



Planting near powerlines

Replacement of trees in avenues and stands near public powerlines in the NBFRA.
Technical Regulator Decision and Consultation summary



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Acknowledgement of Country

As guests here on Kaurna land, we acknowledge everything this department does impacts on Aboriginal country, the sea, the sky, its people and their spiritual and cultural connection which have existed since the first sunrise. Our responsibility is to share our collective knowledge, recognise a difficult history, respect the relationships made over time, and create a stronger future. We are ready to walk, learn and work together.

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12/12/2023	Version 1.0
23/08/2024	Version 2.0 internal OTR review
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Recommendations

The Technical Regulator should not attempt to define 'Avenue' or 'Stand' but simply recognise this as an attempt to preserve the existing 1988 streetscape. At around 35 years later, equivalent community motivations would be to preserve tree canopy cover.

- A tree existing on 1 November 1988 is able to be replaced with that same species, whether or not it was continuously replaced at each senescence, with no conditions.
- A tree existing in the Non Bushfire Risk Area (NBFRA) on public land on 1 January 2017 (although it is acknowledged that there is a reasonable argument that this date should be 11 September 2018) that did not exist on 1 November 1988, will have the powerline clearance maintained by SA Power Networks but on senescence the tree will need to be replaced by a permitted or approved list tree.
- Trees that are planted after 1 January 2017 (not in replacement of a tree that existed at 1 November 1988) must be from the permitted or approved lists.

Regulations history

For the purposes of Part 5 of the Electricity Act, Schedule 2 of the Electricity (Principles of Vegetation Clearance) Regulations sets out requirements for planting or nurturing vegetation near powerlines.

Regulations Schedule 2 Clause 3

3—Exemption

Vegetation may be planted in proximity to a public powerline in a non-bushfire risk area and any such vegetation may be nurtured, if—

- (a) the vegetation is planted in replacement of vegetation in a stand or avenue of vegetation situated along a road; and
- (b) the vegetation is of the same species as that being replaced.

Figure 1: Regulations schedule 2 clause 3

The terms 'Stand' and 'Avenue' are not defined in the Electricity Act 1996 or the Regulations.

The clause first appears in the 9 March 1989 Government Gazette (Figure 4); the variation of the Regulations under the Electricity Trust of South Australia came into operation on that date (figures 3 and 4).

The clause remained unchanged from the 1989 ETSA Regulation through to the current 2021 Regulations under the Electricity Act.

A historical record of the intention of this variation has not been located.

Replacement of trees in avenues and stands near public powerlines in the NBFRA

The variation (figure 4) that added to the column 'ADDITIONAL VEGETATION WHICH MAY BE NURTURED' and substituting, in each case, the statement 'Any vegetation planted or self-sown before 1 November 1988' was added at the same time.

SCHEDULE 2			
<i>Planting or nurturing vegetation in proximity to public supply lines</i>			
1. (1) Only vegetation of a kind set out in the third column of the table below may be planted within the distance set out in the second column from a supply line of a kind set out in the first column.			
(2) Only vegetation of a kind set out in the third or fourth column of the table below may be nurtured if it is growing within the distance set out in the second column from a supply line of a kind set out in the first column.			
SUPPLY LINE	DISTANCE WITHIN WHICH PLANTING OR NURTURING IS CONTROLLED	VEGETATION WHICH MAY BE PLANTED OR NURTURED	ADDITIONAL VEGETATION WHICH MAY BE NURTURED
Overhead public supply line, the conductors of which are not fully insulated, in the bushfire risk area.	Prescribed distance from centreline.	Species listed in schedule 3. Exempt vegetation.	Any vegetation not exceeding 3 metres in height.
	More than the prescribed distance but less than twice the prescribed distance from centreline.	Species listed in schedule 3 or 4. Exempt vegetation.	Any vegetation not exceeding 6 metres in height.
Any other overhead public supply line.	6 metres from centreline.	Species listed in schedule 3 or 4. Exempt vegetation.	Any vegetation not exceeding 6 metres in height.
Underground public supply line constructed to operate at a voltage of 66kV or more.	3 metres from centreline.	Species listed in schedule 3. Exempt vegetation.	Any vegetation not exceeding 3 metres in height.
Any other underground public supply line.	No control.		
27 October 1988] THE SOUTH AUSTRALIAN GOVERNMENT GAZETTE 1433			
2. In this schedule—			
"exempt vegetation" means—			
(a) vegetation (such as small plants that produce flowers or vegetables, ground covers, cereal crops or small bushes or shrubs) with an expected mature height of less than two metres;			
(b) vegetation in relation to which an exemption is in force under regulation 16:			
"prescribed distance" means—			

Figure 2: SA Government Gazette first regulations published 27 October 1988

REGULATIONS UNDER THE ELECTRICITY TRUST OF SOUTH AUSTRALIA
ACT, 1946

Electricity Trust of South Australia Regulations, 1988

being

No. 220 of 1988: Gaz. 27 October 1988, p. 1414¹

as varied by

No. 32 of 1989: Gaz. 9 March 1989, p. 690
No. 122 of 1992: Gaz. 25 June 1992, p. 1968
No. 222 of 1993: Gaz. 30 September 1993, p. 1481²
No. 174 of 1994: Gaz. 20 October 1994, p. 1190³

¹

Came into operation 1 November 1988: reg. 2.

