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Director – Energy Assessments,
Development Assessment,
Department of Planning and Environment,
4 Parramatta Square,
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Parramatta NSW 2150

Dear Sir/Madam,

SUBMISSION IN RESPONSE TO THE ENVIRONMENTAL IMPACT STATEMENT OF THE HUMELINK PROJECT – APPLICATION NO SSI-36656827

I hereby submit this response to the HumeLink Environmental Impact Statement report.

I object to the HumeLink proposal on seven grounds:

The Hume Link Project would:

1. **POSE SINISTER HEALTH DANGERS** by significantly increasing the risks of childhood leukemia and other cancers through the impact of electro-magnetic radiation from living or working near the flow path of the 360km of high voltage transmission lines.
2. **HAVE A CATASTROPHIC EFFECT ON THE ENVIRONMENT.** The proposed 360km of high voltage transmission lines will require up to 130-metre-wide easements through bush land. This will require the removal of tens of thousands of trees and disrupt the habitat of many local native animal species including koalas, possums, sugar gliders and various bird species. This could cause some native species to become locally extinct.
3. **INCREASE THE RISK OF DEVASTATING BUSHFIRES CAUSED BY LIGHTNING STRIKES.** Natural habitats will be destroyed as there will be an increased risk of bushfires caused by lightning strikes on approximately 2,000 new transmission line towers.
4. **ADVERSELY IMPACT AUSTRALIA'S AGRICULTURAL INDUSTRY** with approximately 2,000 new transmission line towers passing directly over farmland, this will result in a reduction of farm produce by up to 25% through 70-80-metre-wide easement through prime agricultural land.
5. **RUIN LOCAL RURAL TOURIST INDUSTRIES** with natural landscapes scarred by the sight of approximately 2,000 new 85 metre high 500kV towers and transmission lines.
6. **REDUCE NSW'S CAPACITY TO INCREASE ITS RURAL POPULATION** that would have helped decentralize our overcrowded city of Sydney as well as offering a positive destination to city-dwellers looking for a rural change, migrants and refugees.
7. **REDUCE RURAL PROPERTY VALUES** to landowners impacted by the 360km of extra high voltage transmission towers and lines as well as neighbouring properties in view of the transmission towers.

1. Sinister Health Dangers

If 360 km of mainly 500kV transmission towers and lines are going to be built over the next few years, there will most likely be an increase in the rate of childhood leukemia and cancer rates in adults who live or work within 600m of these high voltage lines, according to prominent research.

In a report recorded in the **British Columbia Medical Journal**, *Is living near power lines bad for our health? | British Columbia Medical Journal (bcmj.org)*, Dr Copes (director of BCCDC's Environmental Health Services Division) and Ms Barn (an environmental health scientist at BCCDC) referred to **four reputable research papers that conclusively outlined the increased rates of childhood cancer and leukemia to the proximity of living close to high voltage power lines.**

> *The association with childhood leukemia, which the International Agency for Research on Cancer regards as sufficiently well established to rate extremely low frequency magnetic fields as a "possible" human carcinogen.[1]*
>
> ***1. World Health Organization.*** *Extremely low frequency fields environmental health criteria monograph no. 238. 2007.* ***www.who.int/peh-emf/publications/elf_ehc/en/index.html*** *(accessed 12 September 2008).*

> *The first study to link childhood leukemia with residential EMF exposure was published in 1979[2] Studies using magnetic field strength as an exposure measure have found that exposures greater than the range of 0.3 to 0.4 µT lead to a doubling risk of leukemia, with very little risk below this level. This exposure range is approximately equal to a distance of 60m within a high-voltage power line of 500 kV.*
>
> ***2. Wertheimer N, Leeper E.*** *Electrical wiring configurations and childhood cancer.* ***Am J Epidemiol 1979****; 109:273-284.*

> ***An increased risk of 69% for cancer and leukemia was found for children living within 200 m of power lines*** *while* ***an increased risk of 23% was found for children living within 200 to 600 m of the lines.*** *[3] This study was notable in that it found some elevation of risk at much greater distances than previous studies.*
>
> ***3. Draper G, Vincent T, Kroll ME, et al.*** *Childhood cancer in relation to distance from high voltage power lines in England and Wales: A case-control study.* ***BMJ 2005****; 330:1290.*

> *Using current British Columbia leukemia rates[4] and assuming similar proportions of the population live near high voltage lines, on a statistical basis, there may be one additional leukemia in British Columbia every 2 years.* ***To eliminate this risk, one would need to achieve a separation distance of 600 m between every high voltage power line and the nearest residence****.*
>
> ***4. BC Cancer Agency.*** *Leukemia. 2008.* ***www.bccancer.bc.ca/NR/rdonlyres/AC6262BC-634F-4227-BF14-163182197EDF/259...***

Perhaps the most comprehensive study ever conducted regarding the impact of EMFs from high voltage transmission lines on children was the study recorded in the British Medical Journal in 2005 (mentioned briefly on the previous page.) ***Draper G, Vincent T, Kroll ME, et al.*** *Childhood cancer in relation to distance from high voltage power lines in England and Wales: A case-control study.* ***BMJ 2005****; 330:1290.*

The unique significance of this case study is that it was **based on records of nearly 30,000 children in England and Wales who had developed a form of childhood cancer or leukemia.**

> ***Objective:*** *To determine whether there is an association between distance of home address at birth from high voltage power lines and the incidence of leukaemia and other cancers in children in England and Wales.*
>
> ***Design:*** *Case-control study.*
>
> ***Setting:*** *Cancer registry and National Grid records.*
>
> ***Subjects:*** *Records of 29 081 children with cancer, including 9700 with leukaemia. Children were aged 0-14 years and born in England and Wales, 1962-95. Controls were individually matched for sex, approximate date of birth, and birth registration district. No active participation was required.*
>
> ***Main outcome measures:*** *Distance from home address at birth to the nearest high voltage overhead power line in existence at the time.*
>
> ***Results:*** *Compared with those who lived > 600 m from a line at birth, children who lived within 200 m had a relative risk of leukaemia of 1.69 (95% confidence interval 1.13 to 2.53); those born between 200 and 600 m had a relative risk of 1.23 (1.02 to 1.49). There was a significant (P < 0.01) trend in risk in relation to the reciprocal of distance from the line. No excess risk in relation to proximity to lines was found for other childhood cancers.*
> https://pubmed.ncbi.nlm.nih.gov/15933351/

There have been many other health studies, all finding a connection between the onset of childhood cancer and leukemia and living in close proximity to high voltage transmission lines.

