SOCIETY OF CHARTERED SURVEYORS IRELAND

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# HOUSING SUPPLY CAPACITY
## IN DUBLIN'S URBAN SETTLEMENTS
## 2014-2018

SEPTEMBER 2014

Prepared by:
FutureAnalytics
Planning + Research + Economics

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# Housing Supply Capacity in Dublin's Urban Settlements 2014 -2018

## Key Findings

- There are **2,233 hectares (ha)** of land **zoned and potentially available for residential development**, which is **2.4%** of the total land area in the Dublin Region.
- This zoned land can deliver approximately **102,500 additional housing units** under the minimum recommended density scenario.
- This can result in the provision of housing for approximately **269,000 additional persons**.
- There is a **minimum housing unit requirement of 35,433 between 2014 - 2018**[1]. However, currently there is only a total of **granted (extant) planning permissions for 26,580 units**, resulting in **a shortfall of 8,853 units** over the five-year period.

A breakdown of these figures can be found below:

| Local Authority | Zoned for Residential Development | Minimum Housing Requirement (2014-2018) | Granted Planning Permissions | % Surplus/ Deficit |
|---|---|---|---|---|
| DCC | 313 ha | 13,751 Units | 2,444 Units | – 82% |
| FCC | 1,065 ha | 9,617 Units | 15,583 Units | + 62% |
| DLRCC | 302 ha | 3,299 Units | 6,070 Units | + 84% |
| SDCC | 553 ha | 8,766 Units | 2,483 Units | – 72% |
| Total | 2,233 ha | 35,433 Units | 26,580 Units | – 25% |

THERE ARE 2,233 ha OF LAND ZONED AND POTENTIALLY AVAILABLE FOR RESIDENTIAL DEVELOPMENT IN THE DUBLIN REGION

THE DUBLIN REGION HAS CAPACITY TO SUPPLY A MINIMUM OF 102,500 ADDITIONAL HOUSING UNITS

A FURTHER 269,000 PERSONS COULD BE ACCOMMODATED IN THE DUBLIN REGION UNDER MINIMUM RECOMMENDED DENSITIES

A SHORTFALL OF OVER 8,853 HOUSING UNITS EXISTS BETWEEN UNITS GRANTED AND THE REGION'S MINIMUM REQUIREMENT (2014-2018)

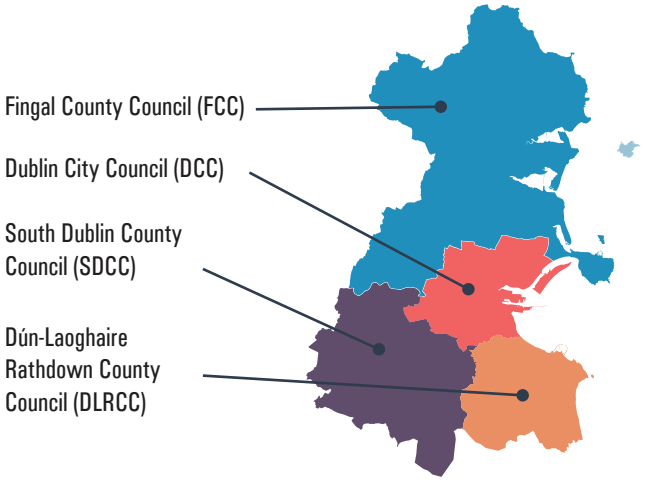



**Figure 1: Local Authorities within the Dublin Region**

1 Based on the methodology applied in the 'Housing Supply Requirements in Ireland's Urban Settlements 2014-2018' publication (Housing Agency/FAC April 2014), which is applicable to the 15 identified urban settlements in the Dublin Region, with Dublin City & Suburbs apportioned out to each local authority. The determination of this minimum housing units requirement is based on the modelling of six key inputs, namely, population projections, intercensal trends, housing stock, household composition, vacancy rates and obsolesence (refer to Appendix 1 for more details).

# INTRODUCTION

The Society of Chartered Surveyors Ireland (SCSI) recognises the serious shortage of supply of residential property in the Dublin Region at present. Projected increases in population and changes in Ireland's demographics will result in the formation of a significant number of new households per annum, each requiring a separate dwelling. The SCSI strongly advocates a properly functioning housing market as an essential component to facilitate a return to sustainable economic growth. By commissioning this research, the SCSI hopes to continue to productively contribute to the identification of solutions to address the housing supply shortage, particularly in the Dublin Region.

This report explores the capacity of lands zoned for residential development[5] within the Dublin Region (comprising the four Dublin local authorities of South Dublin County Council, Dublin City Council, Fingal County Council, and Dun-Laoghaire Rathdown County Council) to deliver the requisite housing units for the projected population of the Dublin Region between 2014-2018, and considers this alongside the quantum of granted (extant) planning permission for residential development. The report has been commissioned by the SCSI, and has been prepared by Future Analytics Consulting (FAC). The analysis contained herein builds off the Housing Agency/FAC publication 'Housing Supply Requirements in Ireland's Urban Settlements 2014-2018' (April, 2014), and maintains the assumptions underpinning the modelling within this earlier research (refer to Appendix 1 for more details).

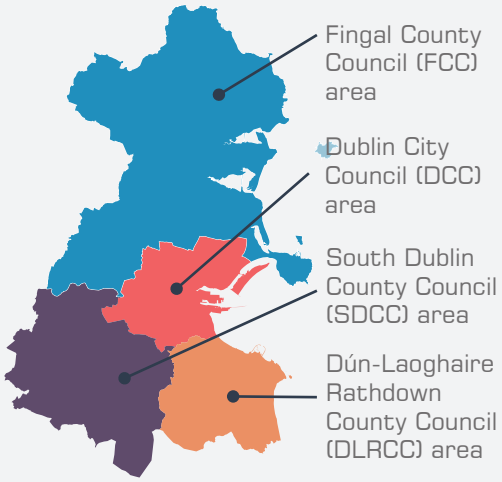



**Figure 2: Local Authorities within the Dublin Region**

2 Those settlements having a resident population of 1,000 persons or more. These account for some 97.6% of the Dublin Region's population in 2011. Lands zoned for residential development, located within c. 1 km of an urban settlement boundary, are also included in the urban settlement totals.
3 Based on the application of recommended densities per parcel of land zoned for residential development.
4 This calculation, and the wider analysis herein, maintains the assumptions underpinning the modelling within the Housing Agency/FAC publication 'Housing Supply Requirements in Ireland's Urban Settlements 2014-2018' (April, 2014), which can also be found in Appendix 1 of the current report.
5 Lands zoned for mixed-use development have been excluded from this analysis.

This detailed analysis establishes the **quantum of undeveloped land, zoned for residential development, within the Dublin Region, specifically focussing on the urban settlements** therein. These settlements were defined on the basis of having a resident population of 1,000 persons or more. Collectively, these settlements account for some 1,242,620 persons, or nearly 98% of the population of the Dublin Region in 2011.

**A sustainable density framework[6] has been applied to the identified lands, to ascertain the capacity of these lands to accommodate future populations[7].**

**It is prudent to note that this study does not seek to quantify the current demand for housing in the Dublin Region** but, based on historic and projected household characteristics, assesses the capacity for supply, and the type of households required (over the period 2014-2018).

For each of the identified urban settlements in the Dublin Region, the **current and future *minimum* housing requirements have been extracted from the Housing Agency/FAC publication** and considered in the context of the capacity for new residential development that exists within these settlements and their immediate environs (on lands zoned for residential development).

