

Coastal Flooding In Ireland 2025

Property Growth and Rising Financial Risk



This whitepaper was originally developed by Gamma, now part of KatRisk.

Introduction

Coastal flooding is not just a theoretical climate risk for Ireland, it is a measurable and increasingly costly exposure.

Rising sea levels, more frequent storm surges, and shifting weather patterns are converging to put both residential and commercial properties at risk. Over the last 5 years, approximately **112,000 addresses** have been added to the Eircode address database, and some of these are in areas prone to extreme coastal flood events.

Understanding how much of this new building stock is vulnerable, and what the potential financial implications could be, is vital for insurers, banks, policymakers, and communities alike. As a financial services analyst told journalist Pilita Clark in a recent [Financial Times article](#):



“For years, it was assumed that stranded assets and other transition risks were going to pose the biggest threat, but the scale of extreme weather disasters in the last few years has forced a rethink because it shows that physical risks are intensifying a lot faster than originally expected”

Using advanced technology and the most comprehensive data to date, this analysis by KatRisk provides an **assessment of the growth in Ireland’s property base between August 2020 and August 2025**, the share of those new properties exposed to extreme coastal flood events, and the estimated scale of potential claims in a worst-case scenario.

The Analysis

For the purpose of this analysis, an extreme coastal flooding event has been defined as **1.75 meters above the 100 year return rate flood depth around the Irish coastline**, as published by the [Irish Coastal Protection Strategy Study](#).

Ultimately, **this means adding 1.75m of floodwater on top of the height of a coastal flood that currently has an expected occurrence rate of 1% per year**. It should be noted that climate change is increasing the occurrence rate of extreme events in Ireland, and in future, what are now rare events will become more frequent.



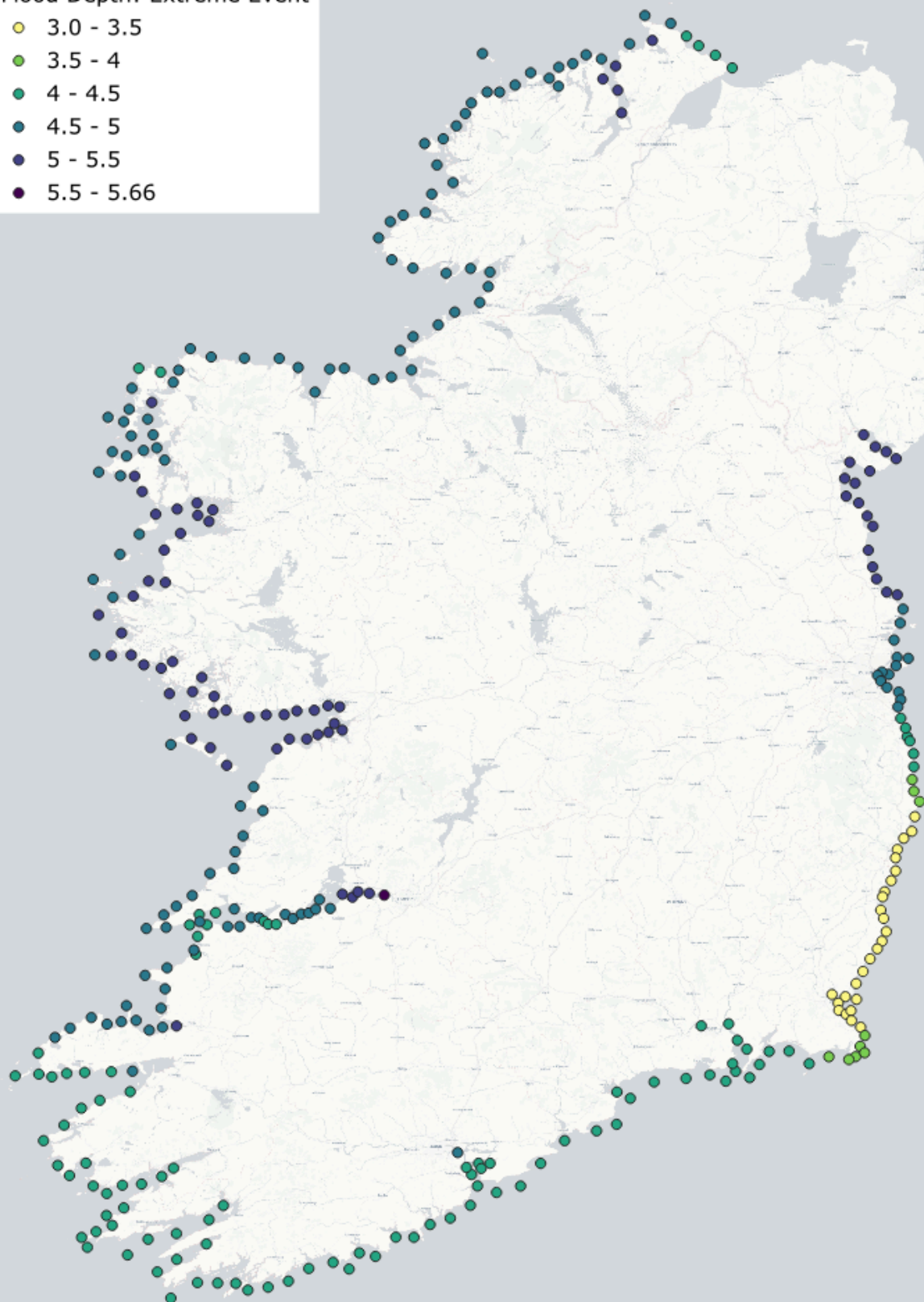
The resulting flood depths vary considerably around the coastline, ranging **from 3m in the South-East to 5.5m in the West and North-East**. This variance is due to a range of factors.