Childhood cancer in relation to distance from high-voltage power lines in England and Wales: a case-control study.
Swanson J. J Radiol Prot. 2005 Sep;25(3):336-7.PMID: 16312037

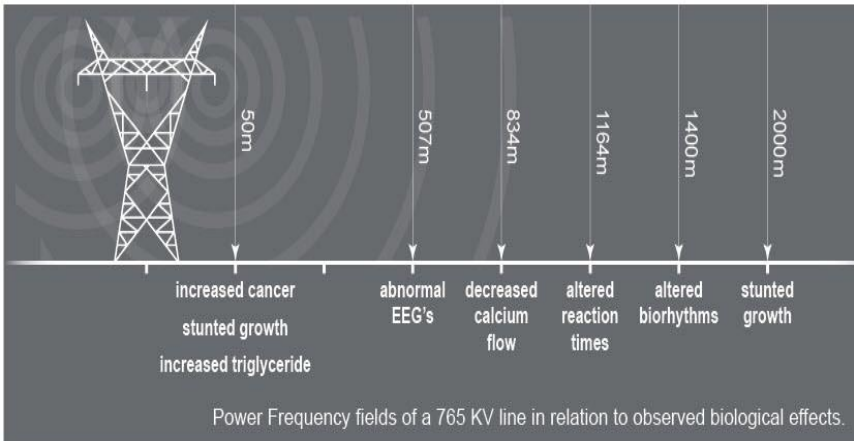
Childhood cancer and magnetic fields from high-voltage power lines in England and Wales: a case-control study.
Kroll ME, Swanson J, Vincent TJ, Draper GJ. Br J Cancer. 2010 Sep 28;103(7):1122-7. doi: 10.1038/sj.bjc.6605795.PMID: 20877338 **Free PMC article.**

Magnetic fields and childhood cancer: an epidemiological investigation of the effects of high-voltage underground cables.
Bunch KJ, Swanson J, Vincent TJ, Murphy MF. J Radiol Prot. 2015 Sep;35(3):695-705. doi: 10.1088/0952-4746/35/3/695. Epub 2015 Sep 7.PMID: 26344172

The incidence of childhood leukaemia in West Berkshire.
Barton C. Med Confl Surviv. 2001 Jan-Mar;17(1):48-55. doi: 10.1080/13623690108409554.PMID: 11339343 Review.

[Childhood leukaemia in a residential area with a high-voltage power line: approach according to the Dutch Community Health Services' guideline 'Cancer Clusters'].
Hegger C, Reedijk AM. Ned Tijdschr Geneeskd. 2013;157(1):A5485.PMID: 23298726 Review. Dutch.

Whilst much of the focus of research has been on childhood cancer and leukaemia, many other illnesses and conditions, as detailed here, are linked to the effects of low-frequency EMF (Electro Magnetic Fields) associated with proximity to high voltage transmission lines, including increased risks of:



Power Frequency fields of a 765 KV line in relation to observed biological effects.

- Glioma and other brain cancers
- Male and female infertility
- Lymphoma Nervous system tumours
- Depression and anxiety
- Heart problems

https://www.econsciousliving.com/living-near-power-lines/

Health dangers are not just related to the proximity to high voltage transmission lines, but also to electricity substations, generators and battery storage units which emit Electro Magnetic Fields (also referred to as Electro Magnetic Radiation). **The AEMO plan to build 100 new electricity substations and 200 generators by 2037, many of which will be located near or in rural townships.**

According to one UK report in 2018, **EMFs can travel through solid bricks, rocks,** the human body, etc. Some EMFs naturally occur in the environment, and we're exposed to these every day. However, **EMFs emitted by pylons and substations can raise the risk of developing health problems when placed close to people and buildings.** Health issues may include:

- Different types of cancer (or an increased risk of cancer)
- Frequent illnesses (with no determined cause)
- Adrenal fatigue
- Hormone imbalances
- Brain fog
- Insomnia
- Anxiety and depression

https://substation-health-risks.co.uk

2. Catastrophic Effect on the Environment

Likewise, **the removal of tens of thousands of trees to instal high voltage transmission towers with up to 130-metre-wide easements in bushland will destroy many native habitats.** The destruction of habitats for native tree-dwelling animals such as koalas, brush-tail possums, flying foxes, sugar gliders and kookaburras may cause some native species to become locally extinct.




To illustrate this problem, I refer to the impact of transmission line projects for the Mt Emerald Wind Farm in Queensland and the Western Victoria Transmission Grid Project.

MT EMERALD WIND FARM AND TRANSMISSION LINE PROJECT, QUEENSLAND

Steve Nowakowski (Renowned Wilderness Photographer and Environmentalist) was *commissioned by the energy company building the Mt Emerald Wind Farm, RATCH Australia Corporation, to photograph the completed project. After the opening ceremony, he walked to the top of Mt Emerald to get aerial shots of the site. Steve had bushwalked through Mt Emerald's native scrub years earlier and knew the landscape well.* ***Back then, it was an untouched wilderness of scraggly trees, open grasslands, and rocky ridges. Now, as he looked down, he was shocked at what he saw.***

Broad roads carved snaking pathways through the scrub, connecting large circular clearings at the base of over 50 towering wind turbines. "I thought, ***'Geez, there's a lot of destruction here. They've transformed what was a really great pristine area … into a really industrial area'."***