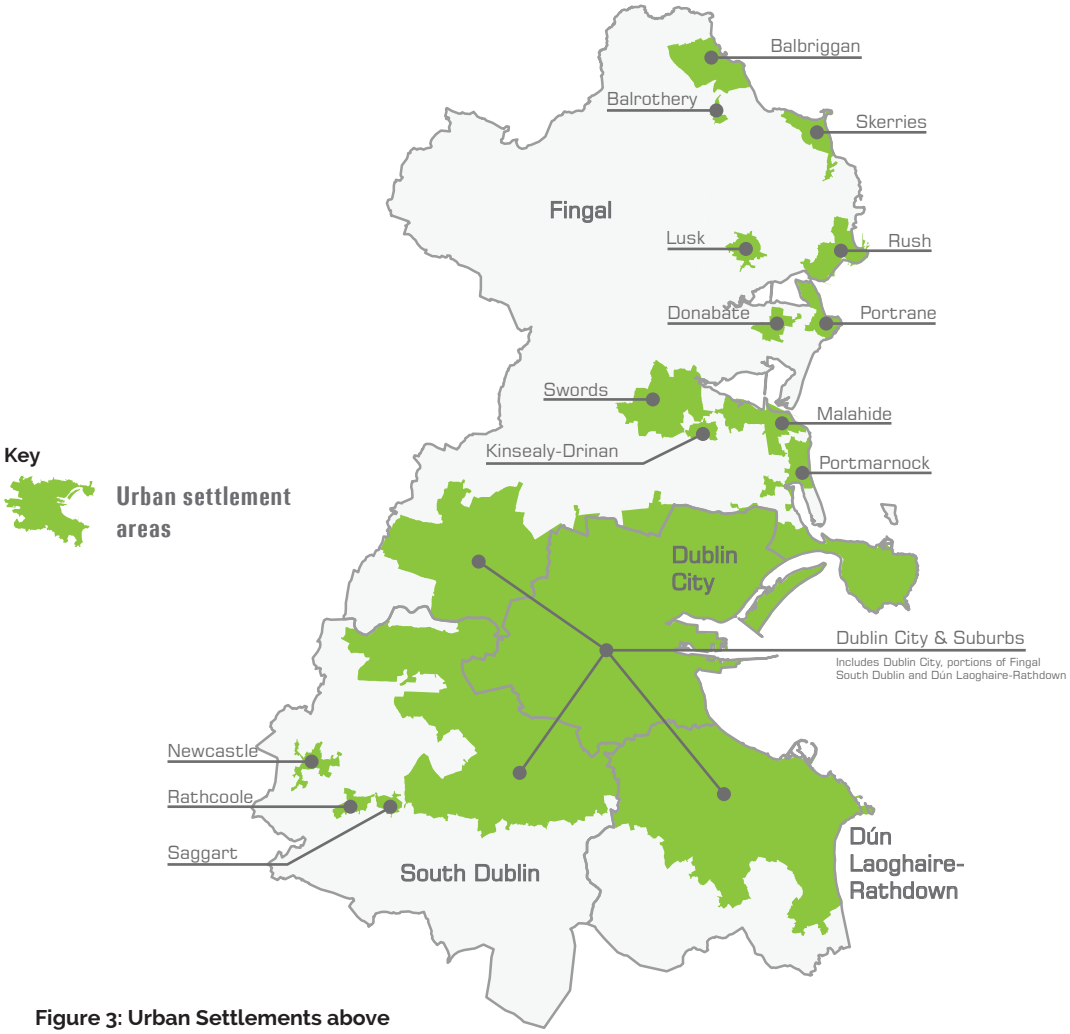


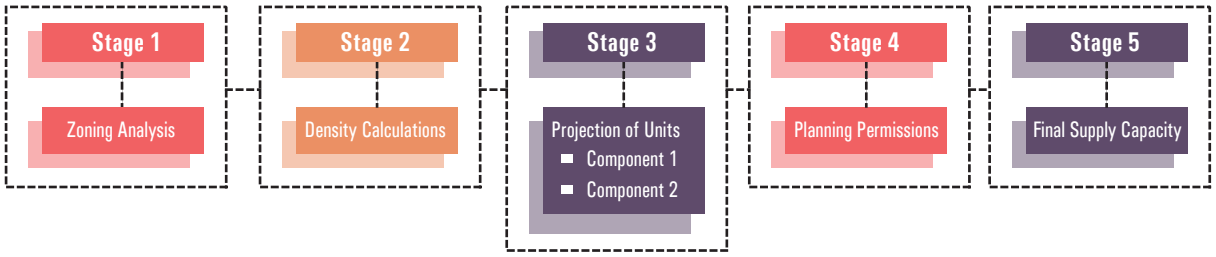

**Figure 3: Urban Settlements above 1,000 persons in the Dublin Region**

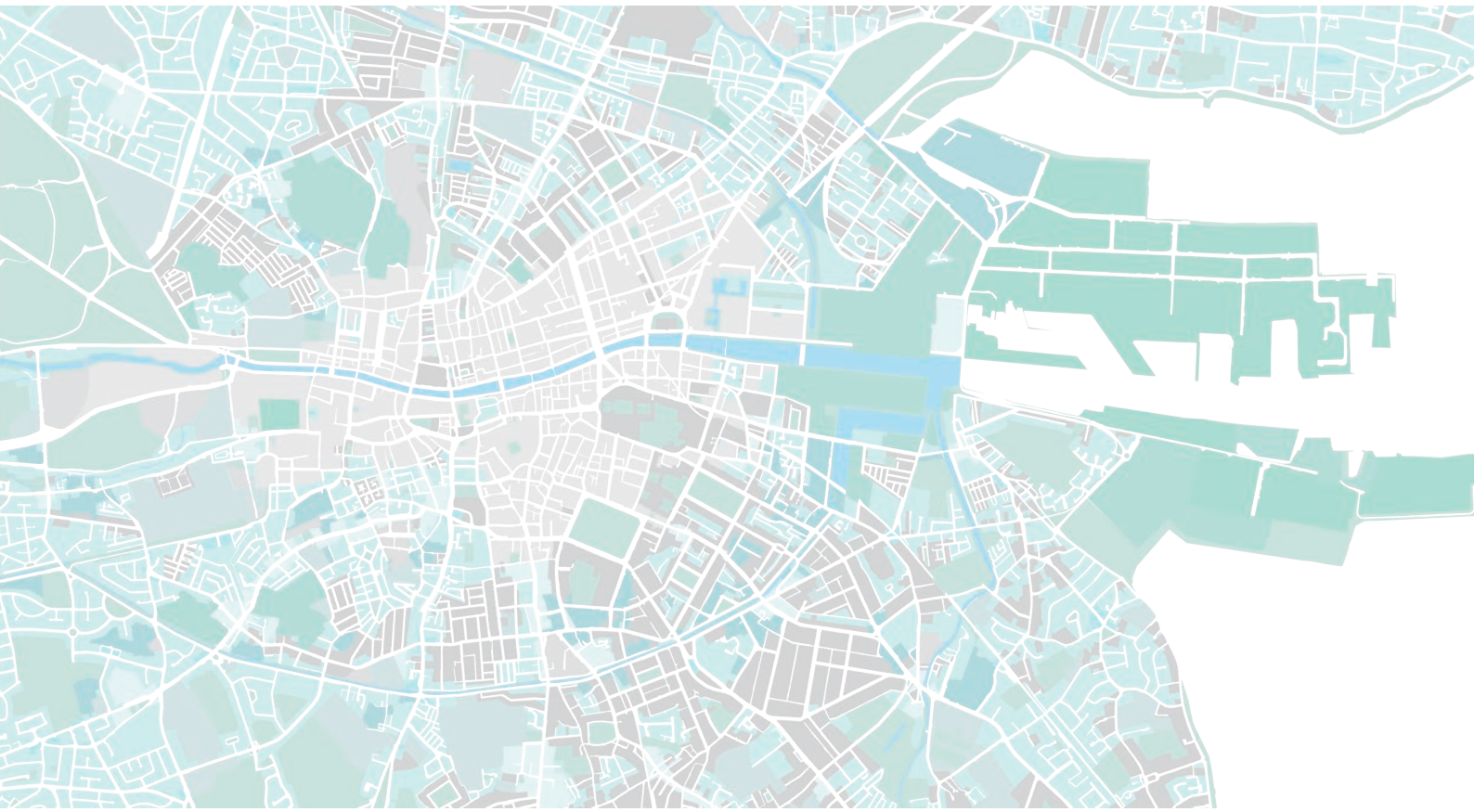
6 This density framework is based on the analysis of all relevant Local Area Plans and Development Plans, Residential Density Guidelines and relevant public transport policies. See Appendix 2 for further details.

7 The population projection utilised has been based on the Central Statistics Office (CSO), M2F2 'Traditional' Regional Projections (in comparison with other M2F2 scenarios, these are considered more moderate in their outlook), while proportional household composition was used as an alternative to average household size to clarify how housing units over the study period will be occupied.

