ClimateIndex™

Facing the Flood - Understanding How Climate Risks Could Impact Your Home Purchase

Groundsure
LOCATION INTELLIGENCE

Introduction

"If we're to learn a lesson from the catastrophic flooding that we are now seeing happen in Australia every few years, it's that we are severely underprepared. We urgently need to address the root cause of the heightened storm threat – climate change."

Elly Bird, Councillor, Lismore City Council

Australia and the climate crisis

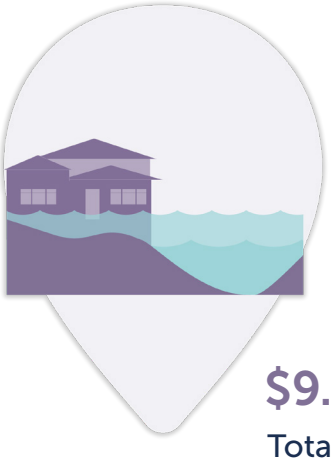
Our country is on the frontline of climate change - there are few countries in the world that are as severely affected by extreme weather events as ours. And this is having real and lasting impacts on our communities across the country, and especially in New South Wales.

We are locked into a loop of flooding and wet weather that increases vegetation, which then provides fuel for aggressive bushfires as we cycle through the seasons each year. This leaves more and more properties vulnerable and ill-prepared for climate risks.

This guide focuses on flood risk - one of the main physical climate risks - how it is determined, what you need to ask of your conveyancer about identifying the risk and what you need to consider in order to live with the risks into the future.

Climate change is real and it's happening - it's time to understand and to adapt.

Flooding by Numbers



$9.6 Billion

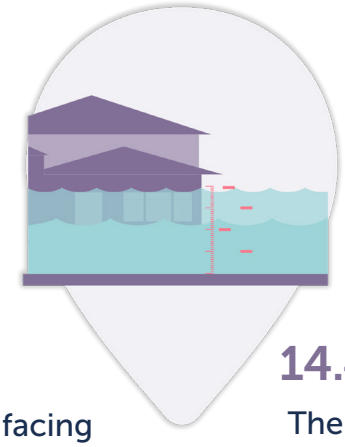
Total estimated cost of East Coast flooding 2022

240,000

The number of flood insurance claims submitted between January and October 2022

$1.6 Million

The number of households facing insurance affordability stress.



14.4 metres

The height of the flood waters in Lismore CBD, NSW

The scale of flooding risk

Flooding from rivers, estuaries and sea level rise poses the single greatest physical climate risk to properties in Australia. This is being driven by ever more frequent weather systems dumping record breaking rainfall amounts, especially across NSW and Queensland.

In 2022, Sydney received a staggering 8 months of rainfall in just 4 days, resulting in some 50,000 homes being evacuated. It became the 4th most costly weather event in history with an estimated insurance bill of some $4.3 Billion. By 2050, the average cost to each property in flood prone areas could be as high as $45,000.

This has inevitably meant huge increases in insurance premiums, with many areas close to rivers and coasts now finding effective and affordable cover impossible. This can also have the knock-on effect that securing the mortgage can become a real challenge.

The Impacts of Flood Risk

House Values

Recent research by the University of Technology Sydney (UTS) examined home sales in the Richmond area on the outskirts of Sydney, alongside flood risk information. They found a 10.8% price discount in the AEP 100 flood zone (where there could be a 1 in 100 year flood risk), 4.4% in the AEP 500 flood zone (1 in 500 year risk), and none in the AEP 1000 flood zone (1 in 1000 year risk).

While a discount might seem tempting when you are buying, it is dangerous to think that it could only flood once in 100 years, as has been clearly demonstrated in recent years. Can the discounts really compensate for the financial, physical and emotional impacts of flooding on your family and assets?

Insurance

Climate change is having a major impact on home insurance affordability. According to the Institute of Actuaries Australia (IAAust) in August 2022, the average Australian household spent nearly 1.1 weeks' worth of gross annual income on annual home insurance – about A$1,500.

But this rocketed to 4 weeks worth of gross income for 10% of all households that live in the most vulnerable flood-prone locations. Many residents already have limited savings and are some of the least resistant to future climate change, unable to access insurance and suffering catastrophic additional financial loss without protection.

In the *most recent Government update* in 2024, 15 per cent of households are believed to be experiencing home insurance affordability stress, or about 1.6 million households.

It's also important to check what your insurance policy will cover. If you are planning to buy a home or are revisiting your current home and contents insurance policy, it is worth checking what it provides.