Coastal orientation and shape with respect to wave patterns can result in large rises in bays and estuaries, for example, while coastal areas facing comparatively shorter stretches of open ocean have reduced wave fetch. Isostatic rebound from the last glacial maximum also plays a role, as do local subsurface and surface topography and other factors.

This research uses the same **Bathtub flood model** as our [previous work in this area](#); however, due to changes in the available underlying address data and digital terrain models, **direct comparison between this work and previous work is not possible**. We have extracted compatible data from the [Eircode Address Database](#) (ECAD) in Q2 2020 and Q2 2025 to conduct the analysis of change over time.

Flood Depth: Extreme Event

- 3.0 - 3.5
- 3.5 - 4
- 4 - 4.5
- 4.5 - 5
- 5 - 5.5
- 5.5 - 5.66



Extreme Flood Depths: 1m Sea Level Rise, 75cm extreme Event above 100 year Return Rate, Coastal Flood. Based on ICPSS (2013), [Vousdoukas et al \(2017\)](#)

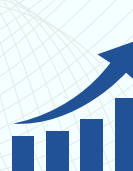
As the risk of coastal flooding increases, are we still building in at risk areas?

KatRisk has conducted an analysis of the Irish building stock, comparing mid-2020 to mid-2025 and assessing **the risk of these properties being affected by an extreme coastal flood event.**

Number of addresses			
Year	Total	At risk	%
2020	2,208,998	99,744	4.52%
2025	2,321,352	104,518	4.50%
Increase	112,354	4,774	4.25%

In the 5 year timeframe, the total number of addresses, as measured by Eircode, has **increased by 4.8%** to 2,321,352. This is an increase of **112,354 addresses**. These addresses are both residential and commercial and are in a mix of building types, some single occupancy, others with multiple occupants. **Of these new addresses, 4,774 (4.25%) are at risk of flooding in an extreme coastal event.** Overall, **4.5% of Irish addresses are at risk of flooding in an extreme coastal event**, so the proportion of addresses at risk has been holding steady over the last 5 years.

Address Growth



+112,354 new addresses added

Between mid-2020 and mid-2025, Ireland's total address base grew by 4.8%, reaching **2.32 million properties**, reflecting continued residential and commercial development.

New Homes in Risk Zones



4,774 new addresses at flood risk

Of the newly added addresses, 4,774 (or 4.25%) are in areas exposed to **extreme coastal flooding**, increasing the **absolute volume of climate risk** in the national building stock.

Relative Exposure



4.5% of Irish addresses are at risk

Despite rapid growth in construction, the **overall share of at-risk properties** has remained stable, moving only slightly from 4.52% to 4.50%.

It should be noted that construction activity in at-risk areas can be deemed appropriate if sufficient protection and mitigation measures are undertaken as part of the [development process](#).