In tandem with this analysis, a detailed assessment of planning application decisions has been carried out to determine the quantum of residential units that have already been granted planning permission. This provides an indication of the level of residential development which remains unbuilt, but could be delivered in the short-term.

The following sets out an overview of the different elements of the analysis undertaken to inform this report (refer to the methodology flowchart on page 7 for more details):



# Context

The Dublin Region is the national economic engine and driver of economic growth, and was at the forefront of the country's rapid economic expansion during the Celtic Tiger period. The Region has a total land area of c. 92,000 ha and accounts for just 1.35% of the land area of the Republic of Ireland. The Dublin Region, however, supports c. 27.7% (1,273,069 persons) of the total national population (CSO, 2011).

This study assesses the capacity of urban settlements across the Dublin Region to support future residential development up to 2018. According to the 'Housing Supply Requirements in Ireland's Urban Settlements 2014-2018' publication, the total population in these urban settlements is expected to increase from 1,242,620 in 2011 to 1,286,462 by 2018. Accordingly, at a minimum, these settlements will need to accommodate an increase in population of some 43,842 persons over this period.

The following list identifies the urban settlements[8] in the Dublin Region which have a population in excess of 1,000 persons:

**Population of the Dublin Region's Urban Settlements (over 1,000 persons) (CSO, 2011).**

| | | | | | |
|---|---|---|---|---|---|
| **Balbriggan** | **19,960 persons** | **Kinsealy-Drinan** | **5,814 persons** | **Saggart** | **2,144 persons** |
| **Balrothery** | **1,866 persons** | **Lusk** | **7,022 persons** | **Skerries** | **9,671 persons** |
| **Donabate** | **6,778 persons** | **Malahide** | **15,846 persons** | **Swords** | **36,924 persons** |
| **Dublin City and Suburbs (DCS)** | **1,110,627 persons** | **Newcastle** | **2,659 persons** | | |
| • DCS - Dublin City Council | 527,612 persons | **Portmarnock** | **9,285 persons** | | |
| • DCS - Fingal | 130,436 persons | **Portrane** | **1,372 persons** | | |
| • DCS - Dún Laoghaire Rathdown | 201,074 persons | **Rathcoole** | **3,421 persons** | | |
| • DCS - South Dublin | | **Rush** | **9,231 persons** | | |

## Approach

It is important to note that this research sets out the total land zoned for residential development in the urban settlements within the Dublin Region. This is considered alongside a full review of extant planning permissions. The research also considers the projected population and minimum housing requirements for the urban settlements over the period 2014-2018, to lend some currency and context to the analysis. It does not purport to suggest that land zoned for residential development should be (nor was planned to be) developed by 2018[9].

A number of factors need to be considered in bringing forward land zoned for development, to contribute to the overall housing stock, and these should be borne in mind when considering the prospects of the minimum housing requirements being delivered during 2014-2018. These factors include:

Planning | Servicing | Market | Financing

Lands suitable for future residential development have been extracted from the composite land use zoning maps. Each zoning parcel has been assessed to determine if any development has occurred since the relevant Development Plan came into force, and then plotted against the urban settlements used in the study. Density figures have been assigned to each parcel having regard to local, city/county, regional or national planning policy and guidance (see Appendix 2).

8 The urban settlements as defined by the Central Statistics Office (and in use for the 2011 Census) are based upon a robust set of spatial conditions which demarcate the boundary of the region's urban areas, including those define by legislation. See criteria as specified in Census 2011 Appendix 1, p152, CSO, 2011. http://www.cso.ie/en/media/csoie/census/documents/census2011vol1andprofile1/Volume1,,Appendices.pdf

9 It is important to highlight that the supply capacity encompasses all lands zoned for residential development, and this invariably includes lands zoned for residential development that has a strategic or longer term objective for development. It should not, therefore, be construed from the present date as being excess zoned land, as the population projections for this report extend only to 2018. Indeed, enough land should be zoned to facilitate at least 9 years future supply.

The following sets out the two component approaches in assessing residential density:

## Component 1: Household Size

The first component uses the area of undeveloped land (zoned for residential development) multiplied by the density capacity for each parcel, to generate a 'Units per Hectare' figures for each urban settlement (see Appendix 2 for further information on the density framework). This number of units is then merged with the average household size for the county[10] to determine the level of population growth that this quantum of new residential development can accommodate.

## Component 2: Household Composition

Component 2 attempts to determine the future requirement for particular household types and, accordingly, the need for units of particular types. It does so by assessing, using historic figures, the distribution in housing composition in the Dublin Region. This split among one-, two-, three-, four- and five or more person households has been projected forward to 2018 to capture the expected minimum housing requirement in these types of dwellings, or as the horizon of the study period is surpassed. This analysis builds off the 'Housing Supply Requirements in Ireland's Urban Settlements 2014-2018' publication. The projected population growth within the Dublin Region, together with the pressures on the residential property market to satisfy emerging housing need must be understood, and the current analysis intends to bridge the existing gaps by highlighting:

- What quantum of land zoned for residential development is currently available within the Dublin Region?; and
- What is the overall capacity of these sites to deliver the requisite minimum housing requirement?

## Serviced/Serviceable Lands for Residential Development

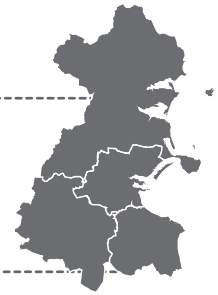
When considering the analysis contained in the report, it is important to remain cognisant that, while many of the results show adequate supply capacity within urban settlements, there are zoned lands that are not currently serviced.

The term 'serviced land' should be understood in its broadest sense as land designated for urban use and equipped with basic infrastructure including access to an urban road network, public lighting, a water supply, a sewerage and drainage system as well as electricity and telephone services.

Further future research could explore this reality and the implications of these requirements to assist in the Dublin Region's short-term housing supply shortage being addressed.

10 Based on those set out in the relevant Development Plans and the Regional Planning Guidelines for the Greater Dublin Area 2010-2022 (Dublin Regional Authority and Mid-East Regional Authority, 2010).

# Methodology Flowchart



## Zoning Analysis

Stage 1

- Existing
  - Built Residential (Undeveloped)
- Planned
  - New/Proposed Residential
  - Strategic Residential Reserve

## Density Calculations

Stage 2

- Planning Policy
  - Local Area Plans
  - Development Plans
  - Sustainable Residential Development Guidelines
- Transport Infrastructure
  - LUAS
  - Commuter Rail/DART
  - Quality Bus Corridor

## Projection of Units

Stage 3

### Component 1

Residential Land Available
X
Recommended Unit Densities per Hectare

County Average Household Size

Existing DPs | Future (RPGs)

DLRCC | SDCC | DCC | FCC

Sustainable Quantum of Housing Units based on Current and Future Average Household Size

### Component 2

Historic Proportional Household Composition (PHC)

1 PHC | 2 PHC | 3 PHC

4 PHC | 5+ PHC

Projection of Trends in Composition towards 2018

Residential Land Available
X
Recommended Unit Densities per Hectare

2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018

Projected no. of Persons Per Household Size (PHC)

Quantum of Housing Units based on Household Composition

## Planning Permissions

Stage 4

Extant Planning Permissions

- Area
- Number of Units
- Composition

## Final Supply Capacity

Stage 5

Undeveloped Zoned Land + Permitted Units on Zoned Land = Supply Capacity

# KEY FINDINGS - Zoning Analysis

## Dublin Region Zonings

The Dublin Region has a total land area of c. **92,000 ha.** 70% of this land (65,000 ha.) is zoned for Open Space and Amenity or Rural/Agricultural lands (see Figure 4 for illustrative purposes). Existing residentially developed areas occupy c. 17,600 ha. or 19% of the total land area of the Dublin Region (see Figure 5).

