

EnergyConnect (NSW – Eastern Section)

Revised landscape and visual impact assessment

April 2022



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1. Introduction

The Environmental Impact Statement (EIS) for the EnergyConnect (NSW – Eastern Section) project (the proposal) was placed on public exhibition for review and comment for 28 days from 19 January 2022 to 15 February 2022. A landscape character and visual impact assessment of the proposal was included as *Technical Paper 5: Landscape and Visual Impact Assessment* (December 2021) (the EIS LCVIA).

Section 3.3.4 of the EIS LCVIA detailed the methodology to assess impacts from the proposal on views from private properties. As noted in the EIS LCVIA, there is no formal guidance for the assessment of visual impact on views from private properties that applies to energy transmission projects in NSW. However, the assessment of visual impact on views from dwellings is generally guided by the planning principles for ‘view sharing’, provided in the judgment of the NSW Planning Environment court in the *Tenacity Consulting V Warringah Council* [2004], NSWLEC 140. This judgement identified that view sharing is when a property ... ‘enjoys existing views and a proposed development would share that view by taking some of it away.’ (NSWLEC 140, 2004).

The assessment steps included in the abovementioned judgement were detailed in Section 3.3.4 of the EIS LCVIA. Step 2 of the assessment as included in the EIS stated that ‘If a high or very high potential adverse visual impact is identified, then during the finalisation of the proposal design a visit to the property would be required to confirm the orientation of the residence, location of living areas and extent of the visibility’.

This report contains a detailed assessment of the potential visual impact on those properties identified as having a potential very high or high visual impact during operation of the proposal in the EIS LCVIA. This detailed assessment is based on field validation activities undertaken in February 2022.

1.1 Overview of EIS visual impact assessment

Due to the scale of the proposal, the number of potential sensitive visual receivers and access limitations during the assessment phase due to COVID travel restrictions, the assessment of visual impacts undertaken for the EIS LCVIA was a desktop analysis with a conservative approach applied to the assignment of potential visual impact levels. The visual impact assessment of the proposal included in the EIS identified that the proposal was anticipated to result in a (pre-mitigation) visual impact at 110 properties during operation of the proposal. Of these properties, 73 would potentially experience a moderate visual impact, 36 would experience a high visual impact and one property was predicted to experience a very high visual impact. Since the public exhibition of the EIS, properties in the EIS LCVIA that were identified as potentially having a high or very high potential visual impact have been subject to further investigation, which has included fieldwork to further analyse affected properties and confirm the actual expected impact level and potential for mitigation of these verified visual impacts.

1.2 Methodology

The methodology for the updated/revised visual impact assessment broadly consisted of two key activities:

1. Identifying the receptors that were assessed in the EIS LCVIA as as potentially having a high or very high visual impact and removing those receptors which were confirmed as not being a dwelling from the assessment.
2. Review and revise the visual impact assessment of those receptors confirmed to be dwellings using a methodology, which generally, follows the steps identified in the Tenacity Consulting V Warringah Council [2004] judgement.

This method included the following steps:

Step 1: Assess views to be affected

- Describe the view distance, the orientation of the affected view, and key features of the view, including topography, buildings, infrastructure, vegetation and visual landmarks.

Step 2: Consider from what part of the property the views are obtained

- Confirm the orientation of the dwelling, location of living areas and extent of the visibility. Noting that views from living areas (such as living rooms, verandas, entertaining areas) are considered in the judgement to be more sensitive than bedrooms and working areas of the dwelling. Primary views, rather than side views, are also more important to protect.

Step 3: Assess the extent of the impact

- Describe the likely visibility of the proposal and its compatibility with the character of the view from the dwelling
- Assign a visual impact level using the levels described in Table 1 (Table 3-10 contained within the *EIS Technical Paper 5: Landscape and Visual Assessment*). This table includes a range of factors that are typical indicators of each impact level, with a combination of these scenarios being present for each level of impact. Noting that a view of the proposal does not necessarily constitute a visual impact.

Step 4: Assess the reasonableness of the proposal that is causing the impact

- The reasonableness of the proposal is usually considered in relation to development controls set by local government in their Local Environmental Plan and Development Control Plan. However, these controls are not applicable to a proposal of this type and scale, being a Critical State Significant Infrastructure (SSI) proposal. Therefore, where a high visual impact remains, this assessment will note *'whether a more skilful design could provide the applicant with the same development potential ... and reduce the impact on the views of neighbours.'*
- Where appropriate, mitigation measures that would reduce the visual impact level, have been identified. These measures are mainly the provision of localised screening vegetation, noting that any mitigation measures mitigation measures would be undertaken in consultation with the landholder.

In the undertaking of this assessment many of the dwellings were visited and others were observed from surrounding roads or properties where this was possible.

