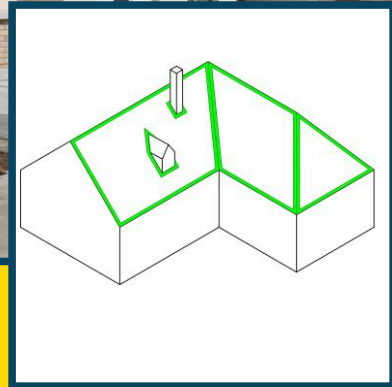
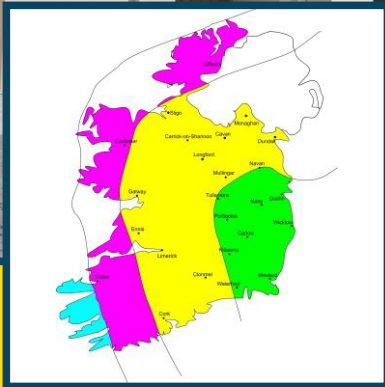




**Condrón Concrete Works**

# CONDRON CONCRETE ROOF TILE FIXING GUIDE (RoI only)



# Introduction

The location of the UK and Ireland on the north west corner of Europe results in some of the highest wind speeds in Europe.

Wind blows most frequently from the south and west due to ocean currents such as the North Atlantic Current and Gulf Stream. The wind at a particular location can be influenced by several factors such as obstruction by buildings or trees, the nature of the terrain and deflection by nearby mountains or hills.

High wind speeds create high wind load forces on buildings and especially on roofs. It is therefore important to minimise the risk of wind load damage by fixing the roof tiles to resist the anticipated wind forces.

## **SR 82: 2017: Slating and Tiling - Code of Practice**

It is important to note that all slated and tiled roofs in the Republic of Ireland must be installed in accordance with SR 82: 2017.

This document provides guidance on the recommendations contained in SR 82 for the fixing of roof tiles and associated fittings. For improved clarity, additional information is given here to determine the appropriate exposure category for any given location.

**Note:** It remains the designer's and contractor's responsibility to ensure that their project is designed and installed in accordance with SR 82: 2017.

# How to determine roof tile fixings

## Roof tiles

Follow the steps below to determine how Condron Concrete roof tiles should be mechanically fixed for any given location and site conditions in the Republic of Ireland:

- 1) Check the location of the site on the wind speed map (Fig. 1) to determine the appropriate wind speed exposure zone
- 2) Refer to Table 1 below to determine the appropriate mechanical fixings for the exposure category
- 3) Refer to Table 2 to check if there are any additional factors which require fixing to the Severe Exposure category
- 4) Twice fix all perimeter tiles. See Fig 2 for an illustration of perimeters

*For the United Kingdom, ie Northern Ireland, Wales, Scotland and England, please contact our office or your local Condron Concrete representative.*

**Table 1: Minimum roof tile fixing requirements for single lap tiles**

Pitch (degrees)	Fixing requirements for single lap tiles
under 25°	a) Perimeters: every tile head nailed and tail clipped Roof area, excluding perimeters: b) Moderate exposure: minimum every tile tail clipped c) Exposed exposure: every tile head nailed* and tail clipped d) Severe exposure: every tile head nailed* and tail clipped
from 25° to 45°	a) Perimeters: every tile head nailed and tail clipped Roof area, excluding perimeters: b) Moderate exposure: minimum every tile head nailed or tail clipped c) Exposed exposure: every tile head nailed* and tail clipped d) Severe exposure: every tile head nailed* and tail clipped
over 45°	a) Perimeters: every tile head nailed and tail clipped Roof area, excluding perimeters: b) All exposure categories: every tile head nailed* and tail clipped