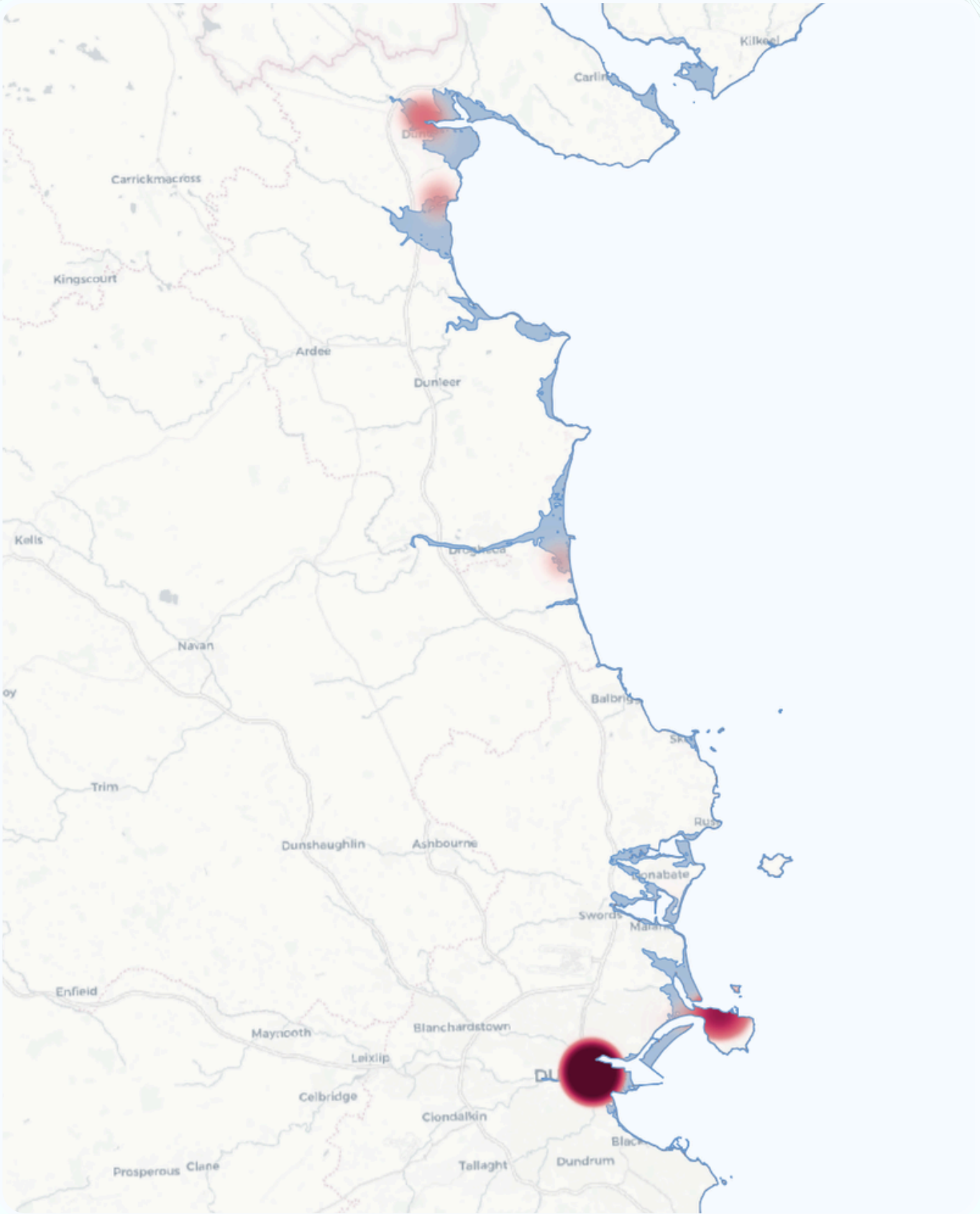
[Coastal Flooding in Ireland from 2020](#)

County Dublin is the most prevalent location of these newly constructed buildings, which are in an at-risk zone. Particularly the Dublin 1, 3 and 13 areas and also along the coastline in the North of the county.