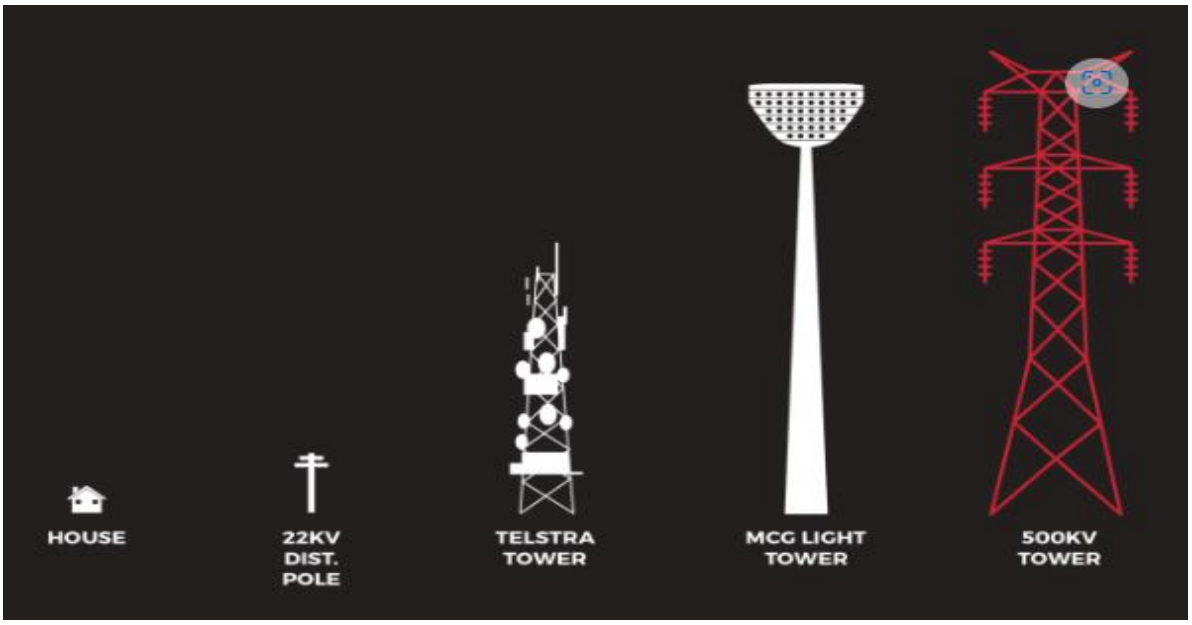
In reference to the High voltage transmission lines connected to the wind farms, Steve said: "These transmission lines provide convenient access to the national energy grid but sometimes cut through ecologically valuable land. We've got this big wall of steel coming through along the transmission line along the western side of the Great Dividing Range, hugging the western side of the Wet Tropics World Heritage Area."

(One of the transmission line towers linking up to the Mt Emerald Wind Farm.)

(Tens of thousands of trees are removed to clear a pathway and 200-metre-wide easement through bushland.)

WESTERN VICTORIA TRANSMISSION NETWORK PROJECT

In Victoria, the Western Victoria Transmission Network Project will require the removal of tens of thousands of trees for the 190km corridor project between Melbourne to Bulgana Wind Farm. The Project consists of **380x500kV transmission towers** and a 20-hectare terminal station near Ballarat.



An MCG light tower is 75 metres high. A 500kV transmission tower is 85 metres high.

Actor Stephen Curry lives in Gordon, 25 kilometres east of Ballarat, and says his home is in the corridor of the project.

***"AusNet and the state government plan to knock down our entire property, including our house, and 3,000 native trees**," he said. **"And that's all in the name of sustainability, which is rubbish —** it's all in the name of saving money."*
https://www.abc.net.au/news/rural/2022-03-08/farmers-gather-at-parliament-house-to-protest-against-ausnet/100890982

Actor Stephen Curry's "The Castle" is in the path of the proposed power lines.

3. Increased Risk in Devastating Bushfires Caused by Lightning Strikes on 85-Metre-High Transmission Towers

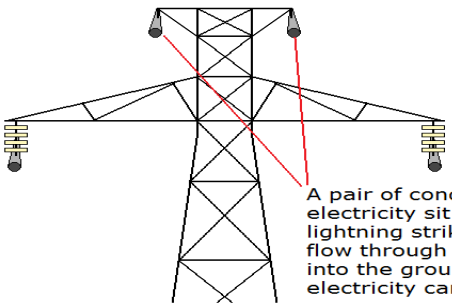
85-METRE-HIGH TRANSMISSION TOWERS ARE LIGHTNING MAGNETS

Following the devastating bushfires of Black Saturday in 2009, the Victorian Government established the **Victorian Bushfires Royal Commission** to consider how bushfires can be better prevented and managed in the future.

The Commission observed that powerlines and electricity infrastructure caused many of the major bushfires in 2009 (and contributed to 159 of the 173 bushfire-related deaths - 92%), as well as earlier major bushfires.

> *In response to the Royal Commission's report and recommendations,* ***the Government established the Powerline Bushfire Safety Program (PBSP) to manage a $750 million program of works delivering improvements to reduce the risk of Victorian powerlines causing catastrophic bushfires in the future.*** *One third of this program ($250 million) was funded by the Victorian Government. Electricity distribution businesses are putting roughly another $500 million worth of works into the PBSP, principally focused on reducing the risk of bushfires ignited by faults on high voltage (>1,000 volts) distribution lines.*
> *https://www.energy.vic.gov.au/safety-and-emergencies/powerline-bushfire-safety-program/network-assets-program/high-voltage-network-assets-program*

Since then, **new lightning protection systems** have been introduced to increase the ability of transmission towers to **withstand lightning strikes and reduce lightning related hazards**. These include decreasing grounding resistance of towers; adjusting protection angle of the shield wire; using a lightning protection differentiation design for double circuit towers; installing additional lightning rods or line surge arresters in areas with highest risk.



A pair of conductors that do not carry electricity sit at the top of each pylon. When lightning strikes the pylon, the lightning will flow through these conductors harmlessly into the ground, without interfering with the electricity carried by the main conductors.