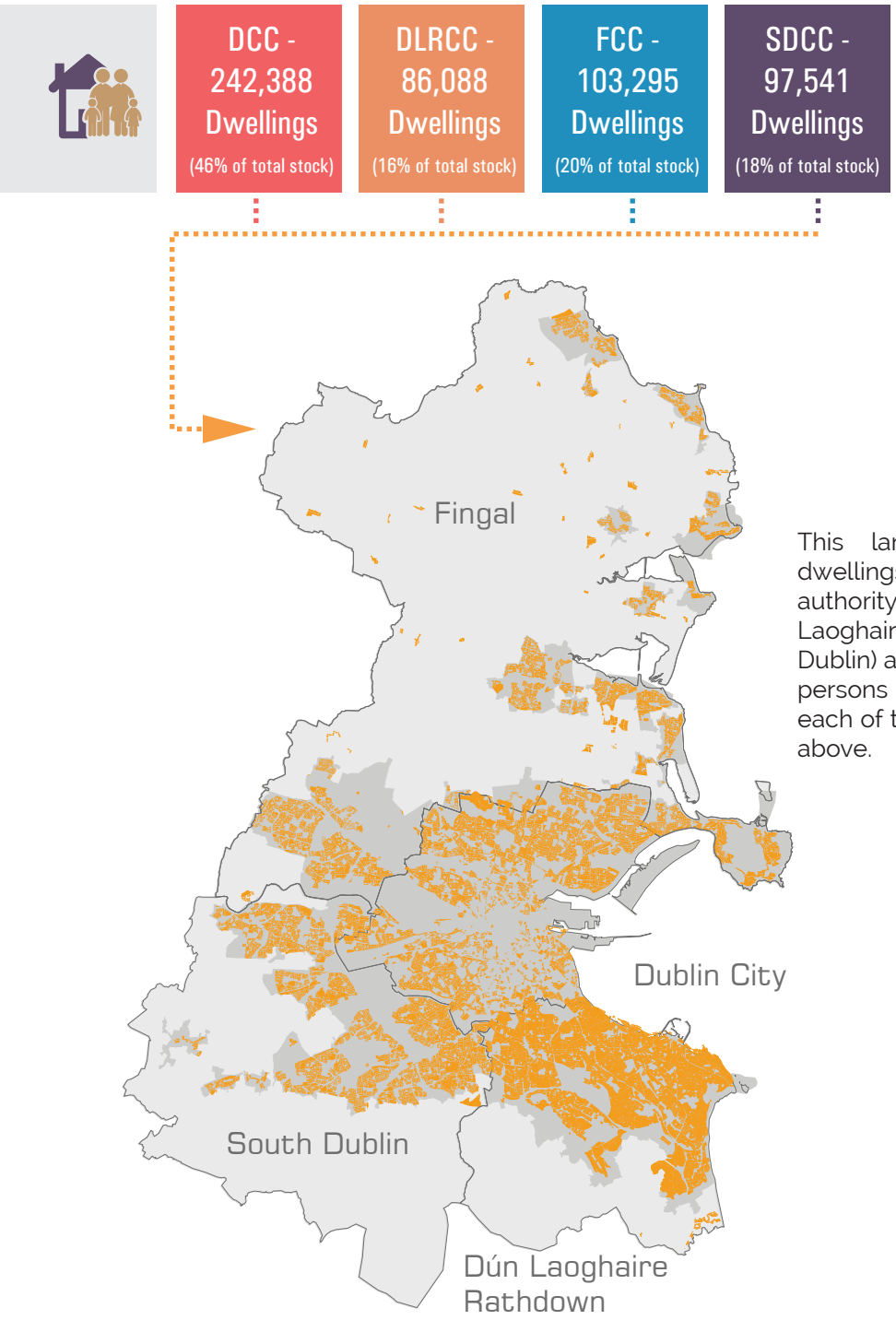



Figure 5: Total lands zoned for residential development in the Dublin Region

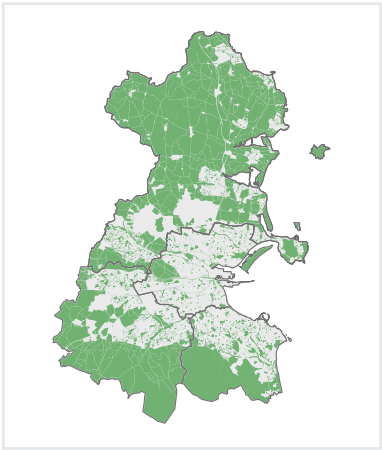


Figure 4: Existing non-residentially zoned land in Dublin Region

This land area accommodates 529,312 dwellings across the four Dublin local authority areas (Dublin City, Dún Laoghaire-Rathdown, Fingal, and South Dublin) and a resident population of 1,242,620 persons (CSO, 2011). A breakdown across each of the local authority areas can be seen above.

# KEY FINDINGS - Zoning Analysis

## Lands Zoned for Residential Development

The assessment highlights that there is 2,233 ha. of land zoned and potentially available for residential development in Dublin Region over the relevant Development Plan periods and beyond (see Figure 6). This can be broken out as follows:

**DCC - 313 ha**

**DLRCC - 302 ha**

**FCC - 1,065 ha**

**SDCC - 553 ha**

A significant quantum of this undeveloped residential land is located within Fingal, with much lower figures in each of the other three local authority areas.

According to the 'Housing Supply Requirements in Ireland's Urban Settlements 2014-2018' study, the total population in the urban settlements is expected to increase from **1,242,620** in 2011 to **1,286,462** by 2018.

Thus, at a minimum, these urban settlements will need to accommodate **43,842** additional persons over the period 2011-2018. Much of the supply capacity is found on the edge of the existing larger urban settlements.

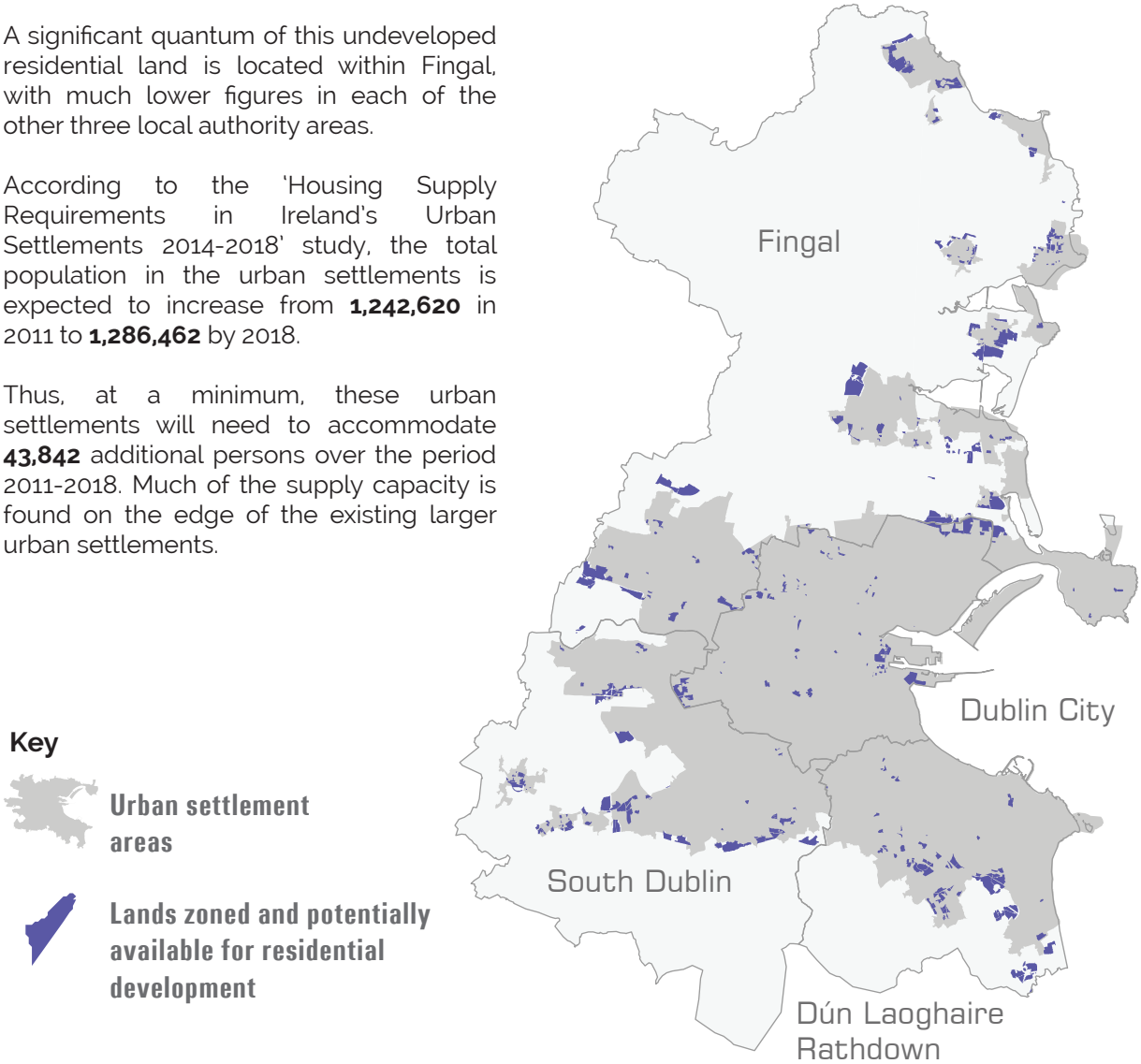



**Figure 6: Lands zoned and potentially available for residential development in the Dublin Region**

# KEY FINDINGS - Density Analysis

## Dublin Region Analysis

The assessment of density has been split into two components as previously described. Following the initial analysis carried out to determine the 'units per hectare' (UPH) density figure for each parcel of zoned land, the area of the parcel is multiplied by the 'UPH' figure. The resulting output indicates the number of units which could be supported at that density.

