

Appendix A – Figures and Calculations

This document forms part of the Dunlavin Town Plan 2014 - 2020. It provides the background calculations for the zoning provisions of the plan.

1. Residential zoning

As provided in the CDP 2010-2016, the population target for Dunlavin is 2,000 in 2016 and 2,500 in 2022. This plan shall provide enough zoned housing land to meet residential needs up to 2022.

In order to determine the how much land will be needed to ensure enough houses can be built to allow for growth up to 2,500 persons, a number of steps are required:

Step 1: Determine the number of housing units required to accommodate population of 2,500 with reference to future household size. The RPGs estimate average household size in the region will fall to 2.56 in 2016 and 2.3 in 2022.

Step 2: Determine how many additional houses are required over and above the minimum required to accommodate 2,500 people. This is called the 'excess factor'. The excess factor describes the fact that demand for housing will exceed actual household formation due to:

- Some of the additional units being required to replace obsolete housing;
- Some units being vacant at any one time due to market frictional factors;
- Some units being second homes or pieds à terre.

This essentially means that not all new houses in the town will result in the formation of a new "household" as (a) the new occupants may have previously resided in the town, in now obsolete housing (b) the house may be vacant or in use as a holiday home. The RPG estimate that the 'excess factor' in 2022 with be 6.5%.

Step 3: Take the existing number of housing units in the town from the required number and zone adequate land to accommodate this number of houses.

Outcome:

YEAR	EXISTING / TARGET POPULATION	HOUSEHOLD SIZE	UNITS	ADD 6.5%	TOTAL ADDITIONAL UNITS REQUIRED FROM 2011
2011	793		313 ¹		
2016	2000	2.56	781.25	836	523
2022	2500	2.3	1086.96	1162	849

Given the restricted availability of substantial Town Centre sites it is assumed that the vast majority of new residential development in Dunlavin will occur on both edge of centre and new greenfield sites. Lands have been selected for new residential development on the basis of meeting the requirements of the vision and overall development strategy set out in Section 1 of this plan; in particular:

- Lands closest to the existing town centre not required for town centre expansion
- Lands/Infill Sites capable of providing greater connectivity between the existing town centre and existing residential development
- Lands that facilitate accessibility to existing/planned community facilities have been designated for new residential development, where suitable.

Densities on these lands shall range from between 15/ha and 20/ha, having regard to proximity to the centre and fit with character of any area.

¹ This is the total number of housing units, occupied and vacant, in Dunlavin on Census day 2011

Proposed residential zoning:

Location/Description	Zoning	Potential No. of units
Dunlavin Upper and Lower	R20	234
Dunlavin Lower	R15	34
Milltown Road	R20	56
Sparrow Road – SLO 1	R20	50
Action Area 2	R20	115
Action Area 2	R15	24
Action Area 3	R20	85
East of R756 north of AA2	R15	15
Lands at Pound Road	R20	23
Existing soccer field at Dunlavin Upper	R20	23
Lands at Church Road (SLO1)	R20	99
Lands at Chapel View	R20	24
Town Centre/infill lands	TC/RE	67
Total		849 Units

2. Employment zoning

As provided in the CDP 2010-2016, the overriding objective with respect to employment is to increase the 'jobs ratio' in the County and in each town, that is, the number of jobs in any given area relative to the number of people in the labour force in that same area.

In order to determine the how much land needs to be zoned for employment purposes, a number of steps are required:

Step 1: Determine the desired number of jobs in the plan area in 2022, given the planned population and the jobs ratio target.

Step 2: Using various assumptions, try to determine what sectors these future jobs might be in, having regard to both existing employment patterns but also possible future growth areas.

Step 3: Zone for employment development purposes, based on the types of employment types predicted.

Outcome:

The existing 'jobs ratio' in Dunlavin is 0.51. It is an objective to increase the jobs ratio in the County to 0.75 by 2022. Clearly not all towns and areas will be able to reach this level – it depends on each area's starting point and the function of each area in the County 'Core Strategy'. In the case of Dunlavin being a 'Level 6' settlement, it is considered appropriate to aim to increase the 'jobs ratio' by 25%.

	2011			2022		
	Population	Jobs	Jobs ratio	Population	Jobs	Jobs ratio
Dunlavin	793	240	0.51	2,500	949	0.64

A detailed analysis of existing employment in Dunlavin was carried out using POWSCAR² Employment Data from the 2011 Census and 'on the ground analysis' of existing employers within the plan area.