Although these lightning protection systems have supposedly reduced the impact of lightning strikes in the past decade, **recent research in Australia indicates that lightning strikes on electricity infrastructure still cause a greater risk during elevated fire danger periods.**

> *The occurrence of wildfires caused by electricity distribution infrastructure were compared to those attributed to other causes during periods of elevated fire danger across the State of Victoria, Australia.* ***The results provided strong evidence that fires caused by electrical faults are more prevalent during elevated fire danger conditions and that they burn larger areas than fires ignited by most other causes. As a result, the consequences of fires caused by electricity infrastructure are worse than fires from other causes.***
> *https://www.researchgate.net/publication/318469759_Electrically_caused_wildfires_in_Victoria_Australia_are_over-represented_when_fire_danger_is_elevated*

80,000 LIGHTNING STRIKES IN 24 HOUR STORM

In September 2016 in South Australia, huge winds and 80,000 lightning strikes battered the state causing blackouts to Port Augusta and Port Pirie. 23 transmission towers were damaged with some even toppling over. With up to 2,000 transmission towers built for the HumeLink, a similar devastating storm could not only start bushfires, but severely disrupt energy supplies.

https://www.news.com.au/technology/environment/whats-going-on-with-south-australias-power/news-story/885602b3ff99c3500dbde27fbe54b5ab

FAILURE OF LIGHTNING PROTECTION DEVICES IN CHINA

In China, failure of lightning protection systems designed to protect high voltage power lines and towers from lightning strikes accounted for 60% of all interruptions to electricity supply. **These lightning protection systems consistently failed to protect the 750kV and 500kV towers.**

Lightning accounts for about 60% of all transmission line tripping rates in China and is closely linked to season as well as region. *Based on the physical processes, lightning over voltages can fall into two broad categories: those caused by direct strike to the tower, shield wire or conductor; and those where lightning strikes the ground near lines, generating an induced overvoltage on conductors.*

A few years ago, the lightning related tripping rate on lines operated by the State Grid Corporation was 865, of which 592 (68.4%) were due to shielding failure, *269 to back flashover and 4 to other causes.* ***Moreover, trippings of 750 kV and ±500 kV lines were all due to shielding failure.*** *https://www.inmr.com/hazards-lightning-transmission-lines/*

Lightning Strikes on Transmission Towers Cause Forest Fires in the Americas

As shown in China, despite lightning protection systems, 500kV transmission towers continue to be magnets for lightning strikes, which in turn lead to bushfires and forest fires. In North and South America, just as in Victoria, many forest fires have been linked with lightning strikes on high voltage transmission lines and towers.

> *The **Texas Wildfire Mitigation Project** reports, **"Power lines have caused more than 4,000 wildfires in Texas in the past three and a half years.***
>
> ***Venezuela** has a long-distance transmission line from its major hydroelectric plant to Caracas. One of the country's recent major electric outages seems to be related to fires close to this transmission line."*
> ***Tverberg. 2019.** https://energyskeptic.com/2019/wind/*

Unfortunately, 360km of high voltage transmission towers 85-metres-high will attract hundreds of thousands of lightning strikes each year and likely be the cause of future devastating bush fires, as demonstrated by the ***Victorian Bushfires Royal Commission*** into the devastating 2009 Black Saturday bushfires.

AN UNEXPECTED CONSEQUENCE OF HIGH VOLTAGE TRANSMISSION LINES AND TOWERS IS THE DANGER THEY PRESENT TO FIRE FIGHTERS DURING BUSHFIRES

Not only are transmission towers and lines hazardous to land fire-fighting crews, but also to aerial fire-fighters. As a result, **fire crews usually abandon efforts to fight fires near high voltage transmission lines and towers for safety reasons.**

> *Peter Muir from Myrniong, 72km northwest of Melbourne, said the 85-metre-tall AusNet towers would ruin his property and pose a danger to the local community. Mr Muir also voiced his concern over the **powerlines reaching the Wombat State Forest and posing a fire hazard. "It's very hard for firefighters to get there to put it out. No Country Fire Association crew is going to put their crew underneath one of the power lines too because they're an ignition point.***
>
> *'It's not just the cost to me, it's the cost to the whole community, these ignition points will stop people from getting out of the bush or stop people getting in the bush during a fire,' he explained. **The farmer was told AusNet would turn the powerlines off in the event of a fire but was concerned they may not be shut off in time.***
> *https://www.dailymail.co.uk/news/article-8579231/Farmer-protests-against-power-lines-digging-rude-message-paddock-tractor.html*

4. Adverse Impact on the Agricultural Industry

ADVERSE HEALTH IMPACT ON ANIMALS

Research has shown that living within 200m of 500kV transmission lines increases childhood leukemia by 69% as well as incidents of cancer in adults. If electromagnetic radiation poses health dangers to humans, it is reasonable to suspect that other mammals such as cows, sheep, horses, pigs, and family pets might also be adversely affected. In June 2020, Moorabool Shire Council mayor Dave Edwards expressed such concerns over the proposed Western Victoria Transmission Network Project.

Cr Edwards said electricity grid expansion projects were important for the state and ***council had suggested the cables could run underground,*** *but Ausnet claimed it was less environmentally friendly.*

"I don't necessarily accept that. ***If you look at the productivity of the farmland it's some of the best in Victoria and to have powerlines straight overhead, what does that do to their stock?"***

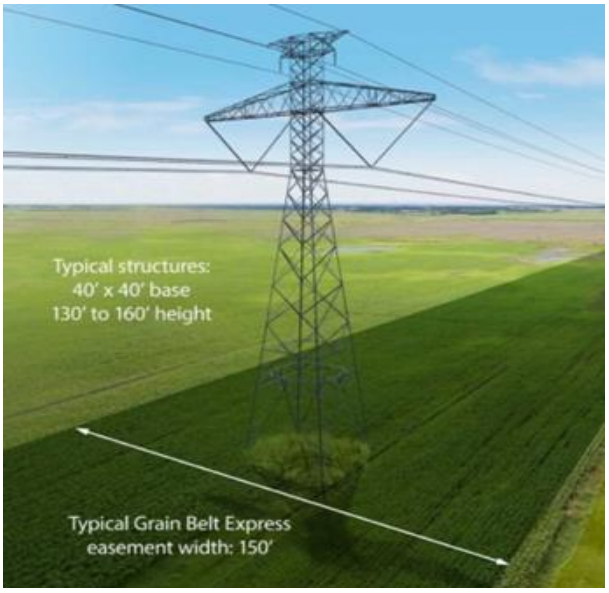
"Some of these farmers have their stock blood-tested before they sent it away, is it going to be affected by radiation? These things need to be understood."