Thereafter, by applying current and projected future average household size, and current and projected future household composition, to these unit figures, the supporting population can be established, namely, the number of persons in those zonings based on a county average household size, and the unit composition breakdown. The following sets out this detailed analysis:

**Under the low scenario for recommended densities:** See Appendix 3 for medium and high density scenarios

Low Scenario

| Settlement Area | Zoned Land Available | Population in 2011 | Population in 2018 | Minimum Housing Requirement Period 2014 - 2018, Housing Agency | Average Zoning Density | Total Units Supported | Average Household Size: 2011 - Persons Accommodated | Average Household Size: 2016 - Persons Accommodated | Average Household Size: 2018 - Persons Accommodated | Household Composition: 2012 - Persons Accommodated | Household Composition: 2016 - Persons Accommodated | Household Composition: 2018 - Persons Accommodated |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DCS - Dublin City<br>313 ha Zoned Land Available | 527,612 | 535,318 | 13,751 units | 35 UPH | 26,673 units | | 60,468 people | 60,281 people | 58,147 people | 69,438 people | 68,353 people | 67,817 people |
| DCS - Fingal<br>416 ha Zoned Land Available | 130,436 | 141,316 | 5,295 units | 35 UPH | 17,499 units | | 45,935 people | 45,148 people | 43,631 people | 45,555 people | 44,843 people | 44,491 people |
| DCS - DLR<br>302 ha Zoned Land Available | 201,074 | 201,996 | 3,299 units | 35 UPH | 14,744 units | | 36,271 people | 35,682 people | 34,453 people | 38,384 people | 37,784 people | 37,488 people |
| DCS - South Dublin<br>450 ha Zoned Land Available | 251,505 | 265,828 | 8,513 units | 35 UPH | 17,977 units | | 49,166 people | 47,638 people | 46,020 people | 46,798 people | 46,067 people | 45,705 people |
| Newcastle<br>30 ha Zoned Land Available | 2,659 | 3,010 | 118 units | 20 UPH | 654 units | | 1,788 people | 1,732 people | 1,673 people | 1,702 people | 1,675 people | 1,662 people |
| Rathcoole<br>34 ha Zoned Land Available | 3,421 | 3,642 | 133 units | 30 UPH | 1,003 units | | 2,743 people | 2,658 people | 2,567 people | 2,611 people | 2,570 people | 2,550 people |
| Saggart<br>39 ha Zoned Land Available | 2,144 | 2,527 | 0 units | 40 UPH | 1,577 units | | 4,312 people | 4,178 people | 4,036 people | 4,104 people | 4,040 people | 4,008 people |
| Balbriggan<br>113 ha Zoned Land Available | 19,960 | 22,047 | 925 units | 30 UPH | 3,378 units | | 10,604 people | 10,422 people | 10,072 people | 10,516 people | 10,352 people | 10,271 people |
| Balrothery<br>6 ha Zoned Land Available | 1,866 | 2,076 | 85 units | 35 UPH | 219 units | | 574 people | 564 people | 545 people | 569 people | 560 people | 556 people |
| Donabate<br>146 ha Zoned Land Available | 6,778 | 7,378 | 265 units | 37 UPH | 5,348 units | | 14,039 people | 13,798 people | 13,335 people | 13,923 people | 13,705 people | 13,598 people |
| Kinsealy-Drinan<br>7 ha Zoned Land Available | 5,814 | 6,676 | 360 units | 35 UPH | 237 units | | 623 people | 612 people | 592 people | 618 people | 608 people | 603 people |
| Lusk<br>39 ha Zoned Land Available | 7,022 | 8,022 | 374 units | 33 UPH | 1,276 units | | 3,350 people | 3,292 people | 3,182 people | 3,322 people | 3,270 people | 3,244 people |
| Malahide<br>58 ha Zoned Land Available | 15,846 | 16,100 | 163 units | 20 UPH | 974 units | | 2,557 people | 2,513 people | 2,429 people | 2,536 people | 2,496 people | 2,477 people |
| Portmarnock<br>50 ha Zoned Land Available | 9,285 | 9,517 | 236 units | 44 UPH | 2,210 units | | 5,800 people | 5,701 people | 5,510 people | 5,753 people | 5,663 people | 5,618 people |
| Portrane<br>7 ha Zoned Land Available | 1,372 | 1,338 | 17 units | 35 UPH | 235 units | | 618 people | 607 people | 587 people | 613 people | 603 people | 598 people |
| Rush<br>51 ha Zoned Land Available | 9,231 | 9,813 | 275 units | 37 UPH | 1,888 units | | 4,956 people | 4,871 people | 4,707 people | 4,915 people | 4,838 people | 4,800 people |
| Skerries<br>28 ha Zoned Land Available | 9,671 | 9,952 | 174 units | 37 UPH | 1,016 units | | 2,668 people | 2,622 people | 2,534 people | 2,646 people | 2,604 people | 2,584 people |
| Swords<br>146 ha Zoned Land Available | 36,924 | 39,904 | 1,448 units | 39 UPH | 5,669 units | | 14,881 people | 14,626 people | 14,135 people | 14,758 people | 14,527 people | 14,413 people |
| Total<br>2,233 ha Zoned Land Available | 1,242,620 | 1,286,462 | 35,433 units | 34 UPH | 102,576 units | | 261,351 people | 256,945 people | 248,154 people | 268,760 people | 264,558 people | 262,483 people |

A review of the logic and methodology for density calculations can be found in Appendix 2 of this document

A full breakdown of these figures can be found in Appendix 3 of this document.

Note: DCS refers to the Dublin City & Suburbs Settlement Area. Each local authority's share of this settlement is attributed above.

# KEY FINDINGS - Planning Permission Analysis

## Dublin Region Analysis

This section reviews the granted (extant) planning permission for new residential developments across the Dublin Region[11].

| Settlement Area | (Area) Extant Planning Permissions | (Units) Extant Planning Permissions | Extant Planning Permissions: 1 Bed Dwellings | 2 Bed Dwellings | 3 Bed Dwellings | 4 Bed Dwellings | 5+ Bed Dwellings |
|---|---|---|---|---|---|---|---|
| DCS - Dublin City | 43.62 ha | 2,444 | 171 | 726 | 223 | 0 | 0 |
| DCS - Fingal | 231.07 ha | 8,530 | 732 | 4,280 | 2,332 | 806 | 509 |
| DCS - DLR | 121.31 ha | 6,070 | 966 | 3,458 | 1,227 | 647 | 296 |
| DCS - South Dublin | 43.87 ha | 1,916 | 81 | 615 | 840 | 162 | 20 |
| Newcastle | 1.90 ha | 48 | 6 | 29 | 21 | 0 | 0 |
| Rathcoole | 14.28 ha | 403 | 0 | 0 | 41 | 29 | 0 |
| Saggart | 4.26 ha | 116 | 0 | 34 | 71 | 17 | 0 |
| Balbriggan | 91.21 ha | 2,363 | 32 | 739 | 1,007 | 488 | 99 |
| Balrothery | 0 ha | 0 | 0 | 0 | 0 | 0 | 0 |
| Donabate | 18.56 ha | 458 | 3 | 76 | 251 | 123 | 15 |
| Kinsealy-Drinan | 6.61 ha | 272 | 26 | 114 | 120 | 20 | 0 |
| Lusk | 6.24 ha | 203 | 0 | 89 | 139 | 6 | 0 |
| Malahide | 46.97 ha | 880 | 87 | 324 | 199 | 322 | 7 |
| Portmarnock | 14.67 ha | 323 | 16 | 16 | 75 | 198 | 33 |
| Portrane | 0 ha | 0 | 0 | 0 | 0 | 0 | 0 |
| Rush | 2.71 ha | 80 | 0 | 50 | 37 | 5 | 0 |
| Skerries | 26.44 ha | 543 | 70 | 412 | 104 | 61 | 0 |
| Swords | 69.20 ha | 1,931 | 109 | 402 | 502 | 333 | 54 |
| Total | 742.91 ha | 26,580 | 2,229 | 11,364 | 7,188 | 3,217 | 1,000 |
| (Percentage of Units) | | | 9% | 43% | 27% | 12% | 4% |