²

Came into operation 30 September 1993: reg. 2.

³

Came into operation 1 November 1994: reg. 2.

Figure 3: First version of regulations came into operation on 1 November 1988

Planting or nurturing vegetation in proximity to public supply lines

9. Schedule 2 to the principal regulations is varied—

(a) by striking out from subclause (1) of clause 1 “Only” and substituting “Subject to clause 1a, only”;

(b) by striking out from subclause (2) of clause 1 “Only” and substituting “Subject to clause 1a, only”;

(c) by striking out from the table in clause 1 each of the statements in the column headed “ADDITIONAL VEGETATION WHICH MAY BE NURTURED” and substituting, in each case, the statement “Any vegetation planted or self-sown before 1 November, 1988.”;

and

(d) by inserting after clause 1 the following clause:

9 March 1989]

THE SOUTH AUSTRALIAN GOVERNMENT GAZETTE

693

1a. Vegetation may be planted in proximity to a public supply line in a non-bushfire risk area and any such vegetation may be nurtured, if—

(a) the vegetation is planted in replacement of vegetation in a stand or avenue of vegetation situated along a road;

and

(b) the vegetation is of the same species as that being replaced.

Figure 4: Regulations variation published 9 March 1989

At a meeting convened by OTR on 28 September 2023 with 20 online and 20 in person attendees, one of the original drafters of the ETSA Vegetation Clearance Regulations, Dr Peter Dean, shared his recollections of the intent of the clause. The intent was apparently to address concerns that the Adelaide metropolitan streetscape of 1988 would be decimated by the planting restrictions as the existing trees enter senescence and are replaced with smaller trees. It was deliberately left imprecisely defined.

Following the meeting, OTR called for written submissions, with a total of 12 submissions being received.

Discussion

Clause 3 of Schedule 2 of the Regulations permits replanting of trees recognised as being in an Avenue or Stand, whether or not the regulations otherwise restrict these plantings.

The broadest interpretation of 'avenue' or 'stand' would include all street trees. The narrowest interpretation would be only those trees that are part of declared Avenues of Honour (stand would then be where trees are on one side of the road only). All submissions were a compromise between the extremes.

Removal of 'avenue' and 'stand' as terms in the Regulations and reference to a date of planting of an individual tree was supported generally by all except SA Power Networks.

Referring to <https://www.greenadelaide.sa.gov.au/projects/urban-heat-and-tree-canopy-mapping>, work by Green Adelaide¹ appears to show that Adelaide's urban heat mitigation is reliant upon street trees, due to reducing tree canopy on residential land. Any unreasonable or arbitrary restrictions on street trees would be unacceptable to anyone aware of this.

SA Power Networks has conceded that a tree existing in an avenue or stand on 1 November 1988 is able to be replaced with that of the same species, whether or not it was continuously replaced at each senescence, with no conditions.

All submissions agreed that a tree existing in an avenue or stand (on a date that is not agreed, either 1 January 2017 or 11 September 2018) that did not exist on 1 November 1988, will have the powerline clearance maintained by SA Power Networks but on senescence the tree will need to be replaced by a permitted or approved list tree.

The recommendations preclude infill additional plantings that were not present at 1 November 1988 from being part of the Clause 3 Schedule 2 replacement planting exemption.

¹ Green Adelaide 2024, *Urban heat and tree canopy mapping*, viewed 22 August 2024, <https://www.greenadelaide.sa.gov.au/projects/urban-heat-and-tree-canopy-mapping>

The Technical Regulator would accept and maintain records of identified 1 November 1988 and 1 January 2017 extant and former tree plantings. This would be on request by a council that deemed this a necessary step. Individual records would be made available to SA Power Networks or another electricity distributor with responsibility under Electricity Act for keeping trees clear of powerlines. It is anticipated that this would fall short of a comprehensive register of such identified plantings as called for in some submissions, and neither would it be a register of 'avenues' and 'stands'.

A submission argued that along with the removal of 'avenue' and 'stand' from the regulations, a future date should be declared and all trees in place at that date be exempted from planting restrictions. While this would protect existing illegally planted trees, it is not being considered further in part as there will need to be agreements in place for future powerline clearance of these trees.

Tangential matters raised in the submissions

Councils and planting exemptions

Councils advise that obtaining planting exemptions from the Technical Regulator or entering into schemes under the Electricity Act exposes them to uninsurable risks that excludes this as an option. Section 245 of the *Local Government Act 1999* supports this conclusion. [Local Government Act 1999 \(legislation.sa.gov.au\)](https://legislation.sa.gov.au)

15.2.2024—Local Government Act 1999 Land—Chapter 11 Other matters—Part 5	
245—Liability for injury, damage or loss caused by certain trees	
(1)	A council is not liable for any damage to property which results from— (a) the planting of a tree in a road; or (b) the existence of a tree growing in a road (whether planted by the council or not).
(2)	However, if— (a) the owner or occupier of property adjacent to the road has made a written request to the council to take reasonable action to avert a risk of damage to property of the owner or occupier from the tree; and (b) the council has failed to take reasonable action in response to the request, the council may be liable for any damage to property that would have been averted if the council had taken reasonable action in response to the request.