Fifth-generation cattle and lamb farmer Emma Muir is also fighting plans to put 85-metre towers on her Myrniong property that would support the 500-kilovolt transmission lines.

https://www.abc.net.au/news/2020-06-17/western-victorian-farmers-fight-plans-transmission-lines/12363978

25% REDUCTION IN FARM OUTPUT THROUGH TRANSMISSION TOWER EASEMENTS

The 360km HumeLink transmission line project will impact agricultural land including grazing land, dairy farms, orchards, crops, and sheep farms.



Farmland and grazing land are the **preferred routes by energy distributors** as much of the land is already cleared. As a result, **transmission towers that are built on farmland require a 50- to 80-metre-wide easement, reducing farm production capacity by up to 25%.**

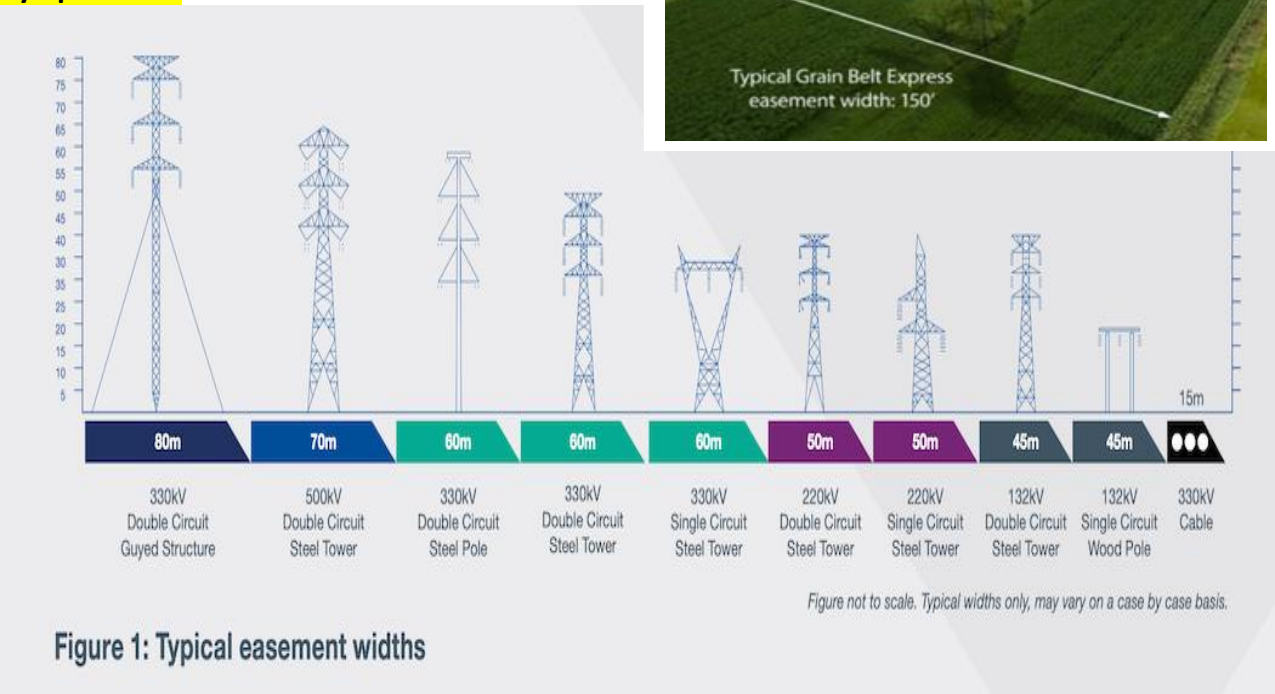


Figure 1: Typical easement widths

https://tatimes.com.au/farmers-prepare-for-new-battle/ July 9, 2020

In the Upper Hunter, Transgrid has proposed a high-voltage line through prime agricultural land on the Merriwa Cassilis plateau.

Farmer Peter Campbell *is among a large group of landholders fighting the proposal.*

"You can't pay us enough. Transgrid and the government could not pay us enough money to host this power line and we will defend our land," Mr Campbell said. "They want to come through here because it's supposedly cheaper and easier across the plateau."

The line is being built to connect the state's first Renewable Energy Zone *in the central west and will transport three gigawatts of renewable power back into the grid.*

"We were sold a line at one of our working groups that we will get $140 off our energy bill. That's a bitter pill to swallow for landholders that are going to host an 80-metre-wide easement across their property and not be compensated properly for it."

The Merriwa Cassilis plateau is prime cropping land.
(ABC News: Jess Davis)
https://www.abc.net.au/news/2021-11-07/renewables-powerlines-on-farming-land/100599454

The same problem in faced in other parts of the world where transmission lines are given "right of way" through prime agricultural land as they are considered vital to support new wind and solar farms.

North Louisiana farmers may be getting calls soon - a major transmission line is in the works to cross through the state... and much of it will cross through farms. Southern Cross spokesperson Denton Gibbes says the project, an approximately 400-mile high-voltage line across north Louisiana, will share renewable energy from wind farms in Texas, through Louisiana, and all the way to the Alabama/Mississippi line.
https://www.knoe.com/content/news/transmission-lines-to-cross-north-louisiana-farmland-398963241.html

PROTESTS FROM VICTORIAN FARMERS OVER LOSS OF LAND

Fifth-generation Newlyn potato farmer and chairman of the Kingston and District Power Alliance, Kain Richardson, said the VNI West would be two 500kV transmission lines that would connect to the Western Renewables link to deliver power into Melbourne.