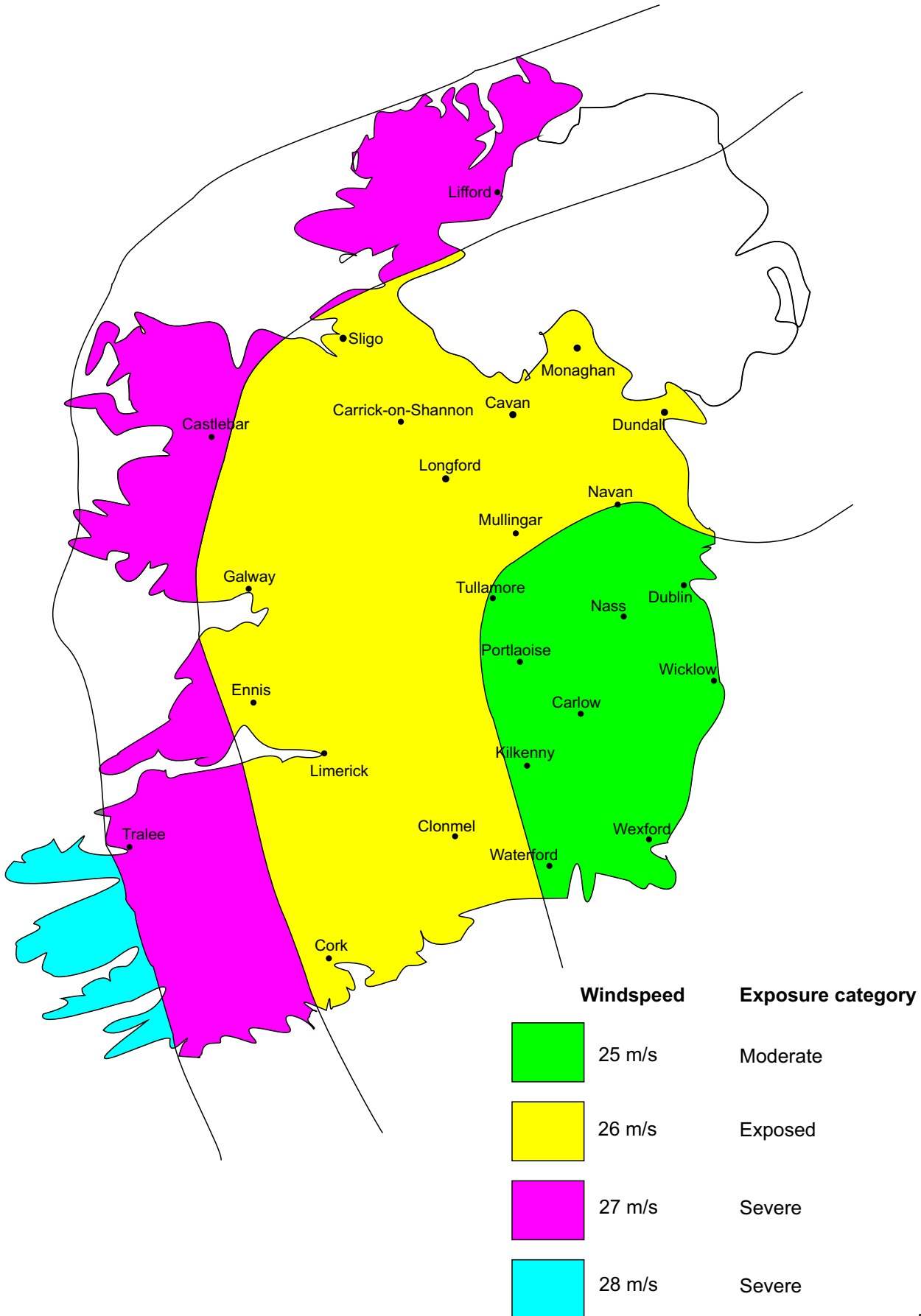
*\*Twice nail Condron Slates, Slates Tiles and Senior Slates*

## Ridge and hip tiles

All ridge and hip tiles must be mechanically fixed. The best way to achieve this is to use a Condron Concrete dry fix ridge or hip system. Alternatively, where ridge and hip tile tiles are mortar bedded, the mortar must be supplemented with suitable nails, screws or clips fixed to the ridge or hip batten. Please contact our office or our local Condron Concrete representative for more details.

# Ireland wind speed map

Fig 1: Wind speed map of Republic of Ireland (from EN 1991-1-4)