Figure 3: Local Government Act tree damage liability

However, Section 232 of the Local Government Act also requires that councils consider powerlines before planting.

Division 11—Miscellaneous 232—Trees Before a council plants vegetation, or authorises or permits the planting of vegetation, on a road, the council must (in addition to complying with any other statutory requirement)—	
(a) give consideration to whether the vegetation is, on balance, appropriate to the proposed site taking into account—	
(i) environmental and aesthetic issues; and	
Published under the <i>Legislation Revision and Publication Act 2002</i>	
19	
Local Government Act 1999—15.2.2024 Chapter 11—Land Part 2—Roads Division 11—Miscellaneous	
(ii) the use and construction of the road (including the potential for interference with the construction of the road or with structures (including pipes, wires, cables, fixtures, fittings or other objects) in the road); and	
(iii) road safety matters; and	
(iv) other matters (if any) considered relevant by the council; and	
(b) if the vegetation may have a significant impact on residents, the proprietors of nearby businesses or advertisers in the area, follow the relevant steps set out in its public consultation policy.	

Figure 4: Local Government Act tree planting considerations

Thus it is accepted that councils will not enter into exemptions to planting restrictions under Electricity (Principles of Vegetation Clearance) Regulation 7(1)(b) or schemes as intended under Section 55A of the Electricity Act where liability would rest with the council for injury, damage or loss caused by a tree planted in a road. Councils still have an obligation under the Local Government Act to consider the powerlines before planting street trees.

36—General powers and capacities	
(1) A council—	
(a) has the legal capacity of a natural person and, in particular—	
(i) may enter into any kind of contract or arrangement; and	
(ii) may sue and be sued; and	
(iii) may act in conjunction with another council or authority, or a person; and	
(b) has the other powers and capacities conferred by or under this or another Act; and	
(c) has the power to do anything necessary, expedient or incidental to performing or discharging its functions or duties or to achieving its objectives.	
(2) A council may act outside its area—	
(a) to the extent considered by the council to be necessary or expedient to the performance of its functions; or	
(b) in order to provide services to an unincorporated area of the State.	
(3) A council should, in the arrangement of its affairs, take reasonable steps to separate its regulatory activities from its other activities.	
(4) A council must not do anything inconsistent with a law of the State or Commonwealth.	

Figure 5: Local Government Act council powers and capacities

Planting near low risk powerlines

Planting vegetation near powerlines is controlled by the Electricity (Principles of Vegetation Clearance) Regulations. In the non-bushfire risk area defined under the regulations, the focus is on preventing power outages by restricting the planting of trees to those that will not grow as tall as the powerlines. The minimum height of powerlines over land other than the carriageway of a road e.g. a roadside verge is 5.5 metres for low voltage (LV) and 6.0 metres for 11kV².

In 2010, on expiry of a scheme agreed under the Electricity Act between an Adelaide metropolitan council and SA Power Networks, where significant clearance to low voltage powerlines was not in compliance, a low risk powerline clearance principle was added to the regulations.

The clearance to uninsulated LV conductors in non bushfire risk areas is 0.1 m, as it has been since the regulations under the Electricity Trust of South Act came into operation on 1 November 1988. With over 13 years since the introduction of the low risk principles in 2010, the metropolitan area community has adjusted to seeing foliage through low voltage powerlines, without attributing outages to the low risk powerline principles.

It is valid at this point to consider whether the low risk powerline principles should affect the planting restrictions. That is, should planting restrictions be changed to allow trees that will grow through powerlines. Considering the minimum height of powerlines over roadsides³ is 5.5 metres for low voltage and 6.0 metres for 11kV, it would seem that restricting the planting of trees to those that grow to 6 metres in height is necessary for 11kV powerlines. Where there are no 11kV powerlines above the low voltage lines this is not a restriction, however there is a risk that the network will need augmentation in the future and permitted trees that were planted become unsuitable. Should the minimum ground height of powerlines be revised, we should be alert to revisiting the maximum permitted list tree height.

Heritage, historic and character area plantings

Submissions discussed having additional tree species approved for defined heritage areas.

As the regulations currently define *permitted vegetation* as 'species in the list of vegetation with an expected mature height of more than 3 m but not more than 6 m' we can have tree

² [Electricity \(General\) Regulations 2012 | South Australian Legislation](#)

³ [Electricity \(General\) Regulations 2012 | South Australian Legislation](#)
[https://www.legislation.sa.gov.au/lz/path=%2FC%2FR%2FElectricity%20\(General\)%20Regulations%202012](https://www.legislation.sa.gov.au/lz/path=%2FC%2FR%2FElectricity%20(General)%20Regulations%202012)

species on the list restricted to defined areas where the expected mature height for that species is predictable and different to that expected if planted outside that area.

That an area has a particular character or history is not a relevant concern under the Electricity Act. If the suggestion is that a higher risk of powerline damage, firestarts and power outages should be accepted in such an area, we return to a discussion of where the responsibility for the increased risk should be placed. If this can be addressed in a council heritage management plan then it could be considered under existing regulations exemption provisions, or a regulation variation that would refer to these exemption provisions or the existing Electricity Act Section 55A vegetation clearance scheme provision.