While the majority of home building and contents insurance policies contain some degree of flood cover as a standard inclusion, the East Coast and Northern Rivers Floods of 2022 have redrawn the map and access to insurance cover dramatically. Premiums and excesses have risen in response, while the scope of what can be claimed has been reduced.

The Impacts of Flood Risk *(continued)*

Standard buildings and contents insurance usually covers the costs of repairing the structure and interior of the property. Flood cover does not include external damages to the property — for instance, any damage a flood caused on your driveway, fences, landscaping, might not be eligible for cover unless you negotiate these to be part of the deal with your insurer.

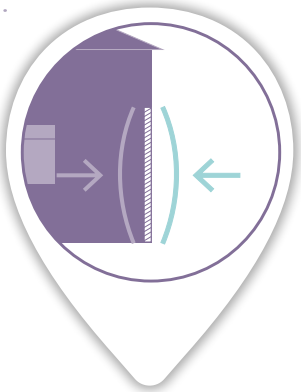
Also, damage caused by heavy rains and storms that preceded a flood might not be included. Some insurers do not include damages caused by floods resulting from storm surges, leaks from underground water, and other "escape of liquid" and water-related events.

Mortgages

In 2023, the Commonwealth Bank estimated 39,000 properties worth $17 billion were at a "severe physical risk" of floods. But while they are exposed to the loss in value of the property that they are lending on, most banks are being pragmatic with existing homeowners. Rather than looking at foreclosures, they are engaging with consumers through their vulnerable customer frameworks.

The main issue is when you first apply for a home loan. Banks are scrutinising the property's flood and wider climate risk exposure in more depth. If insurance can't be obtained or has restricted cover, lenders may offer higher interest rates because of the risk. This could affect whether you can afford the property.

Relocation or Resilience?



The New South Wales state government has implemented a *voluntary buyback scheme* of at-risk houses in flood hit areas. However, these have not been very successful, as property prices in flood-prone regions were already lower, reflecting higher flood risk. This meant that those who sold could not afford to buy houses in less vulnerable areas, which isn't sustainable or resilient for affected communities.

The Impacts of Flood Risk *(continued)*

Mental Health

Last, but perhaps the most significant at a human level, are the longer term psychological and physical impacts to homeowners and the wider community affected by flooding. Aside from the loss of personal belongings and having to live in temporary, often sub-standard and smaller accommodation, it has been the fracturing of community spirit that has taken its greatest toll.

This is best illustrated by the aftermath of perhaps the worst flood event to have affected New South Wales for generations at Lismore during the devastating flooding of 2022.

Lismore's Long Term Trauma

On February 28 2022, the biggest flood in modern Australian history inundated Lismore, and the rest of the Northern Rivers catchment. Over the next two days, about 670 millimetres of rain fell in the region, and the waterways surrounding Lismore rose to a peak of 14.4 metres.

Lismore, in northern NSW, is located on a floodplain at the intersection of the Wilsons River and Leycester Creek found itself in the crosshairs. As the river levels rose, official warnings from the State Emergency Service (SES) and Bureau of Meteorology gave no real hint of what was to come.

"People moved their vehicles to land that had always been above the flood levels. Families moved possessions upstairs in their two-storey homes, expecting that they would be safe - only to find themselves engulfed in rising water, two metres higher than expected," a NSW Flood Inquiry submission said.

Lismore's Long Term Trauma *(continued)*

Lismore's commercial centre was cut off, with major roads in and out of the area experiencing closures. Twenty-four hours after the floods topped out at Lismore, residents downriver at Woodburn, Coraki, Broadwater and Wardell were inundated and a major rescue plan had to be initiated here after already stretched resources were dealing with events in Lismore.

The Northern Rivers floods were Australia's biggest natural disaster since Cyclone Tracy in 1974. It was the second-costliest event in the world for insurers in 2022, and the *most expensive disaster in Australian history*. Some estimates suggested that up to 31,000 people were impacted, not just from the total loss of or damage to their homes that became uneconomic repair, but from a huge collective emotional trauma.

A year on from the event, The Northern Rivers Reconstruction Corporation (NRRC), funded by the federal and NSW governments, was assessing over 6,000 flood-impacted residences for buyback, raising or retrofit.

A survey by Southern Cross University highlighted that, at the end of 2022, almost 52% of flood victims were living in the shells of homes that had flooded; 26% were living in temporary accommodation such as caravans, sheds or pods, or with friends or family; 18% were living in insecure accommodation such as tents or temporary rentals; and 4% were no longer living in the region.