**DCC** - 44 ha and 2,444 units

**DLRCC** - 121 ha and 6,070 units

**FCC** - 514 ha and 15,583 units

**SDCC** - 64 ha and 2,483 units

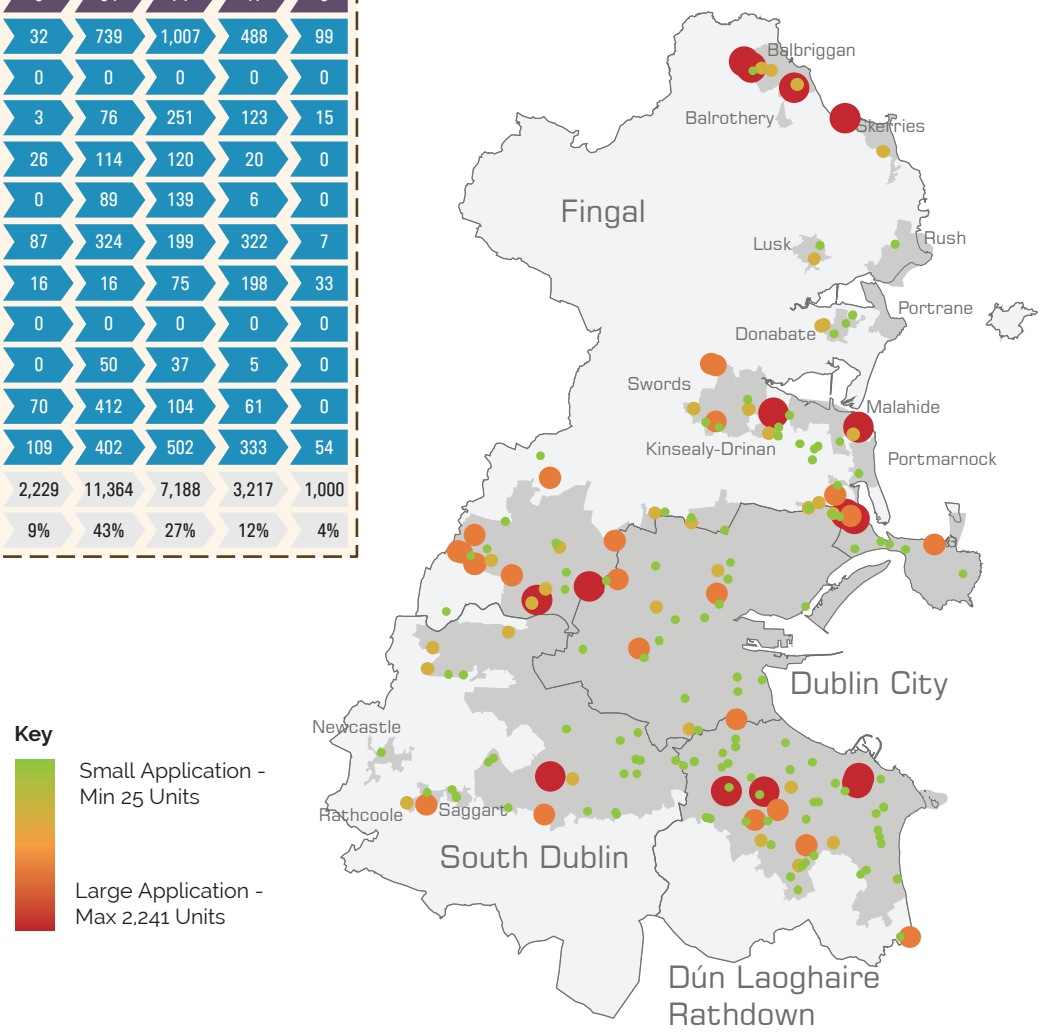



**Figure 7: Granted (Extant) Planning Permissions for New Residential Development (from 2008 to June 2014)**

11 There have been anecdotal examples of large developments permitted in the late 2000's that have now been revised or sought to be revised at lower densities or in different formations. These must be carefully considered on a case-by-case basis to protect the proper planning and sustainable development of the urban settlements in the long-term interests of quality housing supply being delivered.

# Appendix 1

## Minimum Housing Requirements - Key Terminology In Accordance With 'Housing Supply Requirements in Ireland's Urban Settlements 2014-2018' (April, 2014)

1 **Dwellings Required** is the minimum number of dwellings that will be required to accommodate the urban settlement's projected population in full, incorporating the **available housing supply**, as split by proportional household composition. Not the same as **Housing Supply Requirement**.

2 **Housing Supply Requirement**: the summed total of the (per annum) projected shortfalls in housing provision for each urban settlement as derived from the relationship between **Dwellings Required** and **Available Housing Supply**, i.e. the difference between them. This minimum housing supply requirement is not a reflection of housing demand.

The methodological approach taken in the Housing Agency/FAC publication assumes that any annual shortfall is realised (constructed) for the subsequent year's assessment for that settlement.

3 **Available Housing Supply:** is the number of habitable dwellings in the urban settlement as derived from census 2011 base figures; supplemented by the preceding year's **housing supply requirement** (if any), less the specified vacancy rate and annual obsolescence factor.

4 **Proportional Household Composition (PHC):** is an assessment of Census data on household composition for each urban settlement. The basis of PHC is the assumption that an urban settlement's household composition, i.e. the breakdown of each settlement's resident population into 1-, 2-, 3-, 4- and 5+ Person Households, will continue to grow and decline (as per intercensal trends) throughout the period. PHC is used to distribute, proportionately, the projected population into each household category, whereupon the number of **dwellings required** to satisfy each household type in full can be derived.

As an alternative to average household size, PHC is more sensitive to the housing characteristics at play in each urban settlement.

For example, some settlements may have a predominant share of 1-person households and are therefore applying greater pressure on the available housing supply than if that same population was to be accommodated according to the average household size. This pressure if compounded by any such growing trend towards 1-person households. In this way, potential supply-side issues can be highlighted on a basis that is tied to each settlement's demographic characteristics.

**Figure 8: Housing Agency-Future Analytics Consulting modelling overview for determining minimum housing supply requirement**

# Appendix 2

## Density Framework - Capacity Constraints

Sustainable residential development is a key feature in the pursuit of proper planning and sustainable development. In order to adequately determine the delivery capacity of the zoning, this study has sought to attach appropriate density allocations to each parcel of undeveloped residential land. Planning policy and guidance from the local level up to national level has been consulted to ensure that the density allocations are robust and defensible. Specifically, Local Area Plans, Development Plans, Residential Density Guidelines, and proximity to supporting public transport infrastructure have been consulted.

### START

**Action:** Is the parcel located within a Local Area Plan?

### IF YES...

**Action:** Does the LAP provide density guidelines? - Assign Densities.

### IF NO...

**Action:** Is the parcel located within a transport corridor or in close proximity of an important transport node?

(500m from a Quality Bus Corridor and/or 1km from a rail or light rail station).