Review of the permitted and approved lists for errors

The permitted and approved lists contain species names that have changed since 1988 and typographic and other errors. There are also many species on the lists that are unable to be sourced for planting by councils at this time.

There is little benefit and some risk in removing species that are currently unavailable, for example if they later become available again.

The Office of the Technical Regulator has contacted the Adelaide Botanic Gardens for assistance in correcting the permitted and approved lists. Work is ongoing to improve the presentation of the lists.

Regulations consultation between the Technical Regulator and councils

It is well noted that much previous consultation on vegetation regulations variations has been conducted through SA Power Networks' convened working groups. Submissions have advised that this has had the appearance of SA Power Networks driving the regulations variations. The Office of the Technical Regulator acknowledges here that SA Power Networks' expert stakeholder engagement professionals and established industry contacts have been used effectively to reduce redundancy of effort. The meeting of 28 September 2023 has proved that industry will show up, that this model of consultation can be effective, and will be implemented in future.

Tree canopy cover

Most submissions explained local councils' increased tree canopy cover target obligations, reinforcing the criticality of street trees in preventing urban heat islands. This weighs heavily on considerations in addition to community amenity and future health, as while not raised in submissions (relates to underground powerline areas), excess radiant heat at night directly affects reliability of the electricity network for example by not allowing padmounted

transformer enclosures to cool down overnight leading to blown fuse outages on high load nights.

Green Adelaide defines tree canopy as *any horizontal vegetation that is 3 metres in height or greater*.⁴ We note that while taller trees provide better canopy cover, species on the permitted list all contribute to canopy cover, being expected to grow to 3-6 metres in height.

Cost of living outcomes

We note that around 70% of 2021 South Australia Census⁵ respondents were homeowners, leaving around 30% being electricity consumers not directly paying council rates (this cost likely being embedded in rental arrangements).

An increase in the cost of maintaining vegetation clearances to powerlines in metropolitan areas will be borne ultimately by the people of South Australia generally, whether the responsibility for these costs rest with the regulated monopoly electricity distributor (funded by a regulated portion of the electricity bill) or local councils (funded by ratepayers).

Consultation, communication, and engagement

The Office of the Technical Regulator (OTR) held a meeting on 28 September 2023 with 20 online and 20 in person attendees. See Appendix B for the minutes. OTR called for presenters throughout their networks. Four engaging presenters precipitated a robust discussion. Notably, one of the original drafters of the Vegetation Clearance Regulations, Dr Peter Dean attended and shared his recollections of the intent of the regulation and provided considered responses to participant's questions.

Following the meeting, OTR called for written submissions, and extended the due date to 4 December 2023. The last submission was received on 6 December 2023, with a total of 12 submissions being received.

Submissions received

1. Resilient South, whose partners include City of Holdfast Bay, City of Marion, City of Mitcham, City of Onkaparinga. *An administrative submission drafted by council staff,*

⁴ Green Adelaide 2024, *Urban heat and tree canopy mapping*, viewed 22 August 2024, <https://www.greenadelaide.sa.gov.au/projects/urban-heat-and-tree-canopy-mapping/faqs-mapping-adelaide-urban-environment>

⁵ Australian Bureau of Statistics 2022, *Snapshot of South Australia*, ABS, viewed 22 August 2024, <https://www.abs.gov.au/articles/snapshot-sa-2021>

not endorsed by council chambers. Submission received from Dr Stefan Caddy-Retalic Regional Coordinator, Resilient South.

2. Ian Seccafien, Coordinator Arboriculture, City of Marion and arborist member of the SA Power Networks Local Government working group committee. Additional comments also supporting the Resilient South submission.
3. Resilient East, whose partners include the City of Adelaide, City of Burnside, Campbelltown City Council, City of Norwood, Payneham and St Peters, City of Prospect, City of Tea Tree Gully, City of Unley, Town of Walkerville. *This submission does not reflect formal Council consideration by any of the constituent Councils. This input is intended to provide a perspective from regional climate change adaptation practitioners. Resilient East echo comments from Resilient South and Green Adelaide and acknowledge the combined input to create this submission.* Submission received from Maria Zotti, Chair, Resilient East Steering Committee, on behalf of Resilient East.
4. City of Campbelltown. Endorsed by Council 5 December 2023. Received from Maria Zotti, Manager Environment & Sustainability Services.
5. City of Norwood Payneham and St Peters. *Please note that whilst the following submission presents the views of the Council's administration and has not received formal endorsement from the Council, the submission aligns with the Council's established and endorsed position on trees and canopy cover in the City.* Submission received from Lisa Mara Acting Chief Executive Officer.
6. City of Charles Sturt. Submission received from Mark Hannan, Strategic Planner – Open Space Environmental Management. Additional comments also supporting the Resilient South submission.
7. City of Port Adelaide Enfield. Submission received from Peter Gehling - Field Team Leader, Biodiversity and Urban Greening, Parks and Gardens.
8. City of Holdfast Bay. Submission not been endorsed by council chambers and should be regarded as an administrative submission drafted by council staff in line with previous council positions. Received from Alex Gaut, Team Leader Environment & Coast.
9. Resilient Hills & Coasts, whose partners include: the councils of Adelaide Hills, Alexandrina, Kangaroo Island, Mount Barker, Victor Harbor and Yankalilla; the Southern & Hills Local Government Association; two Landscape Boards, Hills & Fleurieu and Kangaroo Island; Regional Development Australia (RDA) Adelaide Hills, Fleurieu and Kangaroo Island; and the Department for Environment and Water. *This submission was prepared by the Resilient Hills & Coasts Steering Committee and does not replace or constitute individual partner submissions.* Submission received from Jen St Jack, Resilient Hills & Coasts Coordinator.