The community has gone through a painful process of rebuilding not just the fabric of the town, but also their community spirit. Having initially been motivated to seek repair, it quickly dawned on many residents how slow the recovery process would take. Many were in limbo, unsure if they could get an insurance or government payout, families forced into caravans or in single hotel rooms. Thousands lost heart and disconnected from the recovery process and support.

Most concerning from the survey was evidence of **low levels of mental health**. Twenty percent of people said they were coping with the stresses and challenges of recovery and 60% said they were not coping, underlining the apparent longer-term effects of Post Traumatic Stress Disorder (PTSD).

Lismore's Long Term Trauma *(continued)*

For those able to get insurance and were drawing to the end of their temporary accommodation, there was concern as to whether they could access any of the 11 pod villages built by Resilience NSW across the region. The villages are designed to house 1,800 people for up to three years.

Top 20 NSW suburbs at risk from flooding

We have examined which NSW suburbs could be most at risk of flooding both now and in 30 years time. This exclusive research has been built from our ClimateIndex™ analysis module.

In summary, the top suburbs will remain highly exposed both now and in 30 years time, with Cronulla, Port Macquarie and Lismore being among the most affected in terms of numbers of lots. (Lismore is split over a number of suburbs and even with the record flood levels only comes in third based on the number of lots under very high flood risk).

More information about The ClimateIndex™ analysis and reports for your property

Top 20 NSW suburbs at risk from Bushfires

			Today Risk		30 Year Risk				
30 Year Rank	Suburb	Count of Lots	Count of Lots with Very High Assessment	Percentage of Lots with Very High Assessment	Count of Lots with Very High Assessment	Percentage of Lots with Very High Assessment	Today Rank	30 Year Rank	Change in Rank
1	Narrabri	5231	3748	71.65%	3749	71.67%	1	1	▲ 0
2	Moree	6771	2878	42.50%	2879	42.52%	2	2	▲ 0
3	All Lismore areas	7325	2832	38.66%	2858	39.02%	3	3	▲ 0
4	Walgett	3093	2393	77.37%	2393	77.37%	4	4	▲ 0
5	Moama	4995	2363	47.31%	2363	47.31%	5	5	▲ 0
6	Walcha	5300	2265	42.74%	2268	42.79%	6	6	▲ 0
7	Nyngan	2738	2149	78.49%	2149	78.49%	7	7	▲ 0
8	Yamba	3223	1905	59.11%	1913	59.35%	8	8	▲ 0
9	Hillston	2771	1866	67.34%	1866	67.34%	9	9	▲ 0
10	Bourke	1942	1815	93.46%	1815	93.46%	10	10	▲ 0
11	Merriwa	3696	1794	48.54%	1794	48.54%	11	11	▲ 0
12	Grafton	4796	1634	34.07%	1654	34.49%	12	12	▲ 0
13	Condobolin	4264	1634	38.32%	1636	38.37%	12	13	▼ -1
14	Swansea	2102	1467	69.79%	1534	72.98%	14	14	▲ 0
15	Port Macquarie	17080	1401	8.20%	1401	8.20%	15	15	▲ 0
16	Coonamble	3113	1390	44.65%	1390	44.65%	16	16	▲ 0
17	Cowra	7285	1313	18.02%	1313	18.02%	17	17	▲ 0
18	Tenterfield	4520	1293	28.61%	1293	28.61%	18	18	▲ 0
19	Wentworth	1315	1281	97.41%	1281	97.41%	19	19	▲ 0
20	Dubbo	19840	1262	6.36%	1262	6.36%	20	20	▲ 0

Getting Advice on flood risk for your Property Transaction

Conveyancers and lawyers are there to act in your best interest and to highlight risks that could affect your property decision. For this reason alone. For this reason alone, you have a right to know what could lie ahead as you make the most expensive financial decision of your life.

Lawyers have an automatic duty of care to you – it is a fundamental principle of the contract, but it goes wider than that. Following Guidance from the Law Society of NSW, they also have a duty to disclose and to warn on the basis that information is readily available for them to do so in an easy and accessible way.

You should therefore ask your conveyancer or real estate lawyer what information they are getting as part of checking what the flood risk is and whether this information takes account of potential future impacts that climate change may bring.

Be Careful with the 10.7 Certificate

The 2022 Government Flood Claims Inquiry heard how long and painful the claims and repair process has been and the important and urgent need for home buyers and owners to get better information about the extent of the risk they could face and consider how they could mitigate against it.

