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California bushfires

The home front: Could the Los Angeles fires happen in Australia?

Experts say it is only a matter of time until major Australian cities experience “house-to-house ignition” on a similar scale to LA.

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The LA fires were marked by widespread house-to-house transmission. AP

If you placed a map of the vast areas the Palisades bushfire alone has burnt over a map of Sydney, it would cover a vast stretch of the city – from Kirribilli on the lower north shore to Lakemba in the south-west.

In Melbourne, the burnt area would be equivalent to fires sweeping from Ivanhoe in the north to Malvern in the south-east, and stretching to Yarraville in the west.

The scale of the devastation wrought by the Los Angeles bushfires – in which the chilling term “house-to-house ignition” has become household slang – has led many to wonder: could it happen here?

In short, say many of the experts interviewed for this piece: yes.

The Los Angeles bushfires are “next level”, says Victorian Country Fire Authority chief Jason Heffernan.

Australia is yet to experience losing thousands of homes in a major city, as seen in this month's catastrophic fires in Los Angeles. Yet in some respects, LA-style fires have already happened here – it's just a question of scale.

Most Australians would be acutely aware of the many occasions when bushfires have devastated regional towns and suburbs on the fringes of cities, including five years ago [during Black Summer](#). Heffernan says house-to-house ignition is a feature here too and that it is becoming more common.

In 2003, four people died and 510 properties (including 487 homes) were lost when Canberra's western suburbs went up, fuelled by pine plantations hard up against suburban areas.

Other well-known examples include Victoria's Black Saturday fires in 2009, which killed 173 people – mostly in the Kinglake area and Marysville – and which destroyed more than 2000 homes; the Sydney fires of 1994, when more than a hundred homes were lost around the city from Como in the south to the Lane Cover River Valley in the north; and the 1983 Ash Wednesday fires that swept through South Australia and Victoria.

“Typically, any time we have extreme or catastrophic fire danger ratings, we consider what we call short-fuse fires a real risk,” Heffernan says. “That's where you have a fire start in close proximity to population centres, and then that time from ignition to impact is very short.”

Steve Turton, an adjunct professor of environmental geography at Central Queensland University, says the climatic conditions that sparked the southern California bushfires were prolonged periods of rain, which created extensive growth, followed by extended drought and the hot, gusty Santa Ana winds.

Here, repeated La Nina weather patterns have brought above-average rainfall to the eastern seaboard and warmer than average temperatures have fuelled vegetation growth.

The World Meteorological Organisation on Monday confirmed that 2024 was the hottest year on record. Temperatures were about 1.55 degrees above pre-industrialisation levels.

Turton says the next major El Nino (the drier relative of La Nina) will bring the risk of severe bushfires with it for cities on the east coast of mainland Australia. (Tasmania has its own patterns.)

“South-east Queensland and urban areas like Brisbane – which I think is a sitting time bomb for a big, big fire one day – and also, obviously, the fire-prone areas around Sydney and Melbourne,” he says.

“The Dandenongs [in Melbourne] are a risk but also, when we're getting into Sydney, all those areas of the ... urban forest interface are at risk, and that will come with the next El Nino.”

The Santa Anas, often thought of as peculiar to California, are typical of a phenomenon known as foehn wind, which is found all over the world, including in the Australian coastal cities east of the Great Dividing Range.

Dr Martin Jucker, an atmospheric dynamics and climatology expert at the University of NSW, says foehns are winds that are pushed up a mountain slope and then down the other side, getting hotter and drier on the way because of changes in pressure.

Westerlies over the Blue Mountains, for example, will be hotter by the time they reach Sydney. As with Los Angeles, there is dry country inland to the mountains, so the air is already hot and dry.

“The difference with the Santa Anas is the mountains are much taller and also wider, so the effect is stronger,” Jucker says.

Climate change increases the risk of bushfires occurring and also the intensity of the fires.

Dr Stephen Sutton, a lecturer at Flinders University and a former director of Bushfires NT, says the old saying that “if you keep doing what you're doing, you'll keep getting the same thing” is no longer true.



As Melbourne grows, its suburbs edge closer to bushland. JASON SOUTH

“It is only a matter of time before something like what is happening in LA happens in Australia,” Sutton says.

“Climate change supercharges the weather so that if we keep doing what we’re doing, we’re going to get much worse outcomes than we’ve been getting.”

Fire Brigade Employees Union of NSW state secretary Leighton Drury says climate change is turbo-charging fires.

“Disasters are becoming more intense and more erratic,” Drury says. “Things are happening that we didn’t know could happen or knew only with science could happen like the big thermal up-draughts and down-draughts in the 2019-20 fires that picked up trucks and threw them like toys across the room.”

Drury says there is a strong chance that multiple homes could be lost in the next two to three years, in part because some fire-prone areas around major cities had not had a big fire for some time.

In Sydney, Drury says, this would include areas that burned heavily in the 1990s, such as northern suburbs including Turrumurra and Mona Vale and the southern fringe near Royal National Park.

Victorian United Firefighters Union secretary Peter Marshall says his members hold grave concerns for Melbourne suburbs including Warrandyte, Eltham and Donvale.

‘It is only a matter of time before something like what is happening in LA happens in Australia.’

Dr Stephen Sutton, former director of Bushfires NT

“As Melbourne grows, the interfaces between bushland, industry and suburbia expand, especially in Labor heartland in the north, west and south-east of the city,” Marshall says.