10. SA Power Networks, the electricity distributor with responsibility under the Electricity Act for keeping street trees clear of powerlines in most areas of South Australia. Submission received from Matthew Napolitano Executive General Manager Network Management.
11. Green Adelaide. Received from Brenton Grear, Director Green Adelaide.
12. Kelvin Trimper. *We acknowledge the legacy of Kelvin Trimper in the outcome of this report.*

Written submission summary

Issue	Submitted by
Tree canopy for mitigation of urban heat which is increasing as a result of climate change. Total canopy appears to be declining, primarily driven by the removal of trees on private land. The loss of private realm trees makes the ability to grow trees on public land even more critical	Resilient South Resilient Hills & Coasts Ian Seccafien Coordinator Arboriculture City of Marion Resilient East City of Campbelltown City of Holdfast Bay City of Norwood Payneham & St Peters City of Charles Sturt
State government commitment under the 30-Year Plan for Greater Adelaide	Resilient South Resilient Hills & Coasts Ian Seccafien Coordinator Arboriculture City of Marion Resilient East City of Holdfast Bay City of Norwood Payneham & St Peters City of Charles Sturt
Right tree the right place.	City of Norwood Payneham & St Peters SA Power Networks
Council land is encumbered by provisions for utilities, the most burdensome being those under Electricity (Principles of Vegetation Clearance) Regulations 2021.	Resilient South Ian Seccafien Coordinator Arboriculture City of Marion Resilient East City of Campbelltown City of Holdfast Bay



Replacement of trees in avenues and stands near public powerlines in the NBFRA

Issue	Submitted by
	City of Norwood Payneham & St Peters City of Charles Sturt Resilient Hills & Coasts
Permitted List taxa are small, usually short-lived trees that cost more to the community due to the need to more regularly remove and replace them as they senesce, with the community receiving less net benefit due to reduced shade and amenity.	Resilient South Ian Seccafien Coordinator Arboriculture City of Marion Resilient East City of Campbelltown City of Holdfast Bay City of Norwood Payneham & St Peters City of Charles Sturt Resilient Hills & Coasts
Change in SA Power Networks and its predecessor ETSA tolerance of planting of limited numbers of non-approved species under powerlines without agreement.	Resilient South Ian Seccafien Coordinator Arboriculture City of Marion Resilient East City of Holdfast Bay City of Norwood Payneham & St Peters City of Charles Sturt Resilient Hills & Coasts
Documentation for 1 January 2017 as 'line in sand' date.	Resilient South Ian Seccafien Coordinator Arboriculture City of Marion Resilient East City of Holdfast Bay City of Norwood Payneham & St Peters



Replacement of trees in avenues and stands near public powerlines in the NBFRA

Issue	Submitted by
	City of Charles Sturt
Vegetation clearance agreements with SAPN. Compatibility with the Local Government Act 1999 and uninsurable liabilities. Councils do not view entering into a vegetation clearance agreement as a viable option.	Resilient South Ian Seccafien Coordinator Arboriculture City of Marion Resilient East City of Holdfast Bay City of Norwood Payneham & St Peters City of Charles Sturt
Responsibility for additional costs from non-compliant plantings. Responsibility for costs associated with keeping vegetation clear of powerlines more generally.	Resilient South Ian Seccafien Coordinator Arboriculture City of Marion Resilient East City of Holdfast Bay City of Norwood Payneham & St Peters City of Charles Sturt SA Power Networks
Dr Peter Dean's recollection of the replacement planting exemption provision, that these terms were deliberately not given a narrow definition. We note his view that an avenue could include a single row of trees and that a stand could represent a single tree, effectively meaning that together, these two terms would include any trees in place at the time that the Regulations came into effect. During the workshop, Kelvin Trimper (SA Power Networks Customer Advisory Board Deputy Chair) proposed the removal of the terms 'avenue' and 'stand' from the Regulations, to be replaced by exemption for all roadside vegetation under powerlines that was contributing to canopy, amenity and/or character on 1 November 1988. It was further proposed that sufficient supporting evidence of the existence and species of the	Resilient South Ian Seccafien Coordinator Arboriculture City of Marion Resilient East City of Campbelltown City of Holdfast Bay City of Norwood Payneham & St Peters City of Charles Sturt Green Adelaide Resilient Hills & Coasts



