Continue to support the provision and the management of Community Centres, Neighbourhood Centres, Youth Cafes and other facilities that provide a range of social, cultural and educational facilities to communities. (Policy SCR9)
- Ensure the continued vibrancy and life of town and district centres and to encourage business, leisure, entertainment and cultural uses to locate within these centres. (Policy TDL3)
- Encourage the enhancement and expansion of the Tallaght Cultural Quarter that has grown up around Chamber Square with a particular emphasis on cultural diversity, cultural development and cultural celebration. (Policy TDL11)
- Facilitate and encourage the development of Clondalkin as a town centre and integrated urban centre that includes cultural, heritage, residential and commercial uses. (Policy TDL12)

6.3 Conclusion
Cultural Heritage plays an important role in society that can help shape and diversify the identity of a County and its places and can contribute to the vitality of an area through encouraging activities and events. Cultural heritage can therefore add to the quality of places and improve quality of life and tourism throughout the County. Cultural heritage can also form a vital aspect of Landscape Character Assessment.

The review of the County Development presents the opportunity to identify existing and potential cultural heritage throughout the County and to frame policies that promote and manage related activities.
Energy
1.0 Introduction

Scientists are 95% certain humans are the ‘dominant cause’ of global warming since the 1950s (Intergovernmental Panel on Climate Change, Fifth Assessment Report, September 2013). Our global dependence on fossil fuels has resulted in unprecedented levels of carbon dioxide (CO₂) and other greenhouse gases being released into the atmosphere. This has resulted in increases in the earth’s temperatures, which in turn is having continuing impacts on landscapes, eco-systems and giving rise to extremes in seasonal weather variations across the globe. It is widely acknowledged that Europe’s future energy network should comprise of a low carbon energy supply, focused on a range of renewable energy alternatives, smart grids and buildings and efficient energy storage.

It is clear that continued growth across South Dublin County will require energy to power homes, business and transport needs, over the life of the South Dublin County Council Development Plan 2016 – 2022 and beyond. The future of the County will require a reliable, robust and efficient energy system, catering for growth across all sectors. The County should aspire to becoming as carbon neutral as possible and make every effort to increase energy efficiency and unlock renewable energy potential. To further capacity building and to increase the deployment of energy efficiency measures and renewable energy technologies, there is a recognised need to build on previous County Development Plan energy policies, focusing on more evidence based and spatially appropriate policies. This issues paper aims to review, identify and explore key issues and considerations that need to be considered in advance of preparing an Energy Strategy for South Dublin County, forming part of the South Dublin County Council Development Plan 2016-2022.

2.0 Legislation, Policy & Strategy Context

The context for progressing and advancing energy policy development and preparation of an Energy Strategy for South Dublin County, are set within a hierarchy of EU and national legislation and policy. At a European level these directives include, the EU Climate and Energy Package 2008, EU Renewables Directive 2009/28/EC and EU Energy Efficiency Directive 2012/27/EU. The EU Climate Change and Energy Package 2008 resulted in the 2020 EU wide ‘20-20-20’ energy targets as follows:

- a 20% reduction in EU greenhouse gas emissions from 1990 levels;
- raising the share of EU energy consumption produced from renewable resources to 20%; and
- a 20% improvement in the EU’s energy efficiency.

Under the EU Energy Efficiency Directive 2009/28/EC, each member country has been assigned a legally binding individual renewable energy target. The Directive’s target for Ireland is for 16% of the national gross final consumption of energy will comprise renewable energy sources by 2020, across the electricity, heat and transport sectors.

At a national level the energy targets set out in EU legislation have been translated into the National Renewable Energy Action Plan (NREAP) 2010 and the National Energy Efficiency Action Plan (NEEAP) 2013-2020. Under the NREAP, Ireland plans to achieve the binding EU 2020 targets by delivering approximately 40% energy consumption from renewable sources in the electricity sector, 12% in the heat sector and 10% in the transport sector. The NEEAP sets out how the Government aims to deliver a 20% reduction in energy demand (over average 2001-2005 levels) across the whole economy through a range of energy efficiency measures. The Government believes that the public sector should lead by example; as such an energy demand reduction target of 33% has been assigned to the public sector. The operation of both Plans at a local level, across sectors, requires an integrated approach between both energy efficiency and renewable energy measures. Both Plan’s have equal importance and planning policy should advance in ways to address the targets identified under both.

