

Is your home at risk?

“Advances in technology are creating new avenues for understanding natural perils in ways that allow the public to minimise their likely costs in the face of natural disasters. Over time this knowledge will help create more informed and safer communities.”

Tom Lowes, a freelance science journalist based in Melbourne.

Scientists at Risk Frontiers, a not-for-profit research organization based at Macquarie University and sponsored by the Australian insurance community, have created a way to provide homeowners with key information on natural hazards that may directly affect them. Working with MapData Sciences, a company specialising in the web-delivery of spatial information, they have developed a website (http://www.mapds.com.au/solutions_risk_frontiers.aspx) where anyone can log on and find out what is known about natural perils that threaten a particular address.

Risk Frontiers

Natural Hazards Risk Profile

Address Information

Number
 Street WHITE PLACE
 Suburb SOUTH WINDSOR
 State NSW
 Postcode 2756
 Elevation 15m (ground level)
 Aspect South



© MapData Sciences Pty Ltd 1998-2008 TAS Hobart

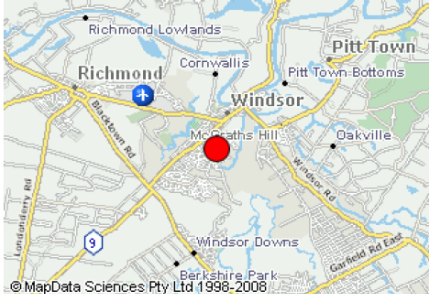


© MapData Sciences Pty Ltd 1998-2008



© MapData Sciences Pty Ltd 1998-2008

Map extent: 1.6x1.2km



© MapData Sciences Pty Ltd 1998-2008

Map extent: 14x10km. Map Copyright © 2007, MapData Sciences Pty Ltd, PSMA

Address Risk Rating

Risk Rating		Overall
Bushfire	Distance to Bushland (m)	1
	Greater Than 700m	
Flood	Average Recurrence Interval (year)	4
	between 20-50 years	
Earthquake	Peak Ground Acceleration (m/s sqd.)	3
	0.9	
Hailstorm	Storm Zone	4
	4	
T. Cyclone	Distance to Shoreline (km)	1
	29	

Indicative Risk Levels

1

 Negligible

2

 Low

3

 Medium

4

 High

5

 Very High

N/A

Disclaimer
 The purpose of this report is to provide an overview of the natural hazards affecting an individual address or geographical area in which the property is located. It is not a substitute for an on-site inspection or review of other available reports and records. It is not intended to be, and should not be taken to be, a rating or assessment of the desirability or market value of the property or its features. In the preparation of this report, Risk Frontiers has relied on data provided by third parties and while all reasonable care has been used to review the data for reasonableness it is not possible within the context and scope of this report to verify the accuracy and completeness of that data.
Access Macquarie Limited, Macquarie University and MapData Sciences Pty Ltd - their officers, employees, agents or contractors and the authors are not liable for any loss (including legal costs and expenses), injury or damage including death, economic loss and consequential loss or liability incurred or suffered by any recipient of this report or their successors in title or any other party acting or purporting to act in reliance on the contents of this report pursuant to a cause of action or claim in contract, tort, negligence, statute (including pursuant to section 52 of the Trade Practices Act 1974 (Cth) or any state equivalent of that provision) or otherwise.

Copyright © 2007 Risk Frontiers, MapData Sciences. All Rights Reserved. Web: www.riskfrontiers.com, www.mapds.com.au

The researchers have combined natural hazard modelling with other data to produce a so-called Natural Hazards Risk Profile for individual street addresses. *“This system represents the culmination of 15 years of data collection and risk modelling,”* says Professor John McAneney, Director of Risk Frontiers, *“...for the first time we are making available to the public information that is normally the preserve of insurers and government planners”*.

Professor McAneney contends that this system heralds a new era in the public’s relationship with the natural environment. Insurers need to assess their potential losses in the case of natural disasters, individual homeowners can take prudent actions to minimise their individual risks. As Professor McAneney explains, *“... half the battle is making people aware that their street or house is in a potential danger zone... if they know this then there are ways to mitigate the risks. I have friends in Hunter Valley whose home was badly flooded in the Queen’s Birthday Weekend Floods. Before this happened they didn’t even know that they were on a floodplain. If they had known, then they may well have built on a different part of the section or designed the house differently.”*

This observation is echoed by Chas Keys, ex-Deputy Director General of the NSW State Emergency Service, who feels that the Hazard Risk Profiles present an innovative way of breaking through to a public that is blinkered to the hazards they face. *“Not only do many people seem unaware of the hazards they face, they don’t, in this information-rich, attention-poor world, appear much interested in learning about them - until they are hit.”* Dr Keys cites the great success of software programs such as ‘Google Earth’ as evidence that people have a significant interest in information about their own properties and surroundings, a fact that suggests this new product from Risk Frontiers could gain popularity as a practical information source.

Risk Frontiers’ database allows individual houses to be rated based upon their location, e.g. metres above sea level, distance from bushland, aspect, etc. and their exposure to a range of hazards including bushfire, earthquake, hailstorm, tropical cyclone, and, where available, riverine flood. The result is a table which displays potential threat on a scale of 1 to 5 and a likelihood for such events (see Figure 1).

Professor McAneney’s hope is that the Natural Hazard Risk Profiles will become an integral part of the due diligence carried out in a property transaction. In other words, home buyers will seek out this sort of information in addition to the checks and engineering assessments that are already common. The developers of the hazard rating system feel it will have significant impact upon insurance premiums and the availability of insurance cover as the potential for large-scale losses through natural hazards increases. *“In the future, insurance premiums will be linked to actual risk”* says Professor McAneney, *“people need to be aware of this when buying a property and have an idea of the sort of actions they can take to reduce the risk to property and their lives”*.

This latest system brings into sharp focus the fact that we are not immune to the extremes of our environment, and, as we develop further into rural bush and along coastlines, the costs from natural hazards are likely to be passed on to the public. By making this type of information available, people have an opportunity to choose and manage the risks they face, a fact that, in the long-term, could save property and lives and guarantee the public a more powerful role in shaping the types and locations of developments that occur.

ABOUT RISK FRONTIERS

Risk Frontiers is a world leader in quantitative natural hazards risk assessment. Natural hazards studied include bushfire, flood, hailstorm, earthquake, tropical cyclone, volcano and tsunami. Through research into the likelihood and costs of natural disasters, Risk Frontiers aims to build safer communities, aid in the responsible management of natural hazard risks and assist the insurance industry in pricing catastrophe risks.

Risk Frontiers is an independent research organisation sponsored by insurance industry partners: Swiss Re, Australian Reinsurance Pool Corporation, IAG Insurance, QBE, Suncorp group, Aon Re, Benfield Australia and Guy Carpenter. For more information visit www.riskfrontiers.com

ABOUT MDS

MapData Sciences is a company specialising in the provision of digital mapping data, services and geocoding software. With offices in Sydney, Australia and Wellington, New Zealand, MDS has a dedicated team of GIS and software professionals who build and maintain digital mapping data products and host spatially enabled applications including Location Based Services, Demographic Analysis, Where’s the Nearest, Travel Planning, Route Optimisation, Site Selection, as well as GIS consulting services and data development projects. MDS has an extensive list of clients involved in the banking, insurance, retail, franchise, travel, oil, transport, government and automotive sectors. For more information visit www.mapds.com