Replacement of trees in avenues and stands near public powerlines in the NBFRA

Issue	Submitted by
vegetation be required (i.e. aerial photographs, location identifiable on-ground photographs, planting records etc.).	
Balance between maintaining a safe and cost-effective maintenance regime for electricity infrastructure, and the imperative of maintaining an extensive urban forest in a time of unprecedented urban heat and ramping climate change.	Resilient South Ian Seccafien Coordinator Arboriculture City of Marion City of Campbelltown City of Holdfast Bay City of Norwood Payneham & St Peters City of Charles Sturt
We recommend that the OTR liaises with its colleagues in Planning and Land Use Services and Green Adelaide to harmonise the State Government position on canopy targets in Adelaide and suggest that achieving this may require substantial revision of the Regulations.	Resilient South Ian Seccafien Coordinator Arboriculture City of Marion Resilient East City of Campbelltown City of Holdfast Bay City of Norwood Payneham & St Peters City of Charles Sturt
We believe that the Regulations should also have regard to other objectives that exist across the land use planning system, particularly as they relate to heritage and character. These locations often articulate the importance of the continuous canopies of street trees, often of species that are not identified within the Regulations, as an essential element of the importance of these locations and are also typically highly valued by the community.	Resilient South Ian Seccafien Coordinator Arboriculture City of Marion City of Holdfast Bay City of Charles Sturt
Remove “avenue” and “stand” from the Regulations as these are ambiguous terms.	Resilient South Ian Seccafien Coordinator Arboriculture City of Marion Resilient East



Replacement of trees in avenues and stands near public powerlines in the NBFRA

Issue	Submitted by
	City of Campbelltown City of Holdfast Bay City of Norwood Payneham & St Peters City of Charles Sturt Green Adelaide Resilient Hills & Coasts
Replace the terms “avenue” and “stand” with a provision of any vegetation in place on 11 September 2018 (the date of the publication of the SAPN Powerline Friendly Trees List, representing the first unambiguous notification that councils received from SAPN of their change in enforcement policy).	Resilient South Ian Seccafien Coordinator Arboriculture City of Marion Resilient East City of Campbelltown City of Holdfast Bay City of Norwood Payneham & St Peters City of Charles Sturt
Replace the terms “avenue” and “stand” with a provision that any vegetation in place before a specified date of commencement (ie. at a future date), is exempt from planting restrictions and removal powers. Future dating this change is critical, as it will ensure that significant community investments made in recent years do not go to waste.	Resilient Hills & Coasts
Create a provision allowing for the use of various tree species that are appropriate to the historic and character values (noting that this will vary according to location) of designated Historic Area and Character Area Overlays as identified within the Planning and Design Code and/or in adopted council heritage management plans for specific precincts (e.g. Colonel Light Gardens, North Adelaide).	Resilient South Ian Seccafien Coordinator Arboriculture City of Marion Resilient East City of Holdfast Bay City of Norwood Payneham & St Peters City of Charles Sturt Resilient Hills & Coasts



Replacement of trees in avenues and stands near public powerlines in the NBFRA

Issue	Submitted by
Review the Permitted and Approved Lists, which currently contain several typographical errors, obsolete taxonomy, and unavailable cultivars	Resilient South Ian Seccafien Coordinator Arboriculture City of Marion Resilient East City of Campbelltown City of Holdfast Bay City of Norwood Payneham & St Peters City of Charles Sturt City of Port Adelaide Enfield
Review the Permitted and Approved Lists to provide more options that provide net benefits and are actually available in nurseries.	Resilient Hills & Coasts
Request that any future consultation undertaken by the Office of the Technical Regulator be undertaken directly with our councils and other relevant stakeholders, and not through any committees established by SA Power Networks.	Resilient South Ian Seccafien Coordinator Arboriculture City of Marion Resilient East City of Holdfast Bay City of Norwood Payneham & St Peters City of Charles Sturt
Plantings and clearance distances under low risk powerlines (LV NBRA only).	Ian Seccafien Coordinator Arboriculture City of Marion City of Charles Sturt
Council is committed to continue working with partners to find appropriate solutions to meet mutually beneficial outcomes, including trialling planting new species that do not conflict with electrical infrastructure or require excessive pruning under powerlines	City of Campbelltown



Replacement of trees in avenues and stands near public powerlines in the NBFRA

Issue	Submitted by
- Avenue – a street or road planted with trees that contribute to the character and amenity of the streetscape - Stand – A group of trees that contribute to the character and amenity of the streetscape	City of Charles Sturt
Any tree that was in the location from 1988 versus identifying the species.	City of Port Adelaide Enfield
Review of existing avenues leading to the development of a database of avenues.	City of Port Adelaide Enfield
Vegetation may be planted in proximity to a public powerline in a non-bushfire risk area and any such vegetation may be nurtured, if— (a) the vegetation is planted in replacement of vegetation which was situated along a road on 1 November 1988; and (b) the species of the vegetation is known and/or agreed upon; and (c) the vegetation is of the same species as that being replaced. This proposed change to the Regulations would have the same effect as taking the broadest possible definition of 'stand', being a stand of a single tree. Green Adelaide suggests that should this change to the definition of exempt vegetation be adopted, where a council or landowner deems it undesirable to replace vegetation with the same species which was present on 1 November 1988, the replacement vegetation should be required to be a species from the approved or permitted species list. Furthermore, if the species of vegetation present on 1 November 1988 is not known and/or agreed upon, the replacement vegetation should be required to be a species from the approved or permitted species list.	Green Adelaide
Revise the date of application of the Regulations Green Adelaide also suggests that, if there is an amendment to the Regulations, consideration should be given to the date from which the Regulations are to apply. The urban landscape of metropolitan Adelaide has changed significantly in the 35 years	Green Adelaide



