

Local Authorities Wind Strategy areas and the GIS Model Results

The classifications from the Statutory Local Authority Wind Energy Strategies were received from NIRSA (<http://airo.maynoothuniversity.ie/external-content/nirsa-wind-strategy-mapping>) for the Local Authorities outlined below (data for 18 County Councils in total).

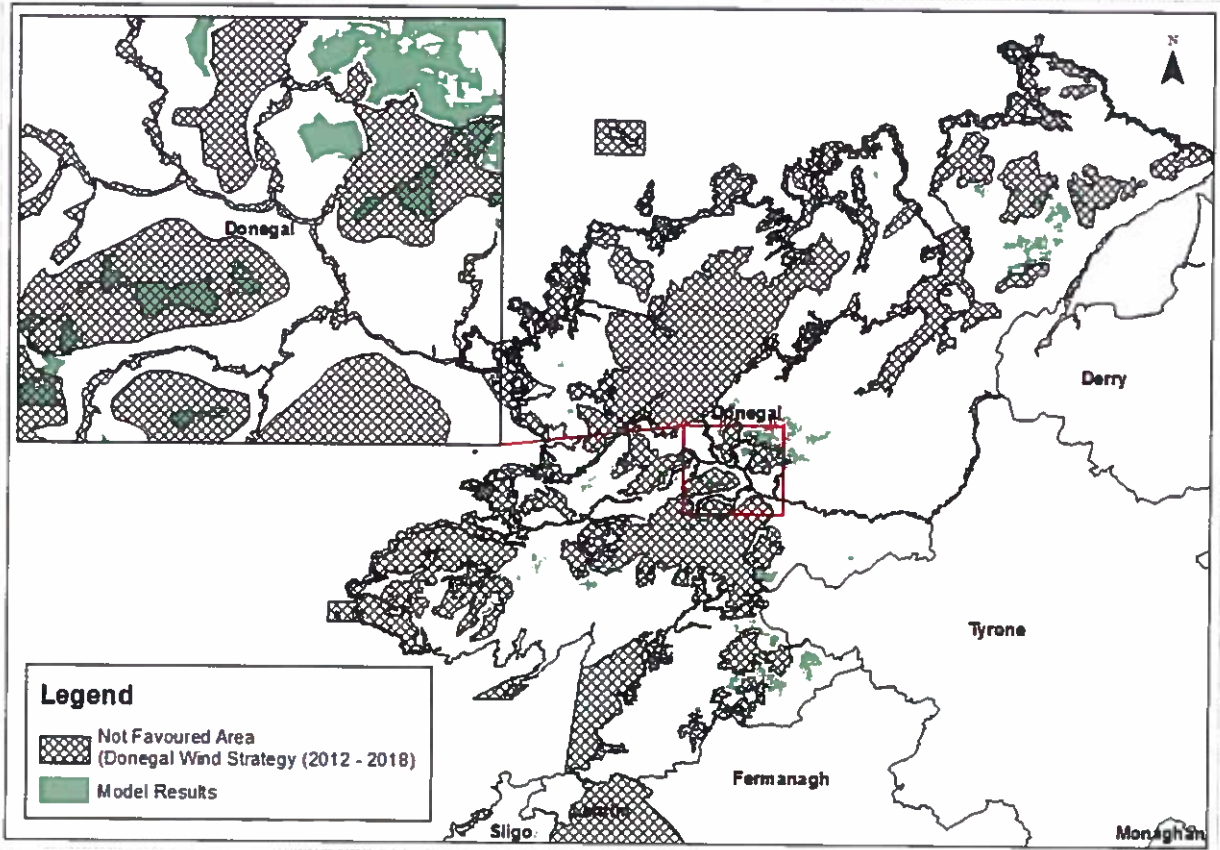
In certain counties (but not all), spatial areas are explicitly mapped where the classification is proactively negative towards wind development. In each of these cases, we have used these 'negative' areas as exclusion zones.

It should be noted that counties where datasets were not received could also have exclusionary areas.