So all of this should be at the front of your mind when you are looking at property. But you need to get information that is using more sophisticated predictive climate modelling. And this means making sure it is accurate for now and **into the future**. The main problem though is that, for many years, conveyancers have relied on Local Government provided information on flood risk in the 10.7 Certificate.

The 10.7 (section 2) provides information on land zoning, permissible and prohibited land uses, details of exempt and complying development, controls for development or environmental hazards. This has included flood risk information from the council's own zoning assessment of the risk.

Be Careful with the 10.7 Certificate *(continued)*

10.7 Flood data is modelled uniquely by that Council and there is **no consistency** between Councils on the method by which they do this – so one council's appreciation of flood risk may vary considerably from another. Sometimes, there is no consistency between areas within the same council and can vary based on what information they get on the ground in a piecemeal fashion.

Perhaps most importantly, **the 10.7 (2) flood risk does not account for climate change** and is based on past events that give no guide to how things could evolve in the future. Are the 2022 Eastern River floods the worst that will ever be? Our climate is getting hotter,wetter and more extreme. What about the lifetime of owning the property? Our climate is dynamic and data should never just look at what's happened in the past as a guide to the future.

Equally, **the 10.7 (2) flood risk also tends to be very conservative and highly risk averse**. This could unnecessarily blight properties, create doubt for the lender and impact on the availability of affordable insurance.

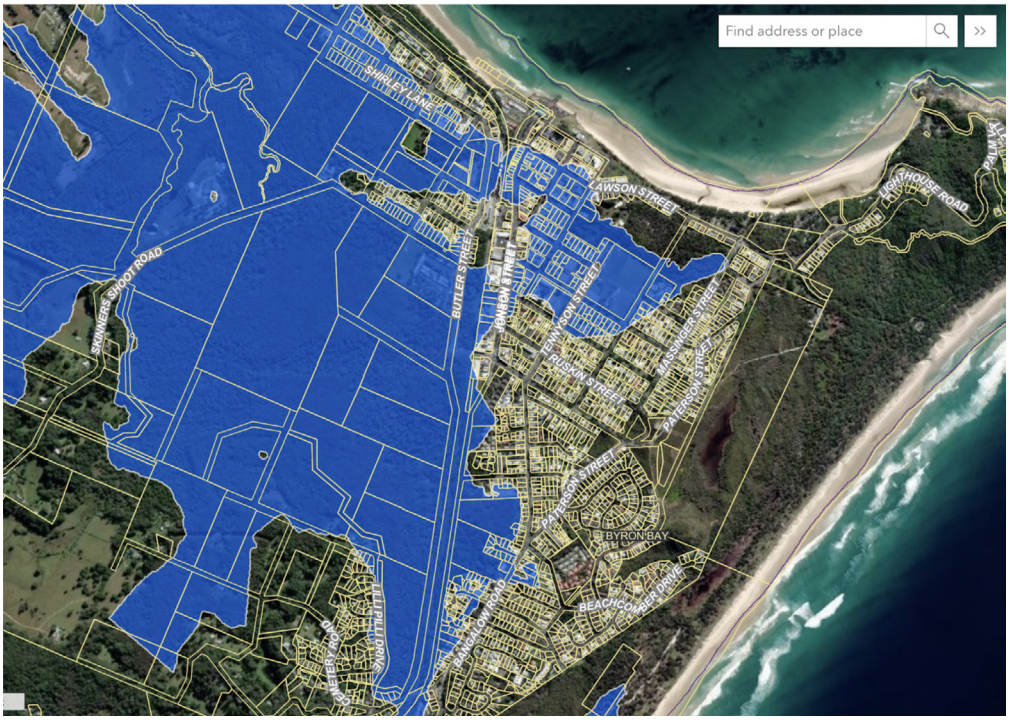


Image from: *Byron Shire Council Web Map*, showing Council modelled flood extent. Map and satellite data powered by Esri, Geoscience Australia, NASA, NGA, USGS | Esri Community Maps Contributors, Department of Resources, Dept.of Environment and Science, Esri, TomTom, Garmin, Foursquare, METI/NASA, USGS |

Be Careful with the 10.7 Certificate *(continued)*

In the above example in Byron Bay, the flood zoning identified in the Council Web Map is what is in the 10.7 (2). It covers a wide area that includes properties in the Tennyson Street and Lawson Street areas. We identified specific properties in Carlyle Street in the heart of this area and the 10.7 (2) identifies them as being at risk of flooding.

However, we ran this same location through our ClimateIndex™ analysis module and identified that this area was likely to stay drier and have less of a flood risk now and into the future, as per the map below. This is important because it enables you to proceed with more confidence whereas the 10.7 may have blocked the path to completion or given an unnecessarily negative view.