Replacement of trees in avenues and stands near public powerlines in the NBFRA

Issue	Submitted by
since 1 November 1988 and continues to do so. SA Power Networks has currently agreed to maintain all vegetation planted up until 1 January 2017 and is undertaking this work within current budgets (albeit on the proviso that that if non-compliant vegetation planted between 1 November 1988 and 1 January 2017 needs to be replaced, it is replaced with compliant vegetation).	
Green Adelaide suggest that this date could be used in an update of the Regulations, with all vegetation planted up to 1 January 2017 classified as exempt. If this is supported, Green Adelaide recommends the following be included as replacement text in the Regulations: Vegetation may be planted in proximity to a public powerline in a non-bushfire risk area and any such vegetation may be nurtured, if— (a) the vegetation is planted in replacement of vegetation which was situated along a road on 1 January 2017; and (b) the species of the vegetation is known and/or agreed upon; and (c) the vegetation is of the same species as that being replaced.	Green Adelaide
As stated at the discussion meeting on 28 September 2023, I believe there is no “easy fix” to this definition dilemma. As stated at the meeting, I suggest the definition of “Avenues and Stands” be replaced with a date referenced definition as follows:- 1. Trees planted pre-1988 Any vegetation which was planted under power lines in non-bushfire areas prior to 1988 will continue to be maintained by SAPN and can be replaced with identical species if they die or need to be replaced. 2. Trees Planted 1988 – 1 January 2017 Any vegetation which was planted 1988 – 1 January 2017 in non-bushfire areas will be maintained by SAPN. However, unless an exemption is granted, any vegetation not on	Kelvin Trimper Supported by: City of Port Adelaide Enfield



Replacement of trees in avenues and stands near public powerlines in the NBFRA

Issue	Submitted by
the approved species list which requires replacement must be replaced by an approved species. 3. Trees Planted After 1 January 2017 Any vegetation planted after 1 January 2017 which is not in non-bushfire areas which existed prior to 1988, or is provided an exemption, will be maintained by SAPN only if it is from the approved species lists. Non-compliant vegetation can only remain if maintained at the owner's expense to the standards agreed with SAPN and the Regulator. Otherwise, it will be removed."	
Vegetation is a significant source of power outages and reliability. In the Eastern suburbs of Adelaide, vegetation has been responsible for up to 50% of outages due to a higher density of large and mature trees. Vegetation can also impact live powerlines creating a community safety risk that requires an immediate response from SA Power Networks crews and emergency services personnel. Our customers and communities are at risk of electric shock or electrocution if they contact live powerlines. In addition, bushfire risk is SA Power Networks' largest corporate risk. This risk extends to our customers and communities and is the major focus of our vegetation clearance program.	SA Power Networks
Our legislated vegetation management program is the biggest, single operational cost for the business – a cost that is wholly borne by electricity customers. Much of that cost has been built into our annual budget because of the planting of inappropriate trees near powerlines over the past 40-50 years. The community has high expectations regarding the safety and reliability of our network, and we seek to meet these in a way that is cost effective and sustainable for all South Australians.	SA Power Networks
To reduce ongoing costs and pressure from stakeholders and customers, in 2015, SA Power Networks commenced communication with Councils to advise that all trees	SA Power Networks



Replacement of trees in avenues and stands near public powerlines in the NBFRA

Issue	Submitted by
planted near overhead powerlines after 1 January 2017 would need to meet legislated requirements.	
The intent of the Act needs to be discussed in the context of an evolving energy and sustainability landscape. While we believe that the intent when introduced, was to protect established trees within an Avenue or Stand (those that existed on 1 November 1988), we need to ensure that the scope does not expand to include infill planting. As advised in the workshop session on 21 September by Dr. Peter Dean, any tree planted after this date would need to meet the requirements of the legislation and be chosen from the appropriate planting list. It is readily apparent that this has not occurred, and several councils have chosen species outside of the approved list.	SA Power Networks
If there was an existing Avenue or Stand at a specific location, we concede that this could be replaced regardless of whether it was removed at a point after 1 November 1988, however this discussion should confirm the replacement of individual trees that are proven to have existed on 1 November 1988, not additional or infill inappropriate tree species.	SA Power Networks
SA Power Networks supports the position that any Avenue or Stand that existed on 1 November 1988 in a non-bushfire risk area may be included in the exemption framework. This means if a tree requires replacement, it can be replaced like for like, in accordance with the legislation. SA Power Networks will continue to maintain these avenues and stands as part of its vegetation maintenance program at no expense to Council and will continue to accept the costs arising from the interaction of these trees with electrical infrastructure. SA Power Networks will continue to maintain Avenues or Stands established after 1 November 1988 at no expense to Council and will continue to accept associated costs however the replacement of any tree in an Avenue or Stand must be chosen from the OTR's Appropriate Species List.	SA Power Networks



Replacement of trees in avenues and stands near public powerlines in the NBFRA

Issue	Submitted by
Any Avenue or Stand established after 1 January 2017 must be chosen from species from the Appropriate Species List. If species not on the list are planted near powerlines in contravention of the Act, Council can either apply for an exemption from the OTR, enter into an agreement for ongoing maintenance with SA Power Networks, or the trees will be removed at Council expense.	
Avenues and Stands endorsed by the Office of the Technical Regulator. SA Power Networks is willing to create a geospatial data platform to map all endorsed Avenues or Stands for council and community visibility.	SA Power Networks

Suggestions in common

There is general consensus in the submissions that for a tree of a species not on the permitted or approved lists in the non bushfire risk area:

1. A tree existing on 1 November 1988 is able to be replaced with that same species, whether or not it was continuously replaced at each senescence, with no conditions.
2. A tree existing on [a date that is not agreed, either 1 January 2017 or 11 September 2018] that did not exist on 1 November 1988, will have the powerline clearance maintained by SA Power Networks but on senescence the tree will need to be replaced by a permitted or approved list tree.