NSW Rural Fire Service commissioner Rob Rogers says Sydney has significant bushland not just adjoining the city but also penetrating deep into urbanised areas. That is great for amenity but it also carries challenges for managing fire risk.

“In the northern beaches, the north shore itself, and the southern suburbs, there’s quite a lot of bushland and significant areas of national park, and then you’ve got housing built on the ridge tops,” Rogers says. “That’s because of historical planning and we can’t change it, but obviously that makes fire management more difficult.”

Suburban sprawl is another problem, especially in south-western and north-western Sydney and the western and north-western suburbs of Melbourne. The outer fringe of these cities tend to be “peri-urban”, meaning there are housing developments interspersed with pockets of bushland or farmland.

As Sutton says: “Every new peri-urban subdivision is at greater risk than any peri-urban subdivision was 40 or 50 years ago, simply because the weather is supercharging the fires.



The Dandenongs are at severe risk of bushfire. JASON SOUTH

“Having said that, Australia has done a really good job in changing the building codes, and so the [Bushfire Attack Level] rating system that operates now right across Australia means new homes that are being built are much more resistant to bushfires.”

The sequence for a bushfire spreading into a suburb is as follows: embers from the burning bush area fall on an individual's property and ignite a fire; embers from that fire fall on the house structure, and it starts to burn; and then if winds are strong enough, embers from the burning house will ignite the next house downwind. Keeping gutters and yards clean is one of the best protective measures.

Latrobe University psychology of bushfire preparedness expert Professor Jim McLennan says research suggests there are broadly two types of people in bushfire zones. First, those who have made a tree change or sea change to live in a lifestyle property in a natural environment. These people would generally understand bushfire dangers and, the research suggests, their strategy would generally be to leave rather than chop down trees.

“But the folk who simply move to the urban fringe because the housing is cheap, and they previously rented in an inner-city area, generally don't have very much awareness of the likely danger,” McLennan says. “For these folk, bushfires are things that happen on television to other people somewhere else.”



Areas on Sydney's northern beaches fringed by bushland are among those most in danger. OSCAR COLMAN

The best trigger to change this, he says, is “a bloody good scare from a fire that fortunately doesn't do too much damage”.

As well as suburban sprawl, there are also well-established areas near bushland such as Hornsby in northern Sydney or Kirrawee in the south that are becoming denser with the construction of large apartment buildings.

The problem, says Rogers, is that the higher concentration of people can make evacuation a challenge. He has been talking with the CSIRO about further research on this.

“When you've got high-density apartments, getting those people out of those areas, and then all of them pouring onto roads is quite a different dynamic than a standard suburban street,” Rogers says.

“In fire-prone areas, we get involved in development approvals and whether it's new estates or high rise, we very much consider both the safety of the building and also the evacuation side of it.”



Sydney is building higher density housing closer to its outskirts, which border on national parks and bushland. WOLTER PETERS

He has concerns about fire-prone areas on Sydney's north shore because of the high concentration of aged care facilities.

In Los Angeles, a political fight has broken out about resourcing. Los Angeles fire chief Kristin Crowley says \$US17.6 million (\$28.3 million) in budget cuts last year affected the ability of her firefighters to do their job.

Marshall, the Victorian fire union leader, shares similar concerns. More than 40 per cent of Fire Rescue Victoria's 200-odd trucks are past the end of their 15-year working life, and this will rise to two out of three by the end of 2025.

"The Los Angeles experience is a solemn object lesson on the consequences of neglecting emergency response capability in a large, dispersed city like ours," Marshall says.

He points to a leaked FRV budget submission to the government that says the fire service does not have the fleet or equipment needed to protect its workforce and the communities it serves.

Drury advocates for NSW Fire and Rescue and Rural Fire Service to be merged, to ensure the same level of training and a unified chain of command. Rogers rejects this, saying there is no evidence there is a need for change and the spirit of independence is motivating for its volunteer workforce of about 40,000 active firefighters.

Rogers says the RFS has made a huge investment in technology, including systems using satellite data to detect fires early and then responding by sending a fire truck, or winching in a crew by helicopter, to put the fire out.

Sutton says Australia needs to increase its investment in aerial firefighting, especially fire tankers, which are fixed-wing aircraft fitted with tanks that can be filled on the ground.

However, while fire tankers make a “massive difference”, they are not infallible.

“You look at the LA situation, they had fire tankers, and still lost hundreds and hundreds of homes, and these were not the homes of people living in the normal margin suburbs. These are the wealthy homes of the rich and famous, and we were still unable to save them,” Sutton says.

Concerns have been raised in Los Angeles about the amount of hazard reduction burning undertaken before the fires spread. This is a problem in Australia too. Last year in NSW, firefighters met about 40 per cent of hazard reduction burning targets. The previous year it was 28 per cent.

Rogers says this is because of weather and climate: rain can delay a planned burn by up to two weeks and the fire season is lengthening.

However, the 2020 bushfire royal commission found the effects of fuel reduction are “relatively short-lived” and in extreme bushfire conditions, “fire behaviour is no longer solely a function of the environmental conditions”.

Fuel loads build up relatively quickly in Australian forests (although meaningful regeneration takes much longer), meaning burn-offs must be done every one to four years to be effective, the commission found.

In the future, Rogers suggests Australians might have to be bolder about progressively reducing fuel loads by allowing a more natural flow of fire or even lighting fires deliberately at the end of summer, knowing that cooler autumn weather is on the way.

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