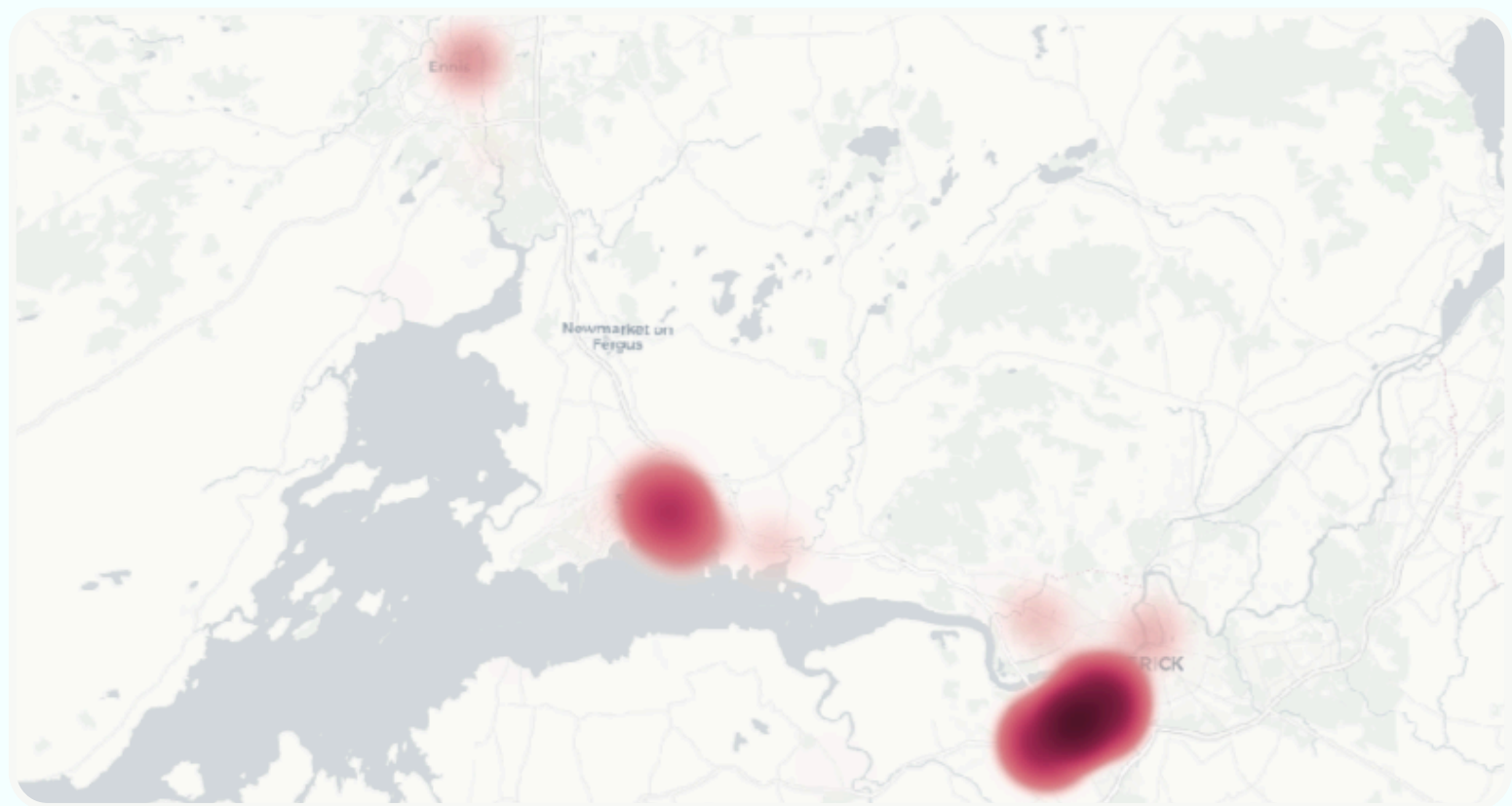