South Dublin County Council signed up to the EU Covenant of Mayors in June 2012. The Covenant of Mayors is an initiative of the European Commission that brings together Mayors from across Europe, in a shared voluntary commitment to reducing CO₂ emissions by a minimum target of 20% by 2020. In Ireland there are five other Covenant of Mayors signatories – Dublin City Council, Cork County Council, Kerry Local Authorities, Roscommon County Council and Waterford County Council. By signing up to the Covenant, South Dublin County Council is also committing to providing updates on energy initiatives and to promoting knowledge sharing on energy in its area of influence and share capacity building at local, regional and national level. Signing up to the Covenant of Mayors commits SDCC to reducing CO₂ emissions by a minimum target of 20% by 2020, based on the South Dublin Sustainable Energy Action Plan (SEAP) baseline year of 2006.
The National Spatial Strategy (NSS), published in 2002 sets out a 20 year framework for the spatial development of the Country. The NSS is currently under review and the need for balanced spatial growth is still fundamental having regard to sustainable development. The review of the National Spatial Strategy is being undertaken at the same time that a National Landscape Strategy for Ireland is being developed, which can also guide local authorities in planning for renewable energy alternatives, in particular wind farm developments. Together these strategies will have an important influence over the deployment of renewable energy alternative across Ireland to 2020 and beyond.

The Regional Planning Guidelines for the Greater Dublin Area 2010-2022 set out an integrated model of policy development, aiming for interdependence between settlement, economic and infrastructure policies. With specific regard to energy, the RPGs recommend that local authorities and Development Plans support the generation of renewable energy, so that 2020 energy targets and future energy targets, can be met. The RPGs encourage a spatial and evidence based approach to energy policy and recommends that as part of the Development Plan process, an Energy Action Plan is prepared to progress the evidence based approach in identifying opportunities for reduced energy consumption and to encourage increased deployment of local renewable energy alternatives.

3.0 The National Energy Picture

Ireland’s energy import dependency was 85% in 2012, down from a peak of 90% in 2006. This import dependency is heavily reliant on coal (11%), oil (45%) and gas (30%). Linked with the economic down turn, national energy demand has fallen by 19% and is now similar to 1999 levels. Associated CO$_2$ emissions have fallen by 21% to 1997/1998 levels (Energy in Ireland - Key Statistics 2013, SEAI, November 2013). The share of import dependency and downward trend in energy demand is shown in Figure 1.

Whilst this reliance on imported energy is expected to continue to 2020, the percentage share of renewable energy in Ireland’s total energy demand is increasing. This share rose from 2.3% to 7.1% between 1990 and 2012. Accordingly, in 2012 displacement of fossil fuel by renewable energy for electricity generation resulted in an avoidance of between €250 million and €280 million in fossil fuel imports (Renewable Energy in Ireland 2012, SEAI, February 2014 Report).
4.0 Addressing the energy challenge in South Dublin County

Since being established in 1994, South Dublin County Council has a proven track record in integrating land use and transport planning to develop sustainable communities, whereby places to live, work and avail of local amenities are developed in conjunction with the delivery of frequent and reliable public transport. It can be assumed that the fossil fuel import dependency of South Dublin County is similar to that of the national energy profile. As such, the Council recognises energy efficiency and the growth of renewable energy alternatives as increasingly crucial to the concept and delivery of sustainable communities.

To assist in institutionalising energy as part of the organisation’s corporate agenda and to up-skill in energy planning, South Dublin County Council took part in a pan-European energy project from May 2011 to November 2013, in partnership with the Town & Country Planning Association (TCPA) and eight other local authorities across Europe. The aim of the EU Intelligent Energy Europe (IEE) supported Leadership for Energy Action & Planning (LEAP) project, was to increase the ability of participating local authorities to pioneer and promote the use of sustainable energy measures and the move towards a low carbon local economy. Further information on the LEAP project is available at www.leap-eu.org.

The main technical output arising from participation in the LEAP project has been the preparation of the South Dublin Sustainable Energy Action Plan (SEAP). The South Dublin SEAP analyses the County’s energy consumption and carbon dioxide (CO₂) emissions using 2006 as a baseline year and sets out how South Dublin County can reduce consumption and CO₂ emissions, in line with 2020 energy targets, through a range of energy actions across sectors. The SEAP was approved by the elected members of South Dublin County Council in May 2013 and was verified by the EU Covenant of Mayors – Joint Research Centre in April 2014.