### IF NO...

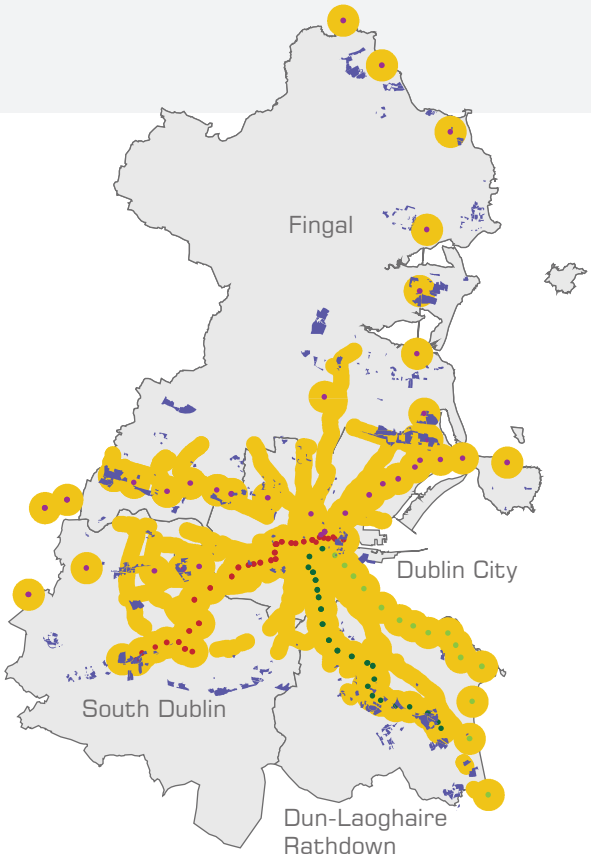
**Action:** Consult the County/City Development Plan and the Sustainable Residential Development in Urban Areas Guidelines and assign the appropriate density.

### IF YES...

**Action:** Using higher density principles and County/City Development Plans and the Sustainable Residential Development in Urban Areas Guidelines, assign higher than average densities in these areas.

### THEN...

**Action:** Assign the appropriate density as specified in the County/City Development Plan and the Sustainable Residential Development in Urban Areas Guidelines.




Key

- Undeveloped land zoned for residential development
- Commuter rail stations
- DART stations
- LUAS Red line stations
- LUAS Green line stations
- 500m radius from rail/tram station or QBC

**Figure 9: Transportation corridors overlaid with undeveloped land zoned for residential development**

**Average density allocation across different zonings (units per hectare)**

| Zone Code | Description/Title | Low | Medium | High |
|---|---|---|---|---|
| **DCC** | | | | |
| Z1 | Sustainable Residential Neighbourhoods | 35 | 50 | 75 |
| Z2 | Residential Neighbourhoods (Conservation Areas) | 35 | 50 | 75 |
| Z14 | Strategic Development and Regeneration Area (SDRA) | 94 | 125 | 156 |
| **DLRCC** | | | | |
| A | Existing Residential Area | 35 | 50 | 75 |
| A1 | New Residential Area | 59 | 77 | 97 |
| **FCC** | | | | |
| RA | New Residential Area | 38 | 52 | 67 |
| RS | Existing Residential Area | 35 | 50 | 75 |
| **SDCC** | | | | |
| A | Existing Residential Area | 35 | 50 | 75 |
| A1 | New Residential Area | 40 | 48 | 58 |

# Appendix 3
## Density Scenario Summary Calculations

| | | | | | | | Average Household Size | | | | | Average Household Size | | | | | Average Household Size | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 2011 | 2016 | 2018 | | | 2011 | 2016 | 2018 | | | 2011 | 2016 | 2018 |
| | | | | | | | Low Density | | | | | Medium Density | | | | | High Density | | |
| Settlement | Population in 2011 (Census) | Population in 2018 (Projected) | Minimum Housing requirement over projected period 2014-2018 | Area of zoned land suitable for residential development (ha) | Average Zoning Density (uph) (Low) | Total Units (Low) | 2011 Persons Accommodated | 2016 Persons Accommodated | 2018 Persons Accommodated | Average Zoning Density (uph) (Medium) | Total Units (Medium) | 2011 Persons Accommodated | 2016 Persons Accommodated | 2018 Persons Accommodated | Average Zoning Density (uph) (High) | Total Units (High) | 2011 Persons Accommodated | 2016 Persons Accommodated | 2018 Persons Accommodated |
| DCS Dublin City | 527,612 | 535,318 | 13,751 | 313.11 | 35 | 26,673 | 60,468 | 60,281 | 58,147 | 60 | 35,583 | 80,666 | 80,416 | 77,570 | 90 | 44,976 | 101,962 | 101,647 | 98,049 |
| DCS Fingal | 130,436 | 141,316 | 5,295 | 415.65 | 35 | 17,499 | 45,935 | 45,148 | 43,631 | 40 | 24,165 | 63,433 | 62,345 | 60,251 | 50 | 32,433 | 85,137 | 83,677 | 80,866 |
| DCS Dun Laoghaire Rathdown | 201,074 | 201,996 | 3,299 | 301.86 | 35 | 14,744 | 36,271 | 35,682 | 34,453 | 40 | 19,757 | 48,603 | 47,813 | 46,166 | 60 | 26,507 | 65,207 | 64,146 | 61,937 |
| DCS South Dublin | 251,505 | 265,828 | 8,515 | 449.99 | 35 | 17,977 | 49,166 | 47,638 | 46,020 | 40 | 22,997 | 62,897 | 60,942 | 58,873 | 50 | 30,434 | 83,236 | 80,649 | 77,910 |
| Newcastle | 2,659 | 3,010 | 118 | 29.91 | 20 | 654 | 1,788 | 1,732 | 1,673 | 25 | 817 | 2,235 | 2,165 | 2,092 | 35 | 1,144 | 3,128 | 3,031 | 2,928 |
| Rathcoole | 3,421 | 3,642 | 133 | 33.90 | 30 | 1,003 | 2,743 | 2,658 | 2,567 | 35 | 1,170 | 3,200 | 3,101 | 2,995 | 50 | 1,672 | 4,572 | 4,430 | 4,279 |
| Saggart | 2,144 | 2,527 | 0 | 39.41 | 40 | 1,577 | 4,312 | 4,178 | 4,036 | 45 | 1,774 | 4,851 | 4,700 | 4,541 | 50 | 1,971 | 5,390 | 5,222 | 5,045 |
| Balbriggan | 19,960 | 22,047 | 925 | 112.59 | 30 | 3,378 | 10,604 | 10,422 | 10,072 | 35 | 3,941 | 12,371 | 12,159 | 11,751 | 50 | 5,629 | 17,673 | 17,370 | 16,787 |
| Balrothery | 1,866 | 2,076 | 85 | 6.25 | 35 | 219 | 574 | 564 | 545 | 50 | 312 | 820 | 806 | 779 | 75 | 468 | 1,230 | 1,208 | 1,168 |
| Donabate | 6,778 | 7,378 | 265 | 145.53 | 37 | 5,348 | 14,039 | 13,798 | 13,335 | 40 | 5,871 | 15,411 | 15,147 | 14,638 | 45 | 6,620 | 17,379 | 17,081 | 16,507 |
| Kinsealy-Drinan | 5,814 | 6,676 | 360 | 6.78 | 35 | 237 | 623 | 612 | 592 | 43 | 292 | 765 | 752 | 727 | 50 | 339 | 890 | 875 | 845 |
| Lusk | 7,022 | 8,022 | 374 | 38.75 | 33 | 1,276 | 3,350 | 3,292 | 3,182 | 48 | 1,857 | 4,875 | 4,792 | 4,631 | 72 | 2,778 | 7,292 | 7,167 | 6,926 |
| Malahide | 15,846 | 16,100 | 163 | 57.83 | 20 | 974 | 2,557 | 2,513 | 2,429 | 30 | 1,302 | 3,417 | 3,359 | 3,246 | 40 | 1,839 | 4,828 | 4,745 | 4,586 |
| Portmarnock | 9,285 | 9,517 | 236 | 50.43 | 44 | 2,210 | 5,800 | 5,701 | 5,510 | 52 | 2,613 | 6,858 | 6,741 | 6,514 | 61 | 3,094 | 8,121 | 7,982 | 7,714 |
| Portrane | 1,372 | 1,338 | 17 | 6.72 | 35 | 235 | 618 | 607 | 587 | 50 | 370 | 883 | 955 | 859 | 75 | 555 | 1,324 | 1,301 | 1,257 |
| Rush | 9,231 | 9,813 | 275 | 51.02 | 37 | 1,888 | 4,956 | 4,871 | 4,707 | 50 | 2,551 | 6,697 | 6,582 | 6,361 | 75 | 3,827 | 10,045 | 9,873 | 9,542 |
| Skerries | 9,671 | 9,952 | 174 | 27.55 | 37 | 1,016 | 2,668 | 2,622 | 2,534 | 48 | 1,312 | 3,445 | 3,386 | 3,272 | 63 | 1,741 | 4,570 | 4,491 | 4,340 |
| Swords | 36,924 | 39,904 | 1,448 | 145.58 | 39 | 5,669 | 14,881 | 14,626 | 14,135 | 53 | 7,752 | 20,350 | 20,001 | 19,329 | 76 | 11,103 | 29,146 | 28,646 | 27,684 |
| | 1,242,620 | 1,286,462 | 35,433 | 2,233 | 34 | 102,576 | 261,351 | 256,945 | 248,154 | 44 | 134,436 | 341,777 | 336,163 | 324,595 | 59 | 177,131 | 451,129 | 443,543 | 428,372 |