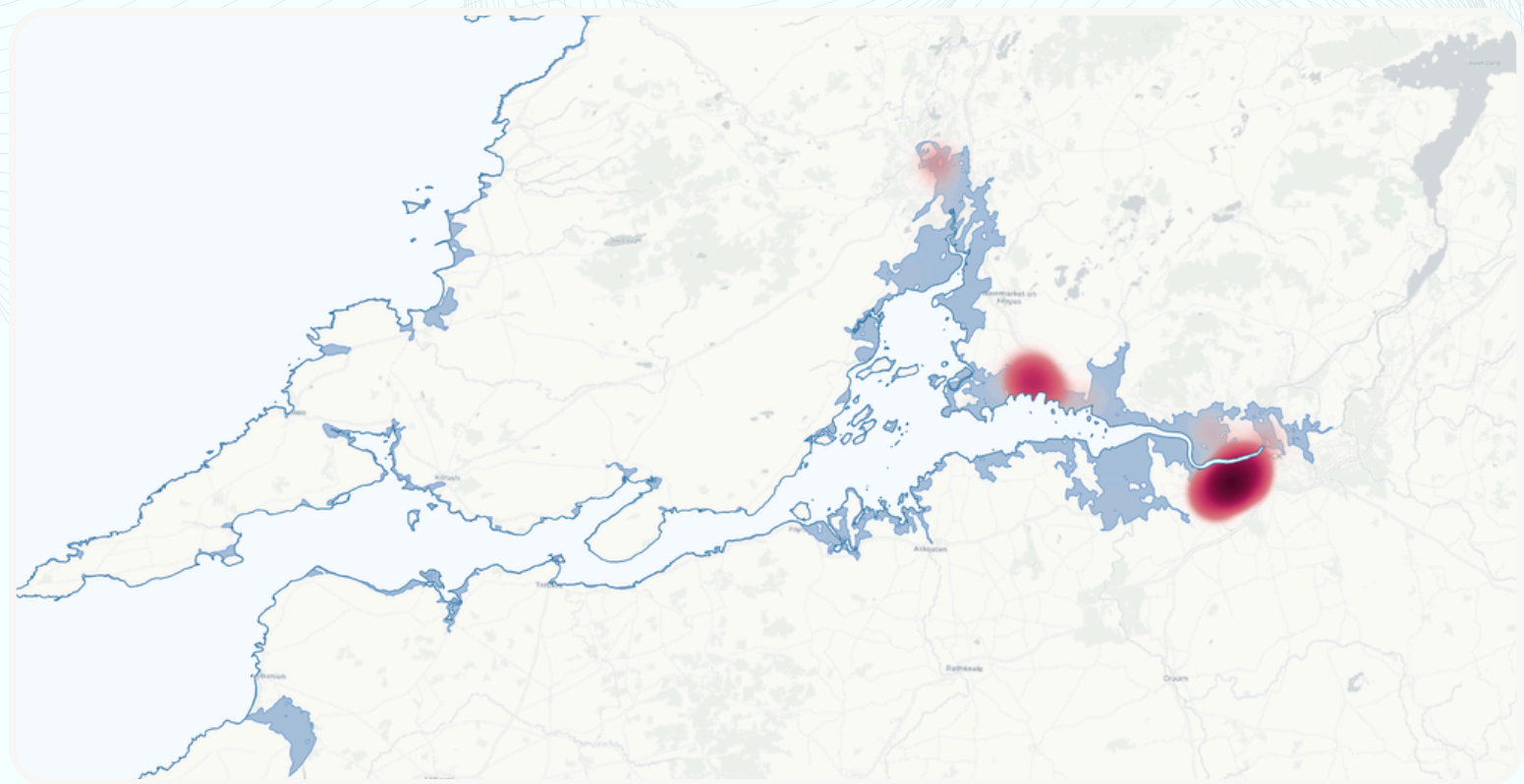