"We'll be right on the fringe of the VNI West," he said. "We've been advocating that ***the state will be covered in powerlines soon*** *and all communities should be aware of this.* ***More prime agricultural land is going to be affected by this*** *— and not only that, but local tourism industries are going to suffer severe consequences.* ***There's a huge horticultural impact and at the end of the day it'll be a loss of capital value on these places and that could put some farmers in very awkward positions financially.*** *[AEMO chief executive Daniel Westerman] has very little idea of the impacts and the lack of social licence his organisation has."*

https://www.msn.com/en-au/money/markets/aemo-s-renewable-energy-roadmap-ignores-community-stalemate-expert-says/ar-AAZ3Iyn

Ballarat Potato Growers Association chairman Chris Stephens *said the Western Victoria Transmission Network Project* ***puts the region's ability to produce food in jeopardy because of restrictions on machinery and irrigation near easements and under transmission lines.***

"The WVTNP means the loss of over 1,000 hectares of the most productive land in Australia," *he said. "The loss of our overall efficiency and profitability — we're going to lose several highly productive industries. Wake up, you dickheads! Where is the justification in building 1960s technology infrastructure — a cheap and nasty transmission line? There is none."*

Potato farmer Chris Stephens says Victoria's food production will be at risk if the WVTNP goes ahead.
https://www.abc.net.au/news/2020-06-17/western-victorian-farmers-fight-plans-transmission-lines/12363978

More than 70 tractors took to the streets in Ballarat to protest the Western Renewables Link.
(ABC Rural: Jane McNaughton)

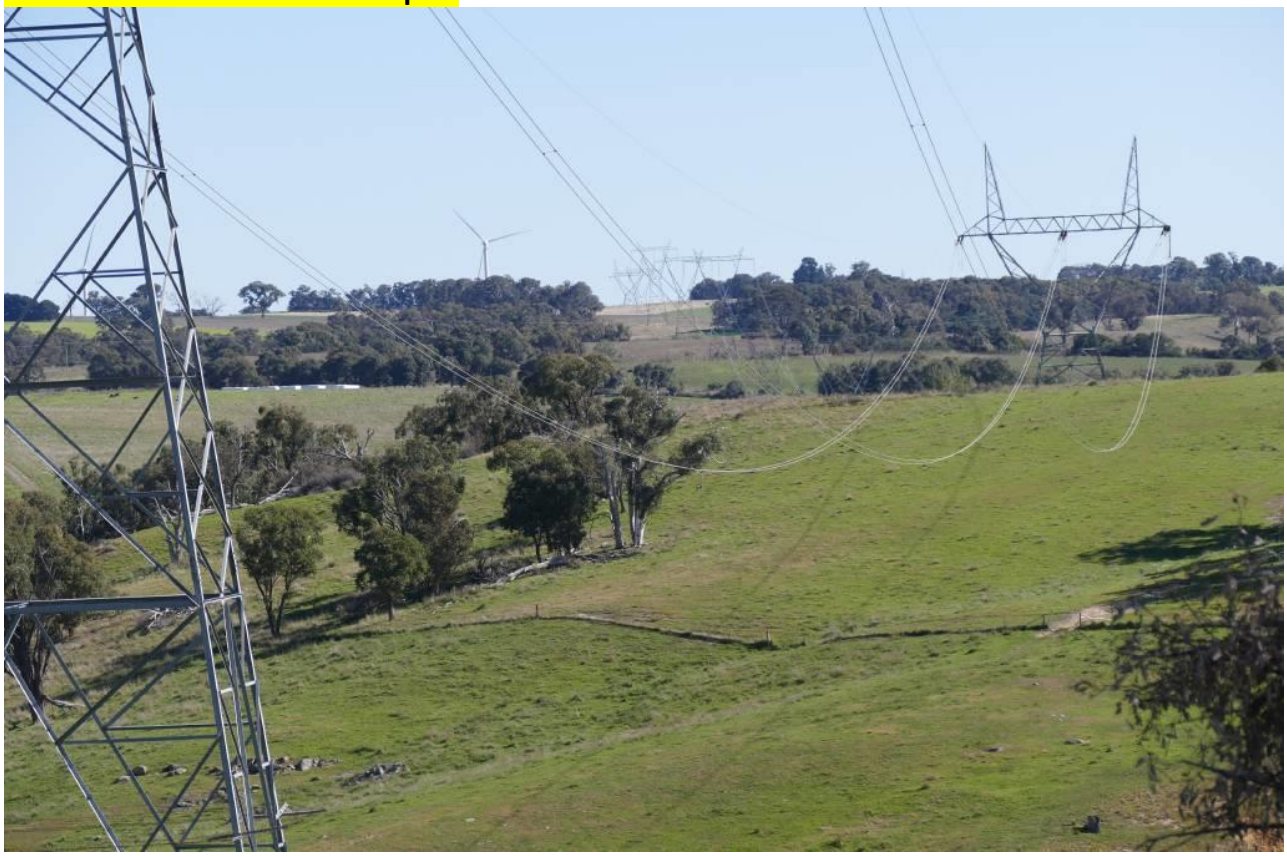
Many attended the rally in tractors or on horseback.
(ABC Rural: Jane McNaughton)

In July 2022, farmers made further protests over the impact on 48 properties of transmission towers that are planned to transmit electricity from rural renewable projects to Melbourne.

In a statement, Ms King said she fully supported the right of the community to protest against this "bad project". ***"Like everybody I am incredibly frustrated by the failure of AusNet to listen to our communities,"*** *she said.*
https://www.abc.net.au/news/rural/2022-07-15/ballarat-tractor-protest-western-renewables-link/101242728

5. Ruin Local Tourist Industries

Prince Philip once described wind turbines and high voltage transmission towers as **"Monstrosities on our landscape."**



(Rows of transmission towers near Crookwell, southern NSW)

The proposed 2,000 85-metre-high transmission towers for the HumeLink Project will have a definite negative impact on rural tourism. A landscape scattered with rows of transmission lines destroys a picturesque rural setting. The view from a mountain top of rolling hills and valleys will be replaced by iron monuments to the green energy transition.