To project South Dublin County’s total final energy consumption and CO₂ emissions to 2020, 2006 was chosen as the baseline year. This year was chosen due to the availability of reliable data, in particular the Census of Population (CSO) and National Transport Authority (NTA) household survey and associated traffic modelling data. Data was collated under the residential, commercial and transport sectors. Across all sectors South Dublin County consumed approximately 6.83 TWh (terawatt hours) of energy in 2006; this is equivalent to CO₂ emissions of approximately 2,396 kilotonnes, as shown in Tables 1 and 2.

Table 1: South Dublin County Total Final Consumption, TWh (2006)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Total Final Consumption (TWh)</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>1.32</td>
<td>19%</td>
</tr>
<tr>
<td>Commercial</td>
<td>2.48</td>
<td>36%</td>
</tr>
<tr>
<td>Transport</td>
<td>2.99</td>
<td>44%</td>
</tr>
<tr>
<td>South Dublin County Council (2010)</td>
<td>0.05</td>
<td>1%</td>
</tr>
<tr>
<td>Total</td>
<td>6.83</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: South Dublin Sustainable Energy Action Plan, SDCC, May 2013
Table 2: South Dublin County Total CO₂ Emissions, KTonnes CO₂ (2006)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Total Emissions (KTCO₂)</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>608.9</td>
<td>25%</td>
</tr>
<tr>
<td>Commercial</td>
<td>1,014.4</td>
<td>42%</td>
</tr>
<tr>
<td>Transport</td>
<td>757.2</td>
<td>32%</td>
</tr>
<tr>
<td>South Dublin County Council (2010)</td>
<td>18.0</td>
<td>1%</td>
</tr>
<tr>
<td>Total</td>
<td>2,396.5</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: South Dublin Sustainable Energy Action Plan, SDCC, May 2013

If South Dublin County was to implement a mix of energy efficiency and renewable energy options set out in both the NREAP and NEEAP (not including any national energy initiatives introduced since then) then a potential overall reduction in energy consumption in South Dublin County could be reduced from 6.83 TWh to 6.33 TWh, a reduction of 7% by 2020. In CO₂ emissions terms, this reduction would result in a decrease from 2,397 kt/yr to 2,174 kt/yr, a 9% reduction. As stated in Section 2 above, by signing up to the Covenant of Mayors, South Dublin County Council is committed to reaching a 20% reduction in CO₂ emissions, based on a 2006 baseline year. Having regard to this target, an increased deployment of existing NREAP and NEEAP actions and a wide ranging array of new locally based actions, are required to achieve the 11% shortfall in CO₂ emissions by 2020.

Having collated a sector based 2006 energy baseline for South Dublin County and projected future energy demand in the context of NREAP, NEEAP and Covenant of Mayors energy targets, the Council recognises the need for a local and spatial based response to identify a range of both renewable energy and energy efficiency actions required to meet 2020 targets. To frame and develop robust policies in the South Dublin County Council Development Plan 2016-2022 there is a need to advance the South Dublin SEAP data and methodologies in a spatially geographic manner to further the evidence base in informing energy policy decisions in the Development Plan. This approach to energy policy development and Sustainable Energy Action Plans is supported in the Regional Planning Guidelines for the Greater Dublin Area 2010 – 2022.

5.0 Scoping renewable and alternative energy resources in South Dublin County

In order to put forward effective and spatially linked energy policies, there is a need to further explore the inter-relationship between energy supply and demand; from this starting point the suitability of a range of renewable energy and energy efficiency measures can be measured. South Dublin County Council recognises that a necessary first step in advancing local energy policy is to get a better spatial picture of existing energy supply and demand across sectors. As part of the South Dublin SEAP methodology energy data was collated across the residential, commercial, transport and municipal sectors.