A Heatmap of addresses added to the Eircode Address Database between 2020 and 2025 that are within the risk zone for extreme coastal flood events.
Darker colours mean more addresses added

Dublin and North East Coastline



Other hotspots include the **Shannon Estuary covering Limerick and Shannon**, and also in **Louth, particularly Dundalk**.



Shannon Estuary

Estimating the total potential claims



Estimating the potential cost of this flooding is complicated by the variability in local conditions and the lack of available data on the cost of insurance claims.

However, **Insurance Ireland has published the overall cost of claims of €52m from Storm Babet, which damaged 600 houses and 300 businesses in Midleton in October 2023.**

If we assume that the cost of a commercial property claim is four times that of a residential claim, a figure backed up by 2016 analysis conducted by [The AA of claim data](#), we can estimate **the average cost of a flood claim for residential property at €28,000, rising to €115,000 for commercial properties.** This is broadly in line with our analysis of flood claim costs carried out in 2020, once the impact of inflation in the construction sector over recent years is taken into account.

Applying these figures to buildings with multiple addresses, such as apartments and office buildings, is more complex. An analysis of the Eircode Address Database shows that multi-unit buildings contain an average of almost 6 addresses. **If we assume that half of these, or 3 addresses, are at risk in a multiple occupancy building, then we arrive at an overall estimate of potential claims, if every single address at risk were to be flooded, of €4.5 billion.**

The risk is unevenly distributed. Some counties have more properties at risk than others.

Dublin alone contains a third of the potential claims, driven by the large number of properties along the coastline and also the number of impacted commercial properties, with their higher claim amounts, in the city centre.

County Clare has about 10% of the total potential claim volume, driven by the number of low-lying properties along the Shannon estuary, which could see very high flood depths. Similarly, **Limerick city is also highly exposed**.

County Louth rounds out the top three counties by potential claim volume, driven by very high flood waters in an extreme event.

Wexford and Wicklow, while having large numbers of properties close to the sea, **are less exposed due to the model anticipating lower levels of water in an extreme event**.

County	Total
Dublin	€ 1,569,718,000
Clare	€ 499,930,000
Louth	€ 433,696,000
Cork	€ 398,363,000
Galway	€ 334,804,000
Limerick	€ 313,346,000
Donegal	€ 185,865,000
Waterford	€ 184,360,000
Mayo	€ 144,924,000
Wicklow	€ 136,961,000
Kerry	€ 107,947,000
Wexford	€ 84,263,000
Meath	€ 62,836,000
Sligo	€ 55,310,000
Leitrim	€ 1,612,000
Kilkenny	€ 690,000
Grand total	€ 4,514,625,000

Examining severely impacted residential properties

We can also analyse **the full rebuild cost of single occupancy** residential properties, that is, those properties which are expected to have their own insurance policies as distinct from block insurance for multi-unit residential properties.

There are **72,875 properties** in this category; however, many of these are likely to suffer minor damage from low levels of flooding.

If we restrict the analysis to those single occupancy residential buildings where the depth of the floodwater from an extreme coastal event has been modelled at over 2.5m, where extensive renovations and possibly the full rebuilding of the property are likely, then there is a total of 6,407 buildings highly exposed. **The full rebuild value for these properties is almost €2 billion. Almost half of this is concentrated in Dublin, with Clare also particularly highly impacted.**

County	Impacted Residential	Rebuild Cost
Dublin	3,332	€ 1,097,024,286
Clare	2,480	€ 837,047,327
Limerick	352	€ 150,395,882
Louth	91	€ 37,844,584
Galway	31	€ 16,979,702
Donegal	27	€ 16,125,130
Wexford	34	€ 15,200,211
Cork	17	€ 9,545,307
Mayo	14	€ 7,609,132
Waterford	23	€ 6,246,237
Kerry	6	€ 5,177,190
Total	6,407	€ 2,199,194,988

Conclusion

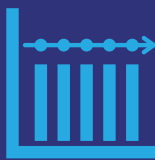
This analysis shows that while **Ireland's building stock has grown by 4.8% between mid-2020 and mid-2025**, the proportion of properties exposed to **extreme coastal flooding has remained almost unchanged, shifting only marginally from 4.52% to 4.50%.**

In other words, thousands of new addresses have been added in flood-prone areas, and the absolute volume of risk has continued to rise even if the relative percentage has held steady.



+4.8% growth in the national building stock between mid-2020 and mid-2025.

The proportion of **properties at risk** from extreme coastal flooding remained steady (from **4.52% to 4.50%**)



While appropriate mitigation can justify construction in flood-prone areas, the concentration of high-value claims, particularly in **Dublin and along the Shannon Estuary, illustrates the scale of the challenge ahead.** Ultimately, the insurance and banking sectors have a central role not only in absorbing financial shocks but also in guiding adaptation strategies that will determine how well Ireland withstands the next generation of coastal flood events.



However, as Günther Thallinger management board member at Allianz PLC, has warned, **global temperatures are fast approaching levels where insurers would no longer be able to operate.** This could create “a systemic risk that threatens the very foundation of the financial sector ... If insurance is no longer available, other financial services become unavailable too”.

Unlike the financial crisis of 2008, **the risk to insurers and banks is not financial; it is physical. Climate risks are not cyclical, as financial markets tend to be, but are all moving in one direction**, as noted by Met Éireann, announcing that 2025 was provisionally Ireland's hottest summer since records began.