² 'Place of Work and School Census Anonymised Records'

Industry Category	Jobs	Jobs % Share
Not stated	2	0.85%
Agriculture, forestry and fishing	1	0.4%
Manufacturing industries, mining, quarrying and turf production, electricity, gas and water supply	48	20%
Construction	12	5%
Commerce	52	22%
Transport, storage and communications	22	9%
Public administration and defence	9	3.75%
Education, health and social work	84	35%
Other	10	4%
Total Employment	240	100%

The main employment sectors in Dunlavin in 2011 were manufacturing (20%), general commerce (22%) and education, health and social work (35%). The majority of those employed in manufacturing are located at the Dublin Products Ltd plant while those in the education, health and social work sectors are, in main, employed in the three schools.

It is difficult to plan for growth in the education, health and social work sectors, as growth in these areas will depend mostly on government policy and public finances. However, the plan does make provision for zoned land around the existing schools where feasible to allow for future growth. With respect to the two other main employment sectors (manufacturing and commerce), the plan will focus on growth in these areas. In particular, the plan will specifically promote the development of new businesses in the existing town centre and the conversion of existing non-commercial buildings into commercial use. Typical businesses that may locate in such areas would be shops, services such as hairdressers and cafes, and professional services such as banks, estate agents, solicitors, accountants etc. Land is required to be zoned for new manufacturing principally and for other employment types that may require greenfield sites or purpose build structures separate from the town centre.

Of the 709 jobs to be created the following assumptions are therefore made:

Jobs Percentage	Location/Zoning	Additional Jobs
20%	TC	142
10%	CE	71
70%	New employment lands	496
Total		709

Based on the above it was identified that the plan area would require the provision of suitable lands to cater for 496 new jobs in varying sectors. Based on an analysis of the varying sectors and in order to provide for a range of varying employment types, sizes and uses it was considered appropriate that 70% of new employment provision would fall within the 'manufacturing / industry' sector while the remaining 30% would fall within the 'commerce' sector.

JOB CATEGORY	JOBS REQUIRED	SQM/EMPLOYEE	TOTAL FLOOR AREA	OVERALL SITE AREA REQUIRED ³	SITE AREA (HA)
Commerce	Total 149	25sqm	3,725sqm	9,312.5sqm	0.93
Industry	Total 347	75sqm	26,025sqm	65,062.5sqm	6.506
				Total	7.435
Adding 25% headroom					9.25ha

Headroom is normally provided so as to (a) allow for greater location choice and deal with any land supply inflexibility which may arise and (b) to take account of the fact that employment land may not be developed at the densities assumed. Low 'headroom' in employment land zoning has been applied in the case of Dunlavin ('headroom' in the range 50%-100% is often applied), in the main because the existing zoned employment land is in Local Authority ownership and will be made available to purchase during the

³ Assuming plot ratio of 0.4

lifetime of the plan and therefore no land supply inflexibility is expected to arise. Further, it is not desired to zone vast swathes of greenfield land around the town periphery for employment use, when clearly in the past, there has been little demand for employment land in this area. This will however be monitored over the course of the plan.

This plan provides 9.4ha of employment zoned land in Dunlavin Lower, on the Milltown Road.

3. Community zoning

Dunlavin has the following community and social infrastructure:

Use Group	Specific use	Location	Area (Ha)
Education	Primary Education	J Swift National School	0.5
Education	Primary Education	Adjoining Scoil Nicolas Naofa	1.438
	Secondary Education	St. Kevin's Community College	3.2
Ecclesiastical	Church	Stephen Street	0.5
	Church	Sparrow Road	0.75
Community	Community Building	Imaal Hall	0.05
Open space	Sports use	Dunlavin Soccer Club	1.15
		Dunlavin GAA	4.7
	Parks	Market Square (OS)	0.4
		Fair Green	0.48
		Cow Green	0.12

In accordance with the Wicklow County Council 'play policy', 2.4ha of open space shall be provided per 1,000 population, divided as follows:

- 1.6ha of outdoor sport areas
- 0.2ha of equipped play spaces
- 0.6ha of casual play areas

In Dunlavin, this will require 5.76ha divided as follows:

- 3.84ha of outdoor sport areas
- 0.48ha of equipped play spaces
- 1.44ha of casual play areas

With respect to education lands, additional lands have been zoned between and to the rear of Scoil Nicolas Naofa and St. Kevin's Community College, following consultation with the Department of Education.

Proposed Community Zoning:

Use Group	Specific use	Zoning	Location	Area
Education	Primary Education	CE	Adjoining Scoil Nicolas Naofa	3.2
	Secondary Education	CE	Adjoining St. Kevin's Community College	
Community	Community Building	CE	Action Area 1	0.05
Open space	Active Open Space	AOS	Action Area 2	4
		AOS	SLO2 – Milltown Road	2
	Equipped Play Spaces	CE	Action Area 1	0.65
		CE	Action Area 3	0.4
	Casual Play Space	OS	Former Dunlavin Rail Line	3.3
		OS	OS off Stephen's Street	0.6
		OS	Fair Green	0.5