In the move towards evidence based energy policies, there is a need to advance and apply this methodology at a spatial scale to ascertain the energy profile of the County, establish existing anchor load diversity and identify the current energy supply mix. Upon this base, using Development Plan population, employment and transport growth assumptions, the future energy demand of a range of land uses, building types and anchor loads can be ascertained. Where possible as much local actual data could be used to inform the compilation of local case study areas. Upon this evidence base and energy characterisation mapping, the local application of a range of renewable energy opportunities and other measures can be further explored and tested. Such interventions would be outside the scope of those classed as exempted development under the Planning and Development Regulations 2007 (SI No. 83 of 2007) & 2008 (SI No. 235 of 2008). Areas of energy policy focus could include the following:
Geothermal:
This is energy derived from heat beneath the earth’s surface. Geothermal energy can be classified as either ‘deep’ or ‘shallow’ depending on the depth involved. Some exploration into the potential of geothermal energy in South Dublin County has been carried out in recent years and the Planning Authority has previously granted planning permission for a 4.5 MW geothermal electricity generation plant at Newcastle. The Sustainable Energy Authority of Ireland (SEAI) has published geothermal resource maps of Ireland which can help in exploring the potential of geothermal energy in Ireland. It is recognised that district heating systems are particularly viable in built up areas where there is sufficient energy demand to make such schemes more viable and result in minimal heat loses, i.e. buildings with a high or even twenty four hour energy base load. By carrying out an energy profile of the County, areas showing potential for district heating can be identified. Viability can be measured against both existing and projected future energy demand based on Development Plan growth assumptions.

Combined heat and power (CHP): This is the production of electricity and heat from a single plant. Conventional CHP systems use natural gas to drive an internal combustion engine. These systems generally supply two thirds heat and one third electricity. CHP is applicable on a variety of scales, from local energy networks down to individual building level. In South Dublin County there is scope for CHP on both the local network and individual building scale, in conjunction with fuels such as biomass as the main or combination energy source. Energy characterisation analysis and mapping across a variety of uses can progress a policy approach in this area, including the testing of a range of scenarios in the mixed use, commercial and industrial sectors.

Hydropower:
This is electricity taken from the power harnessed from the flow of falling or flowing water. The concentration of rivers and streams in South Dublin means there is potential for development of hydroelectricity. The 1985 report ‘Small Scale Hydroelectric Potential – County Rivers’ indicated potential for small scale hydro electricity generation at up to thirteen locations in the County. These locations largely correspond to the location of existing dams, weirs, and mills. In South Dublin County, there is potential to develop projects in this area, for example, in the local community context.

Wind:
The potential for wind turbines and wind farm developments in South Dublin County must be considered having regard to the peri-urban nature of the County’s location and the range of planning, environmental and aviation constraints that could limit the number and height of wind turbines at certain locations. In developing an Energy Strategy for South Dublin County it is acknowledged that a full mapping analysis of such constraints is required, to screen out areas where wind turbine developments would not be permissible. In built up areas including industrial and business parks, there may be potential for smaller wind turbines but further evidence in this area is required, including wind speed analysis, to inform a targeted policy approach.

Solar Energy:
There are two main forms of solar energy generation: thermal solar energy (heat) and photovoltaic (PV) (electricity). From 2000 – 2011, solar PV was the fastest growing renewable power technology worldwide (International Energy Agency, PhotoVoltaic Power System, Annual Report 2011). In South Dublin County, there is scope for solar energy in the residential, commercial and industrial sectors. The suitability of solar energy in the urban context requires careful consideration as part of the design process, in particular issues of integration with the built fabric and orientation having regard to the proximity and height of other buildings.

Biomass:
This refers to land and water-based vegetation, organic wastes and photosynthetic organisms. Examples of biomass include: wood, grasses, crops, agricultural and municipal wastes. Biomass can be burned to produce heat that is used to create steam to turn turbines to produce electricity. Therefore, energy from biomass can produce electricity and/or heat. Liquid biofuels can also be derived from biomass crops such as oilseed rape. South Dublin County has potential to produce biomass through its agriculture, forestry and related industries and from biodegradable fraction of industrial and municipal waste produced in the County.