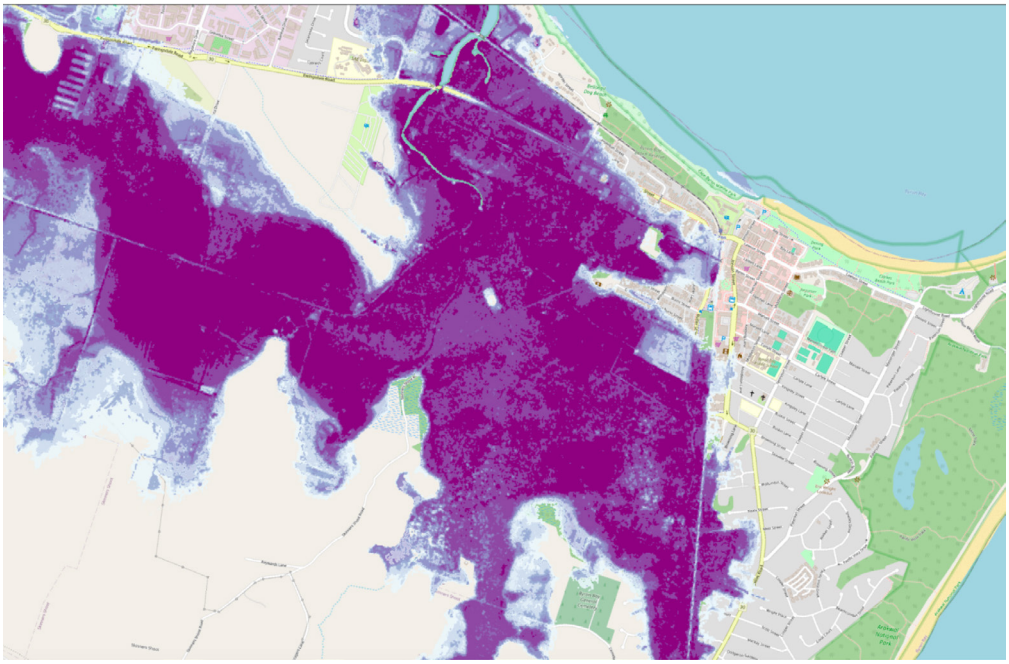
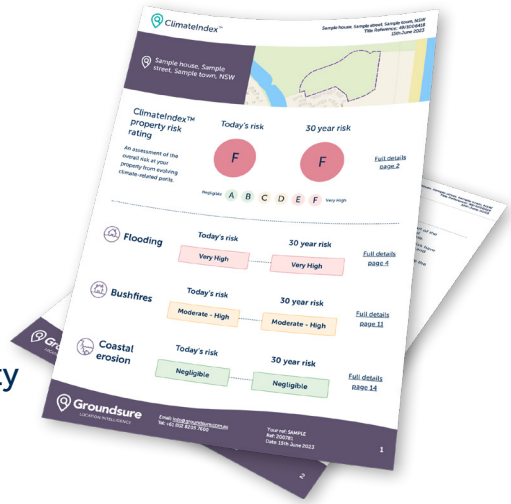


Image from: Groundsure's ClimateIndex™ flood risk analysis for Byron Bay, identifying reduced risk east of Jonson Street

A simple way to meet future flood risk



The Climateindex™ report provides a clear, simple way for you to understand how your proposed house purchaser could be impacted by flood risk, as well as bushfire and, if relevant, coastal erosion. It is specific to your property and provides guidance on whether there could be impacts to getting a mortgage, insurance or to the value of the property over a 5 and 30 year period.

This single report is also quicker and cheaper to obtain than the multiple 10,7 certificates or separate risk reports, which typically only looks at past events without signposting what the future trends could be.

The Groundsure ClimateIndex™ report also provides a FloodScore™ view, which is an insurance rating metric which gives a steer on the insurability of the Lot based on the risks of flooding. There is also detailed mapping that allows you to visualise the risk of flooding to your property.

Find out more about ClimateIndexTM

For more information on ClimateIndex™, visit *www.groundsure.com.au* or email us at *info@groundsure.com.au.*

References

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Groundsure is a leading environmental and climate data authority. We give land and property professionals expert information on risks including land contamination, flooding and ground stability, as well as forward guidance on potential climate risks, to advise their clients in the transaction. We provide high value, property-specific opinions and analysis of land use, turning data into practical, actionable insight.

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