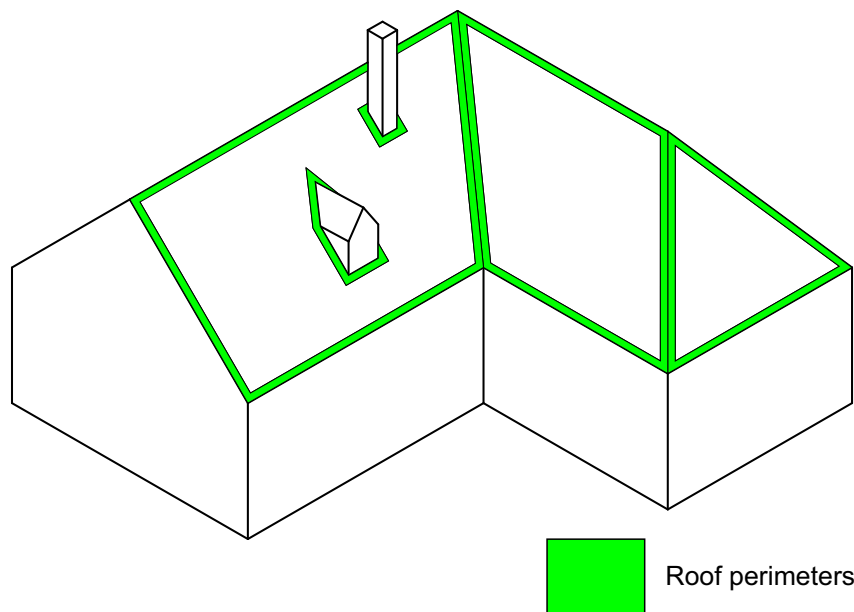
# How to determine roof tile fixings

**Table 2: Severe exposure conditions**

For sites with one or more of the following conditions, tiles must be mechanically fixed in accordance with the 'Severe Exposure' requirements in Table 1.

- a) Sites in areas with wind speeds of 27 m/s and above (see Fig 1: Wind speed map of Republic of Ireland)
- b) The roof of any building which stands above its surroundings
- c) has a ridge height in excess of 12 m above adjoining ground level
- d) any building more than halfway up a hill or escarpment/cliff with more than 5% gradient
- e) any building in a built-up area which is subject to adverse wind effects, such as funnelling
- f) The site altitude is 100 m or greater
- g) The site is within 1 km of the sea or inland water extending more than 1 km
- h) The building has no ceiling
- i) The building roof structure has no underlay, sarking or close boarding
- j) The building is within 6 km of an airport runway touchdown point (see BRE Digest 467)

**Fig 2: Illustration of roof perimeters**





**Condron Concrete Works**

# ROOF YOUR HOUSE WITH CONDRON TILES

Office	+353 57 934 9000 +353 57 932 1220	Contact	<b>John Cantwell</b> - concrete pipes, manholes & accessories, & Twinwall plastic pipes <a href="mailto:john.cantwell@condronconcrete.com">john.cantwell@condronconcrete.com</a>
Email	<a href="mailto:info@condronconcrete.com">info@condronconcrete.com</a>		
Web	<a href="http://www.condronconcrete.ie">www.condronconcrete.ie</a>		
For all enquiries from UK on concrete pipes, manholes & accessories, Twinwall plastic pipes, & roof tiles, please contact the office		Contact	<b>David Dunne</b> - concrete pipes, manholes & accessories, & Twinwall plastic pipes <a href="mailto:David.Dunne@condronconcrete.com">David.Dunne@condronconcrete.com</a>
<b>Technical Staff</b>			
<b>Contact name</b>		<b>Email addresses</b>	
John O'Rourke		<a href="mailto:john.orourke@condronconcrete.com">john.orourke@condronconcrete.com</a>	
Eddie Keenan		<a href="mailto:eddie.keenan@condronconcrete.com">eddie.keenan@condronconcrete.com</a>	
Tim Meehan		<a href="mailto:tim.meehan@condronconcrete.com">tim.meehan@condronconcrete.com</a>	
John Mercer		<a href="mailto:john.mercerconsultant@gmail.com">john.mercerconsultant@gmail.com</a>	

## External Sales

### Sean Tiernan

+353 86 240 6251  
[sean.tiernan@condronconcrete.com](mailto:sean.tiernan@condronconcrete.com)  
Dublin North, Meath, Cavan, Managhan & Louth

### Mark Egan

+353 87 965 6803  
[mark.egan@condronconcrete.com](mailto:mark.egan@condronconcrete.com)  
Carlow, Kildare, South Dublin, Wicklow & Laois

### Robert Burns

+353 87 2443 7264  
[robert.burns@condronconcrete.com](mailto:robert.burns@condronconcrete.com)  
Clare, Limerick, Tipperary & Kilkenny, Cork, Kerry, Waterford & Wexford

### Brendan Reynolds

+353 87 289 6458  
[brendan.reynolds@condronconcrete.com](mailto:brendan.reynolds@condronconcrete.com)  
Galway, Sligo, Leitrim, Longford, Roscommon, Mayo & Donegal

### Derek Tomaselli

+ 44 191 262 1415  
[derek.tomaselli@condronconcrete.com](mailto:derek.tomaselli@condronconcrete.com)  
United Kingdom (UK)

Condron Concrete is continually innovating and improving its products and services. Therefore, we reserve the right to change product specifications without notice. Please contact us for the latest information or visit [www.condronconcrete.ie](http://www.condronconcrete.ie)