| | | | | | | | Household Composition | | | | | Household Composition | | | | | Household Composition | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 2012 | 2016 | 2018 | | | 2012 | 2016 | 2018 | | | 2012 | 2016 | 2018 |
| | | | | | | | Low Density | | | | | Medium Density | | | | | High Density | | |
| Settlement | Population in 2011 (Census) | Population in 2018 (Projected) | Minimum Housing requirement over projected period 2014-2018 | Area of zoned land suitable for residential development (ha) | Average Zoning Density (uph) (Low) | Total Units (Low) | 2012 Persons Accommodated | 2016 Persons Accommodated | 2018 Persons Accommodated | Average Zoning Density (uph) (Medium) | Total Units (Medium) | 2012 Persons Accommodated | 2016 Persons Accommodated | 2018 Persons Accommodated | Average Zoning Density (uph) (High) | Total Units (High) | 2012 Persons Accommodated | 2016 Persons Accommodated | 2018 Persons Accommodated |
| DCS Dublin City | 527,612 | 535,318 | 13,751 | 313.12 | 35 | 26,673 | 69,438 | 68,353 | 67,817 | 60 | 35,583 | 92,632 | 91,184 | 90,469 | 90 | 44,976 | 117,087 | 115,257 | 114,353 |
| DCS Fingal | 130,436 | 141,316 | 5,295 | 415.63 | 35 | 17,499 | 45,555 | 44,843 | 44,491 | 40 | 24,165 | 62,909 | 61,925 | 61,439 | 50 | 32,433 | 84,433 | 83,113 | 82,461 |
| DCS Dun Laoghaire Rathdown | 201,074 | 201,996 | 3,299 | 405.09 | 35 | 14,744 | 38,384 | 37,784 | 37,488 | 40 | 19,757 | 51,434 | 50,630 | 50,233 | 60 | 26,507 | 69,005 | 67,926 | 67,393 |
| DCS South Dublin | 251,505 | 265,828 | 8,515 | 346.77 | 35 | 17,977 | 46,798 | 46,067 | 45,705 | 40 | 22,997 | 59,868 | 58,932 | 58,470 | 50 | 30,434 | 79,228 | 77,989 | 77,378 |
| Newcastle | 2,659 | 3,010 | 118 | 29.91 | 20 | 654 | 1,702 | 1,675 | 1,662 | 25 | 817 | 2,127 | 2,094 | 2,077 | 35 | 1,144 | 2,978 | 2,931 | 2,908 |
| Rathcoole | 3,421 | 3,642 | 133 | 33.90 | 30 | 1,003 | 2,611 | 2,570 | 2,550 | 35 | 1,170 | 3,046 | 2,998 | 2,975 | 50 | 1,672 | 4,352 | 4,283 | 4,250 |
| Saggart | 2,144 | 2,527 | 0 | 39.41 | 40 | 1,577 | 4,104 | 4,040 | 4,008 | 45 | 1,774 | 4,008 | 4,545 | 4,510 | 50 | 1,971 | 5,130 | 5,050 | 5,011 |
| Balbriggan Legal Town and its Environs | 19,960 | 22,047 | 925 | 112.59 | 30 | 3,378 | 10,516 | 10,352 | 10,271 | 35 | 3,941 | 12,269 | 12,077 | 11,982 | 50 | 5,629 | 17,527 | 17,253 | 17,118 |
| Balrothery | 1,866 | 2,076 | 85 | 6.25 | 35 | 219 | 569 | 560 | 556 | 50 | 312 | 813 | 800 | 794 | 75 | 468 | 1,219 | 1,200 | 1,191 |
| Donabate | 6,778 | 7,378 | 265 | 145.53 | 37 | 5,348 | 13,923 | 13,705 | 13,598 | 40 | 5,871 | 15,284 | 15,045 | 14,927 | 45 | 6,620 | 17,235 | 16,966 | 16,833 |
| Kinsealy-Drinan | 5,814 | 6,676 | 360 | 6.78 | 35 | 237 | 618 | 608 | 603 | 43 | 292 | 759 | 747 | 741 | 50 | 339 | 883 | 869 | 862 |
| Lusk | 7,022 | 8,022 | 374 | 38.75 | 33 | 1,276 | 3,322 | 3,270 | 3,244 | 48 | 1,857 | 4,835 | 4,760 | 4,722 | 72 | 2,778 | 7,232 | 7,119 | 7,063 |
| Malahide | 15,846 | 16,100 | 163 | 57.83 | 20 | 974 | 2,536 | 2,496 | 2,477 | 30 | 1,302 | 3,389 | 3,336 | 3,310 | 40 | 1,839 | 4,788 | 4,713 | 4,676 |
| Portmarnock | 9,285 | 9,517 | 236 | 50.43 | 44 | 2,210 | 5,753 | 5,663 | 5,618 | 52 | 2,613 | 6,802 | 6,695 | 6,643 | 61 | 3,094 | 8,054 | 7,928 | 7,866 |
| Portrane | 1,372 | 1,338 | 17 | 6.72 | 35 | 235 | 613 | 603 | 598 | 50 | 370 | 964 | 949 | 941 | 75 | 504 | 1,446 | 1,423 | 1,412 |
| Rush | 9,231 | 9,813 | 275 | 51.02 | 37 | 1,888 | 4,915 | 4,838 | 4,800 | 50 | 2,551 | 6,642 | 6,538 | 6,486 | 75 | 3,827 | 9,962 | 9,807 | 9,730 |
| Skerries | 9,671 | 9,952 | 174 | 27.55 | 37 | 1,016 | 2,646 | 2,604 | 2,584 | 48 | 1,312 | 3,416 | 3,363 | 3,337 | 63 | 1,741 | 4,532 | 4,461 | 4,426 |
| Swords | 36,924 | 39,904 | 1,448 | 145.58 | 39 | 5,669 | 14,758 | 14,527 | 14,413 | 53 | 7,752 | 20,182 | 19,866 | 19,710 | 76 | 11,103 | 28,905 | 28,453 | 28,230 |
| | 1,242,620 | 1,286,462 | 35,433 | 2,233 | 34 | 102,576 | 268,760 | 264,558 | 262,483 | 44 | 134,436 | 351,379 | 346,485 | 343,767 | 59 | 177,080 | 463,996 | 456,742 | 453,160 |

### Legend

Average Household Size

| | 2011 | 2016 | 2018 |
|---|---|---|---|
| DCC | 2.27 | 2.26 | 2.18 |
| FCC | 2.63 | 2.58 | 2.49 |
| DLRCC | 2.46 | 2.42 | 2.34 |
| SDCC | 2.74 | 2.65 | 2.56 |

Household Composition

| | 1 Bed | 2 Bed | 3 Bed | 4 Bed | 5+ Bed |
|---|---|---|---|---|---|
| 2012 % Split | 24.18% | 30.62% | 18.02% | 15.05% | 12.13% |
| 2018 % Split | 24.90% | 31.85% | 18.05% | 14.50% | 10.70% |
| 2016 % Split | 24.67% | 31.45% | 18.04% | 14.68% | 11.17% |

Average Densities Per Local Authority Area

| | |
|---|---|
| DCC | 35 to 95 UPH |
| FCC | 35 to50 UPH |
| DLRCC | 35 to 59 UPH |
| SDCC | 35 to 50 UPH |

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