Waste Heat:
The generation of waste heat from industrial and commercial operations offers potential in being re-captured and used to meet energy needs of adjoining and neighbouring premises. Some examples of the re-capturing of waste heat across Europe include the use of waste heat from large commercial premises, refuse waste incineration, wastewater treatment systems and underground public transport systems. In the South Dublin context, the re-use of waste heat is opportunite in built up areas comprising a mix of uses and anchor loads and in some cases could be developed to create a local energy network. Heat load characterisation and mapping of the built environment across South Dublin County can identify areas where the potential for sharing of waste heat could exist.
6.0 Overarching aims of an Energy Strategy for South Dublin County

The preparation of an evidence based Energy Strategy, forming part of the South Dublin County Council Development Plan 2016-2022, should aim to:

- Develop a robust energy policy in the peri-urban context by collating and mapping energy data related to both existing and anticipated future energy demand. By linking analysis of energy demand to assumed areas of growth over the life of the South Dublin County Council Development Plan 2016-2022 and beyond, a locally focused strategy for energy alternatives can be developed. This exercise allows for the viability and cost effectiveness of a range of energy measures (including both renewable energy and energy efficiency measures) to be linked to both existing and expected growth areas across the County, as opposed to assuming local take up of renewable energy opportunities and other energy responses, based on a 'top-down' policy approach.

- Progress a ‘bottom up’ evidence based policy response to address EU and national energy targets set out in the National Renewable Energy Action Plan (NREAP), the National Energy Efficiency Action Plan (NEEAP) and the EU Covenant of Mayors 2020 CO₂ emissions reduction targets. The South Dublin Sustainable Energy Action Plan (SEAP) acts as a robust starting point leading to further research, feasibility and roll out of renewable energy technologies. The Energy Strategy is recognised as an important next step in delivering SEAP actions and also contributing to Covenant of Mayors requirements, encouraging exemplary benchmark projects and energy leadership at local authority level.

- Encourage increased deployment of renewable energy alternatives at the local level by providing a robust evidence base relating to a range of renewable opportunities across a range of land uses, building types and energy loads. The Council recognises that there is a local knowledge gap in terms of the scope and potential of renewable alternatives, developing an Energy Strategy cognisant of the issues presented by a peri-urban landscape, will encourage greater engagement and partnership with other sectors, in particular the private sector, with the ultimate aim of increasing the economic competitiveness of the county, reducing energy costs and increasing energy sector job creation.

7.0 Conclusions

South Dublin County Council has a proven track record in pioneering activities in sustainable development and promoting the growth of sustainable communities. Into the future, the delivery of a low carbon County can only be achieved by collaboration between all sectors, if challenging EU and national energy targets to 2020, 2030 and beyond are to be achieved.

The potential for a range of renewable energy and energy efficiency measures in South Dublin County requires further evidence based investigation, defining energy character areas, to inform policy development. The suitability and inter-relationship between renewable and efficiency measures will vary across sectors, land uses and building types. An Energy Strategy focusing on energy mapping is a necessary first step in this process.

With regard to renewable options in the heat sector, the peri-urban nature of the County offers much potential in this area. The development of local energy networks, stemming from ‘kick start’ projects requires an understanding of both existing and projected energy demand. Such kick start projects could include, for example, a local district heating or CHP network. With regard to renewable opportunities in the electricity sector there is a need for further exploration into the potential of such resources i.e. solar PV on the existing and future building stock and wind turbine developments at an appropriate scale. The advancement of an evidence based approach to energy policy must also be carried out in the context of national and regional policy development in this area and must also have regard to the financial supports that may increase the cost effectiveness and deployment of renewable energy and energy efficiency measures across the County’s landscape.
Environmental Assessment and Climate Change
Introduction

In order to fully incorporate environmental considerations into the plan making process, the Council will carry out a number of environmental assessments in parallel with the plan process. These assessments are Strategic Environmental Assessment, Appropriate Assessment and Flood Risk Assessment.

Strategic Environmental Assessment (SEA)

Strategic Environmental Assessment of Development Plans is required under the EU SEA Directive 2001/42/EC. The SEA Directive was transposed into Irish law under the ‘Planning and Development (Strategic Environmental Assessment) Regulations 2004-2011’.

Strategic Environmental Assessment (SEA) is a statutory formal process, concerned with the environmental impacts of implementing the County Development Plan. It is a process that aims to ensure that any potential for significant environmental effects are identified, considered and taken into account prior to the adoption of the plan. It is a separate parallel process carried out in tandem with the preparation of the Development Plan.

SEA is concerned with the effects of the Plan on the following:

- Climatic Factors, Flora/Fauna, Material Assets.
- Cultural Heritage including Architecture, Archaeology, Landscape and the interrelationship between each of these factors.