LA Wind Strategy	Area Classes
Carlow_WindStrategy_2009_15	Preferred Location Open for Consideration
Clare_WindStrategy_2011_17	Acceptable in Principle Not Normally Permissible Strategic Areas
DLR_WindStrategy_2010_16	Area of Potential
Donegal_WindStrategy_2012_18	Not Favoured Area Open for Consideration
Fingal_WindStrategy	Accepted on Principle Not Acceptable Open to Consideration
GalwayCounty_WindStrategy_2011_16	Acceptable in Principle Open to Consideration Not Normally Permissible Strategic Areas
Kerry_WindStrategy_2009_15	Open to Consideration
Kilkenny_WindStrategy_2008_14	Acceptable in Principle Open For Consideration Not Normally Permissible
Laois_WindStrategy_2012_18	Areas Not Open for Consideration Areas Open for Consideration Preferred Areas
Leitrim_WindStrategy_2009_15	High Capacity Medium Capacity Low Capacity
Limerick_WindStrategy_2010_16	Areas Unsuitable Preferred Areas Areas Open for Consideration
Longford_WindStrategy_2009_15	Preferable Locations Non Preferable Locations

	Town Buffer / Not Permissible
Mayo_WindStrategy_2008_14	Priority Areas Open to Consideration
SouthTipp_WindStrategy_2019_15	Area open for Consideration Preferred Area Areas Unsuitable
Waterford_WindStrategy_2010_17	No Go Open to Consideration Preferred Strategic
Westmeath_WindStrategy_2014_20Draft	Low Capacity Medium Capacity No Capacity
Wexford_WindStrategy_2013_19	Acceptable in Principle Open for Consideration
Wicklow_wind_Strategy14	Less Favoured Most Favoured Not Favoured

The following map illustrates the model results and the Donegal Wind Strategy areas designated as "Not favoured Areas".



RPS REPORT ITERATION 4-12TH JUNE 2015
(LA WIND STRATEGIES AND CAPACITIES)

Table 3 - Details of the land cover classes (Memorandum dated 29/04/2015) and the model calculation

Absolute Noise Limit 45 dB

Location	Spatial extent (scale)		Height		Matching Minimum Wind Speed at Tip Height (m/s)	Setback from sensitive properties (residences, schools)	Area available (km ²)	Remaining Area (km ²) following application of 40dB limit	Remaining Area (km ²) following application of 45dB limit and LA Strategy "NO GO" zones and 100m buffer from all lakes	Percent of ROI land Area	Capacity available (MW)	Assumed Capacity Factor for Tip Heights	Capacity Output Potential (GWh)
	Existing guidelines	New	Existing guidelines	New									
Mountain Moorland and hills	> 150m	Tend towards large	Existing guidelines Any height	New 150m	7.75	Min 500m, multiplier of 5 (750m max)	437.18	217.35	317.75	0.45%	3,177.50	33.33%	7,885.77
	< 150m	Tend towards small	Medium	125m	8	Min 500m, multiplier of 6 (750m max)	63.49	40.89	50.26	0.07%	502.60	30.00%	1,122.71
Transitional marginal land	Ridges and hilltops preferred	Tend towards small	Medium and short	125m	8	Min 500m, multiplier of 7 (875m max)	0.33	0.15	0.28	0.00%	2.80	30.00%	6.25
	Flat farm land	Tend towards small	Medium	125m	8	Min 500m, multiplier of 7 (875m max)	80.25	0.19	0.95	0.00%	9.50	30.00%	21.22
Flat peat land	Large	50 turbines maximum	Tall	170m	7.75	Min 500m, multiplier of 5 (850m max)	218	102.93	207.10	0.29%	2,071.00	33.33%	5,139.71
	Urban town & villages	Tend towards small	Short	100m	8	Min 1km from town & villages	0	0.00	0.00	0.00%	0.00	30.00%	0.00
Lakeside	Industrial	Tend towards small	Short	100m	8	Min 600m	0	0.00	0.00	0.00%	0.00	30.00%	0.00
	Set back from water	Tend towards small	Tall may be acceptable	100m	8	Min 500m, multiplier of 8 (800m max)	0	0.00	0.00	0.00%	0.00	30.00%	0.00
Coastal	Tend towards small	10	100m	100m	8	Min 500m, multiplier of 8 (800m max)	0	0.00	0.00	0.00%	0.00	30.00%	0.00
							799.25	361.51	576.34	0.00%	5,763.40	30.00%	14,175.66