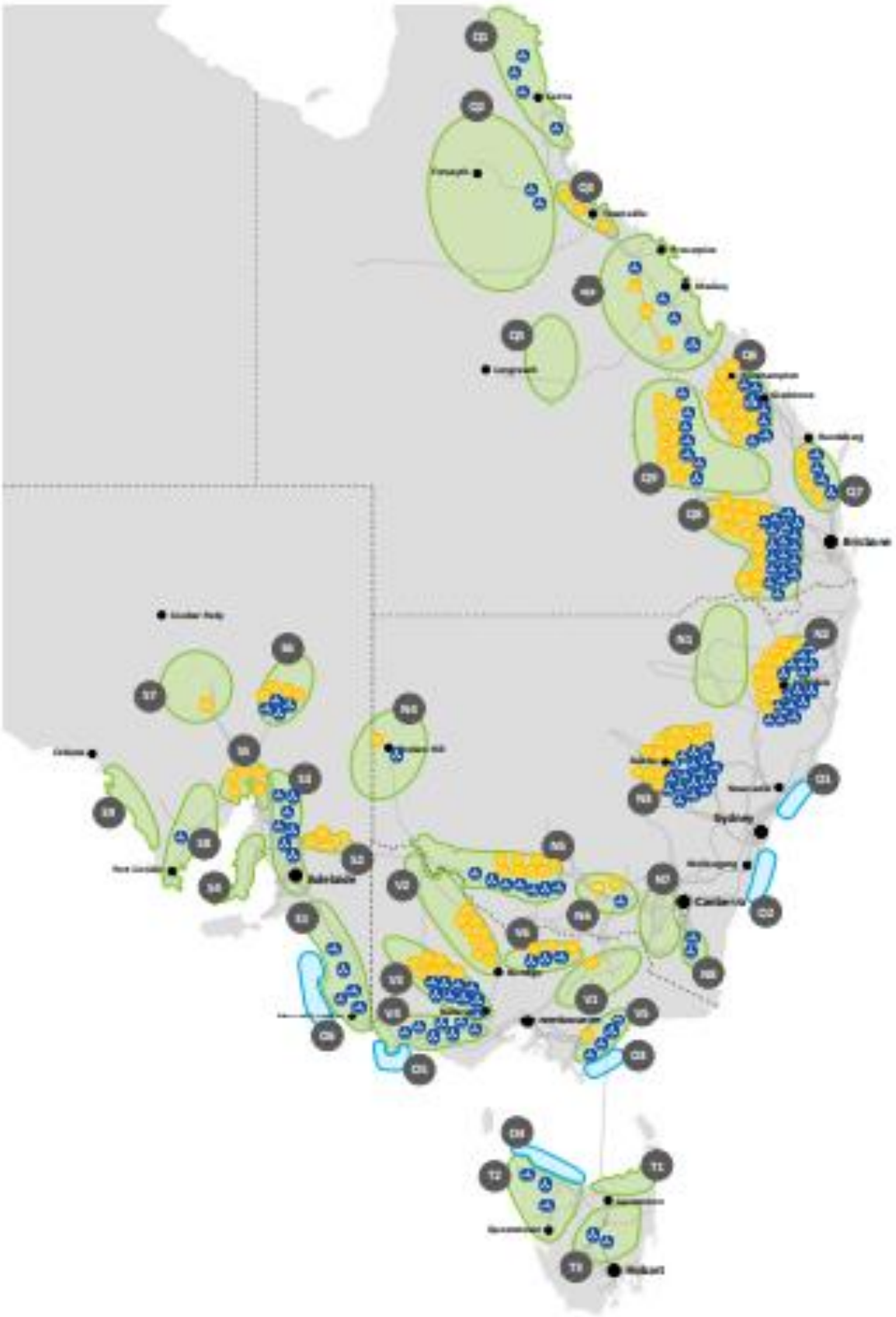
Once stretches of pristine rural land are scarred by an endless row of transmission lines, a visit to the country will lose its attraction.

One of the reasons why the Hills of Gold Wind Farm and its network of transmission lines were defeated by the people of Nundle was the negative impact on rural tourism brought about by destruction to the local landscape and native wildlife.

> **Phil Spark, an ecologist** engaged by the Nundle community group, **opposes the project in its current location.** "I support renewable energy 100% [but] we've got to get it in the right places to have the minimal impact."
>
> **The project's environmental impact statement** identified a total development footprint of **approximately 513 hectares (1,270 acres), with more than 206 ha of native vegetation to be cleared,** including threatened fauna such as koalas, squirrel gliders and booroolong frogs, and flora including a variety of red, ribbon and mountain gum species. "You destroy what's there today with the intention of someday regenerating the same habitat," he said. "You've got all those years until that happens, and, **in the meantime, species can decline and become locally extinct."**
> *https://www.theguardian.com/australia-news/2021/nov/16/windfarm-opponents-in-nundle-accuse-nsw-of-double-standards*

6. Reduce Australia's Capacity to Increase Its Rural Population

The AEMO plans to utilise approximately 750,000 square kilometres of rural land in Queensland, New South Wales, Victoria, Tasmania, and South Australia for 41 Renewable Energy Zones. The AEMO argues that the establishment of 151 wind and 137 solar farms will create extra jobs in rural Australia.



https://aemo.com.au/-/media/files/major-publications/isp/2022/2022-documents/2022-integrated-system-plan-isp.pdf?la=en&hash=D9C31A16AD6BF3FB2293C49AA97FE1EA

But, given the fact that **living within 600m** of high voltage transmission lines increases the risk of:

- Childhood cancer and leukemia
- Glioma and other brain cancers
- Male and female infertility
- Lymphoma nervous system tumours
- Depression and anxiety
- Heart problems

and, given the fact that **living within 2,000m** of wind turbines causes:

- Altered quality of life
- Sleep disturbance
- Excessive tiredness
- Headache and migraines
- Stress, anxiety, and depression
- Hearing problems, including tinnitus
- Heart palpitations
- Degraded living conditions

most people, particularly those with families, would be dreading the news that their family home had become a serious health risk by being situated near one the enormous number of newly planned renewable energy projects.