The SEA of the County Development Plan is broken down into a number of steps. The process includes:

- Scoping of the Environmental Report, in consultation with environmental authorities.
- Preparing an Environmental Report where the likely significant environmental effects are identified and evaluated.
- A set of environmental objectives are compiled against which the policies and objectives of the plan are measured.
- Identification and evaluation of reasonable alternative development strategies.
- Selection of a preferred strategy and the environmental assessment of this strategy.
- Consulting the public, environmental authorities, and any EU Member State affected, on the environmental report and draft Plan.
- Monitoring and mitigation measures.
- Taking account of the findings of the report and the outcome of these consultations in deciding whether to adopt or modify the draft plan.

An SEA was previously carried out on the existing 2010-2016 South Dublin County Development Plan and that Plan already contains a robust, strong set of policies relating to the protection of the environment. There is an opportunity in the new Plan to further develop and strengthen the environmental strategy for the County. Examples of environmental objectives used in the SEA of the 2010-2016 County Development Plan include those that set out to:

- Conserve and enhance valued natural landscapes
- Conserve and promote the diversity of habitats and species
- Protect the quality of surface and ground waters as sources of drinking water

How can you participate in this process?

The main output of SEA is the Environmental Report, which details the findings of the SEA process at each stage of the Development Plan Review. The Environmental Report will be made available at the same time as the Draft Plan and a period of public consultation with the general public and the Environmental Authorities will also occur at this time.

The Environmental Report, and opinions expressed by the Environmental Authorities and the public, must be taken into account during the preparation of the Plan prior to it being adopted. Once submissions are reviewed, a decision must be made on whether any of the predictions regarding significant environmental effects need to be revised, and whether any of the proposed policies should be amended. If subsequent alterations to the Draft Plan are proposed, information on the likely significant effects on the environment of implementing these amendments will also be made available and there will be a further opportunity for submissions from the public and others.
Appropriate Assessment (AA)
The EU Habitats Directive (92/43/EEC) aims to create a network of protected wildlife sites in Europe through the designation of Special Areas of Conservation and Special Protection Areas, collectively known as Natura 2000 sites. South Dublin currently has three of these sites. It is a requirement of the Directive and legislation to carry out an Appropriate Assessment (Natura Impact Report) on any plan or project that is likely to have a significant effect on the conservation status of a site.

The Draft County Development Plan will have to be screened to ascertain whether it has any significant impact on any Natura 2000 site. Whilst the AA is a statutorily separate process to the SEA it is a parallel process and, as such, the outcomes of the AA will feed into and inform the SEA process outlined above.

Strategic Flood Risk Assessment (SFRA)
The EU Floods Directive and the “Planning System and Flood Risk Management Guidelines for Planning Authorities” (DoEHLG/OPW, 2009) set out the requirement for a development plan to be accompanied by a Strategic Flood Risk Assessment. These Guidelines state that inappropriate development that cannot meet the criteria for a Justification Test should not be considered at the plan-making stage.

The Council will carry out a Strategic Flood Risk Assessment of the policies and objectives of the Draft County Development Plan. This assessment will provide a broad assessment of flood risk within the county and inform strategic land-use planning decisions.

Climate Change
In line with global trends, Ireland’s climate is changing and scientific consensus is that more changes are on the way. It is accepted that action is required to manage and deal with climate change impacts. There is a need to adapt to these changes.

In December 2012 the Department of Environment, Community and Local Government (DOECLG) published the “National Climate Change Adaptation Framework”. The DOECLG has been identified as the lead body on National Adaptation policy. Local Authorities have, however, been given the role to prepare local adaptation plans through the Development Plan process. Adaptation involves changing our own habits so as to adapt to the challenges of climate change. Climate change adaptation is an overarching consideration that will inform policies and objectives throughout the plan review process, with increased emphasis on reducing climate change at a local level through settlement and travel patterns, energy use and protection of Green Infrastructure.
NOW WE’D LIKE TO HEAR FROM YOU ...

Submissions and observations are invited over an eight week period from 5th September 2014 to 16.00 hours on 31st October 2014, online at www.southdublindevplan.ie or in writing to the address below.

On Line: www.southdublindevplan.ie

Postal: Senior Executive Officer, Land Use Planning and Transportation Department, South Dublin County Council, County Hall, Tallaght, Dublin 24.

For further information log onto www.southdublindevplan.ie or call the County Development Plan Review Team on 01 4149000

A Vision for South Dublin’s Future