Republic of Ireland Land Area (km ²)	70,273
Capacity Intensity (MW per km ²)	10
Losses	15%
Hours in the Year	8,760

Previous result: 3,018.90
 Notes: 1. 500m buffer from lakes greater than 5km²
 2. New Annex 1 mapping used.
 3. Tip height buffer from SACs & SPAs
 4. Areas removed within the LA red zones
 5. 100m buffer from all lakes and reservoirs.

NIS REPORT + TERMINION 4 - 11TH JUNE 2015
(LA WIND STRATEGIES AND LAKES)

Table 4 - Details of the land cover classes (Memorandum dated 29/04/2015) and the model calculation (16% of capacity delivered)

Absolute Noise Limit 45 dB

Location	Spatial extent (scale)		Height	Matching Minimum Wind Speed at Tip Height (m/s)	Setback from sensitive properties (residences, schools)	Area available (km ²)	Remaining Area (km ²) following application of 40dB limit	Remaining Area (km ²) following application of 45dB limit and LA Wind Strategy "NO GO" zones and 100m buffer from all lakes	Percent of ROI land Area	Capacity available (MW)	Assumed Capacity Factor for Tip Heights	Capacity Output Potential (GWh)
	Existing Guidelines	New										
Mountain Moorland and hills	> 150m	Tend towards large	Existing guidelines Any height	7.75	Min 500m, multiplier of 5 (750m max)	437.18	217.35	317.75	0.45%	508.40	33.33%	1,261.72
	< 150m	Tend towards small	Medium	8	Min 500m, multiplier of 6 (750m max)	63.49	40.89	50.26	0.07%	80.42	30.00%	179.63
Transitional marginal land	Ridges and hilltops preferred	Tend towards small	Medium and short	8	Min 500m, multiplier of 7 (875m max)	0.33	0.15	0.28	0.00%	0.45	30.00%	1.00
	Flat farm land	Tend towards small	Medium	8	Min 500m, multiplier of 7 (875m max)	80.25	0.19	0.95	0.00%	1.52	30.00%	3.40
Flat peat land	Large	50 turbines maximum	Tall	7.75	Min 500m, multiplier of 5 (850m max)	218	102.93	207.10	0.29%	331.36	33.33%	822.35
Urban/Industrial	Urban town & villages	Tend towards small	Short	8	Min 1km from town & villages	0	0.00	0.00	0.00%	0.00	30.00%	0.00
	Industrial	Tend towards small	Short	8	Min 600m	0	0.00	0.00	0.00%	0.00	30.00%	0.00
Lakeside	Tend towards small	10	100m	8	Min 500m, multiplier of 8 (800m max)	0	0.00	0.00	0.00%	0.00	30.00%	0.00
Coastal	Set back from water	Tend towards small	Tall may be acceptable	8	Min 500m, multiplier of 8 (800m max)	0	0.00	0.00	0.00%	0.00	30.00%	0.00
						799.25	361.51	576.34	0.00%	922.14	30.00%	2,268.11

Republic of Ireland Land Area (km ²)	70,273
Capacity Intensity (MW per km ²)	10
Losses	15%
Hours in the Year	8,760

Previous result: 616.38
 Notes: 1. 500m buffer from lakes greater than 5km².
 2. New Annex 1 mapping used.
 3. Tip height buffer from SACs & SPAs
 4. Areas removed within the LA red zones
 5. 100m buffer from all lakes and reservoirs.