Recommendations

The Technical Regulator's interpretation of Clause 3 of Schedule 2 of the [Electricity \(Principles of Vegetation Clearance\) Regulations 2021](#) is summarised as:

- A tree existing on 1 November 1988 is able to be replaced with that same species, whether or not it was continuously replaced at each senescence, with no conditions.
- A tree existing in the Non Bushfire Risk Area (NBFRA) on public land on 1 January 2017 (although it is acknowledged that there is a reasonable argument that this date should be 11 September 2018 and this recommendation will not overrule an existing agreement between SA Power Networks and a council to this effect) that did not exist on 1 November 1988, will have the powerline clearance maintained by SA Power Networks but on senescence the tree will need to be replaced by a permitted or approved list tree.
- Trees that are planted after 1 January 2017 (not in replacement of a tree that existed at 1 November 1988) must be from the permitted or approved lists.

Governance and Implementation

Next steps

The Office of the Technical Regulator will:

- Communicate these recommendations to councils and other affected parties;
- Determine whether the recommendations enact a practical solution; and
- Request feedback after 36 months to determine whether a regulations variation is required for practical operation of the recommendations.

Replacement of trees in avenues and stands near public powerlines in the NBFRA

A regulations variation removing the terms 'avenue' and 'stand' from the regulations and aligning with the recommendations may also be considered, or at the regulations' sunset and remake in scheduled for 1 September 2032.

Appendix A

Relevant regulations

For the purposes of Part 5 of the [Electricity Act 1996](#), Schedule 2 of the [Electricity \(Principles of Vegetation Clearance\) Regulations 2021](#) sets out requirements for planting or nurturing vegetation near powerlines.

Subject to the following clause (clause 3), only vegetation of a kind set out in the third column of Table 1 may be planted within the distance set out in the second column from a powerline of a kind set out in the first column.

Clause 3 Exemption

Vegetation may be planted in proximity to a public powerline in a non-bushfire risk area and any such vegetation may be nurtured, if—

- (a) the vegetation is planted in replacement of vegetation in a stand or avenue of vegetation situated along a road; and
- (b) the vegetation is of the same species as that being replaced.

Table 1

Powerline	Distance within which planting or nurturing is controlled	Vegetation which may be planted or nurtured	Additional vegetation which may be nurtured
NBFRA overhead public powerline.	Prescribed distance from centreline.	Approved vegetation or permitted vegetation. Exempt vegetation.	Any vegetation planted or self-sown before 1 November 1988.

approved vegetation means species in the list of vegetation with an expected mature height of 3 m or less published on a website determined by the Technical Regulator;

exempt vegetation means—

- (a) vegetation (such as small plants that produce flowers or vegetables, ground covers, cereal crops or small bushes or shrubs) with an expected mature height of less than 2 m; or
- (b) vegetation in relation to which an exemption is in force under these regulations;

permitted vegetation means species in the list of vegetation with an expected mature height of more than 3 m but not more than 6 m published on a website determined by the Technical Regulator;

prescribed distance means—

- (a) in the case of a powerline constructed to operate at a voltage listed below—the distance set out below in relation to that voltage:

Voltage	Distance (in metres)
500kV	19.0
275kV	12.5
132kV, other than a single pole	15.0
132kV, single pole	10.0
66kV	6.5

(b) in any other case—6 m.

7—Technical Regulator may grant exemption from principles of vegetation clearance

- (1) The Technical Regulator may, on application—
 - (a) exempt an occupier of land on which vegetation is planted or nurtured for commercial purposes (not including the production of timber) from compliance with regulation 5; or
 - (b) exempt a person from compliance with a provision of Schedule 2 in relation to specified vegetation.
- (2) An application under this regulation must—
 - (a) be made in a form approved by the Technical Regulator; and
 - (b) contain the information specified in the form; and
 - (c) be accompanied by an application fee fixed by the Minister.
- (3) Before determining an application under this regulation, the Technical Regulator must give the electricity entity or council with the duty to keep the vegetation clear of powerlines a reasonable opportunity to make submissions and be heard on the matter.
- (4) An exemption under this regulation—
 - (a) must be in writing; and
 - (b) may be subject to conditions, including a condition that the applicant is to pay any costs that the electricity entity or council incur in keeping the vegetation clear of powerlines in accordance with these regulations.
- (5) A person who contravenes, or fails to comply with, a condition of an exemption under this regulation is guilty of an offence.

Maximum penalty: \$5 000.

Expiation fee: \$315.

Appendix B

Minutes from meeting 28 September 2023

Available to meeting non-attendees on request.

Further information

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