Instead of attracting people from the cities to the country, there would be a mass exodus of hundreds of impacted rural families to the cities. Ironically, Renewable Energy Zones would become an unexpected contributor to overcrowding in the cities.

Likewise, **if governments were serious about decentralization and encouraging city folk, migrants, and refugees to settle in rural townships, beautiful rural scenes with water security would be more appealing** than a countryside littered with wind turbines, solar farms, and high voltage transmission lines.

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7. Reduce Rural Property Prices

TRANSMISSION TOWERS REDUCE RURAL PROPERTY VALUES IN OTHER PARTS OF AUSTRALIA

In southern NSW, western Victoria, northern Queensland, north-east Tasmania and other parts of Australia, landowners have protested over their concerns for transmission line projects impacting the value of their properties.

Southern NSW farmer, Eric Heffernan, rearranged the hay bales in his paddock to send a blunt message to the company behind a major powerline project between Wagga Wagga, Maragle and Bannaby.

The Biala farmer is among hundreds of landholders protesting a project that would see a 70-metre high, 500-kilovolt transmission line run through about 600 properties in the area.

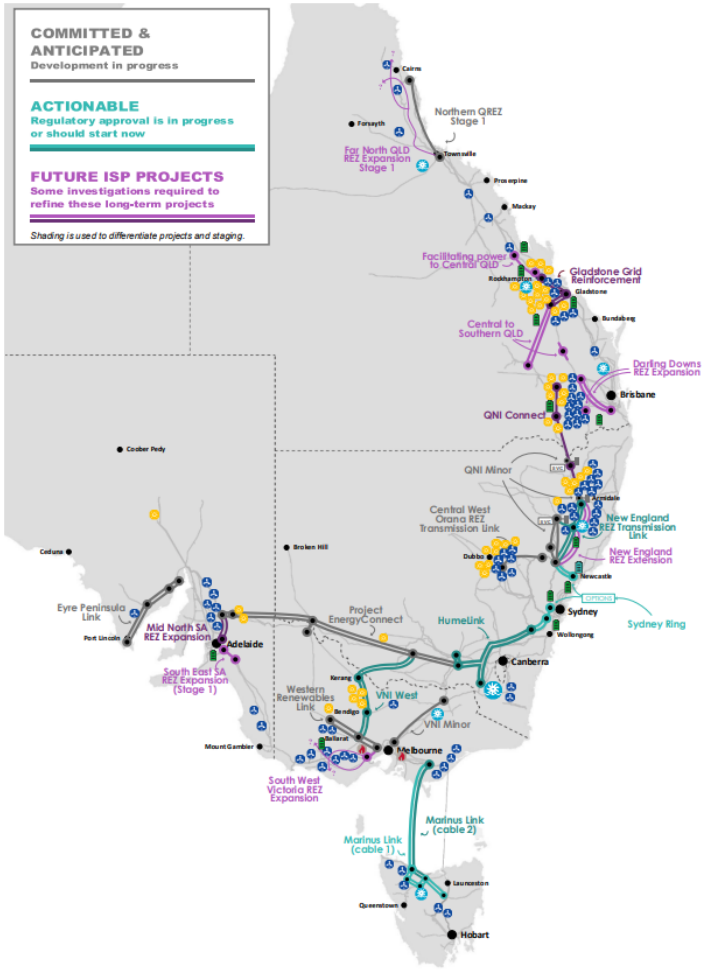
Mr Heffernan and his wife, Lyn, have lived and worked on their property, near Crookwell, for 41 years, but fear they won't be able to pass it on to the next generation. ***"Our daughter would love to come and work on the land, but why would anyone want to when the value of the property will be decreased?"*** *asked Ms Heffernan.*

https://aboutregional.com.au/nsw-farmer-creates-hay-bale-sign-to-protest-against-powerline-project/

This map details the optimal development path of the 28,000km of transmission lines.

Protests from property owners impacted by the proposed route of the 28,000km transmission lines will likely delay the construction of towers and the AEMO's **'irreversible shift to renewables.'**

Figure 2 Map of the network projects in the optimal development path



https://aemo.com.au/-/media/files/major-publications/isp/2022/2022-documents/2022-integrated-system-plan-isp.pdf?la=en&hash=D9C31A16AD6BF3FB2293C49AA97FE1EA

TRANSMISSION TOWERS REDUCE RURAL PROPERTY VALUES IN TEXAS

In other parts of the world, high voltage transmission lines and towers reduce the value of rural property prices as well as their use by landowners. According to **Paramount Property Analysts in Texas,** property prices reduce with existing or planned transmission line projects. **Not only do prices reduce for properties that have given access to towers and transmission lines, but also for neighbouring properties within view of towers and transmission lines.**

The process of building the towers and running the transmission lines can affect the property well beyond the actual right of way. *The initial presence of equipment and building materials, the clearing of vegetation and timber, and the noise associated with construction and maintenance can all depreciate the value of the land.* ***Once the transmission lines are installed, they can detract from the perceived value of the views and general enjoyment of the property.***

The effects of power transmission lines on the health of people and animals *are a subject of much debate. There is little doubt that the general public is concerned about this potential hazard, and thus* ***the appeal of property with transmission lines is reduced. Indeed, in our research we have found a consistent, marked decrease in the value of properties with existing or planned power transmission lines.*** *These properties tend to sell for less than comparable areas without transmission lines, and often sit on the market for much longer.*
https://ppabv.com/transmission-lines-affect-property-value/

In conclusion, high voltage transmission towers:

- Are lightning magnets.
- Have the potential to cause devastating bushfires.
- Pose sinister health risks from electromagnetic radiation.
- May pose health risks to animals.
- Reduce the landholder's capacity of farm production by up to 25%.
- Require the removal of ten of thousands of trees and vegetation.
- Disturb or destroy the habitat and of many native animal species.
- Have a negative impact on rural tourism.
- Discourages decentralisation from overcrowded cities.
- Negatively impact rural property prices.

- *I acknowledge and accept the Department of Planning and Environment's disclaimer and declaration.*
- *Declaration of political donations: None*

Yours sincerely,

Colin Smith

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