TABLE 1: VISUAL IMPACT LEVELS – PRIVATE PROPERTIES

Potential visual impact level	Description (typical indicators of visual impact)
Very high	<p>Potential for an overwhelming or fundamental change to the view, may include one or a combination of the following:</p> <ul style="list-style-type: none"> - Towers or substation located in close proximity - Tower(s) obstruct the view to an icon (such as The Rock) - Towers of a large height and scale - Transmission line extending across the view with multiple towers visible - Transmission line changes direction and may include larger corner towers - Towers prominently located on a ridgeline - Limited screening by vegetation or landform - Large areas of vegetation removed - Prominent new access tracks and / or landform change visible.
High	<p>Potential for a considerable change to the view, may include one or a combination of the following:</p> <ul style="list-style-type: none"> - Towers or substation located in foreground of the view - Towers of a large height and scale - Tower(s) partly obstruct the view to an icon where it is a whole view of that icon (such as The Rock) - Transmission line extending across the view with multiple towers visible - Transmission line changes direction and / or includes larger corner towers - Towers prominently located on a ridgeline - Limited screening by vegetation or landform - Large areas of vegetation removed - Some new access tracks and / or landform change visible.
High-moderate	<p>Potential for a substantial change to the view, may include one or a combination of the following:</p> <ul style="list-style-type: none"> - Towers or associated infrastructure located in the middle ground - Towers of a moderate to large height and scale - Tower(s) reduce the prominence of a view to an icon (such as The Rock) - Several towers visible or partly seen - Some screening by vegetation or landform <p>Some vegetation removal, access tracks and / or landform change visible.</p>
Moderate	<p>Potential for a noticeable change to views, may include one or a combination of the following:</p> <ul style="list-style-type: none"> - Towers or associated infrastructure located in the middle ground - Towers of a moderate to large height and scale - Tower(s) reduce the prominence of a view to an icon (such as The Rock) - Several towers visible or partly seen - Some screening by vegetation or landform - Some vegetation removal, access tracks and / or landform change visible.
Low-moderate	<p>Potential for a noticeable change to views, may include one or a combination of the following:</p> <ul style="list-style-type: none"> - Towers or associated infrastructure located in the middle to background - Towers of a moderate to large height and scale - Several towers may be partly seen above or between vegetation - Some screening by vegetation or landform - Some vegetation removal, access tracks and / or landform change visible.
Low	<p>Potential for a slight change to the views, may include:</p> <ul style="list-style-type: none"> - Towers glimpsed in the background - Infrastructure visible but not prominent - Other similar infrastructure visible - Glimpses to vegetation removal, access tracks and / or landform change
Negligible	No change visible or the infrastructure would not be discernible in the view.

[Table above adapted from the table contained in the *EIS Technical Paper 5: Landscape and Visual Assessment*]

2. Verified visual impact assessment – dwellings

2.1 Summary of verified potential visual impacts

A summary of the site observations and analysis undertaken for each identified dwelling is contained in **Attachment A**. This includes the verified pre-mitigation visual impact levels, potential mitigation measures (where appropriate) and potential post mitigation measure visual impact levels (Refer to section 2.2 of this report). This attachment includes a detailed analysis of the visual assessment and reasoning behind the verified impact levels and is accompanied by maps and photographs. Table 2 contains includes a summary of this verified visual impact assessment.

The EIS identified 36 potential dwellings with a potential high visual impact, and one with a potential very high visual impact. Of these 37 potential dwellings, it has been confirmed that twelve are not dwellings and are sheds or other structures that are not used for accommodation. These receivers were removed from this assessment of as potentially impacted dwellings. Two additional dwellings were identified by the affected landholders, these replaced the structure identified in the EIS and one future dwelling site was also identified and added to this assessment.

Of the remaining 27 dwellings, the field investigations verified that:

- three dwellings would have a High visual impact
- two dwellings would have a High-moderate visual impact
- five dwellings would have a Moderate visual impact
- seven dwellings would have a Low-moderate visual impact
- seven dwellings would have a Low visual impact, and
- three dwellings would have a Negligible visual impact.

The reduction in visual impact levels has been a consequence of factors including confirming the orientation of the main living areas and views from the dwelling, and existing vegetation and or local landform that has been confirmed as screening the view.

These levels have the potential to be further reduced by mitigation measures.

2.2 Mitigation measures

The EIS committed to the following in relation to visual mitigation for dwellings:

For residences where the project is predicted to have a high or very high visual impact, opportunities for screening vegetation would be investigated. Appropriate visual screening or other options would be confirmed in consultation with the affected landholder and implemented during construction. Vegetative screening would be maintained by the landholder.

Further to this, options for visual mitigation has been identified for dwellings where there is a verified High, Moderate or Moderate-High visual impact, and where improvement to the visual impacts of a dwelling (or wider property) could feasibly and reasonably be achieved.

Some detail has been provided in this assessment, noting the potential location of visual screening measures, however, these measures have not be the subject of stakeholder negotiations, and would be confirmed in consultation with the affected landholder.

The proposed mitigation measures include:

- minor adjustments to the location of individual towers where feasible and reasonable
- areas of screening planting on the visual impact affected land holders property such as mounded garden beds with trees and shrubs, and / or additional trees on field boundaries.

Where it is not possible to screen the proposed towers due to the scale of the structures, or their location on a neighbouring property, the proposed mitigation measures would aim to reduce the visible portion of the towers, which are the main source of potential visual impact.

Final visual mitigation measures would be selected based on consultation with the impacted land holder and would be subject to detailed design noting that the mitigation measures would be subject to stakeholder consultation.

Assuming the implementation of visual mitigation measures (refer to **Table 2** and **Attachment A**), these visual impact levels could potentially be reduced for some dwellings.

Of the 27 dwellings assessed, there is the potential to reduce the visual impacts so that:

- one dwelling would have a High visual impact
- one dwelling would have a High-moderate visual impact
- seven dwellings would have a Moderate visual impact
- six dwellings would have a Low-moderate visual impact
- eight dwellings would have a Low visual impact, and
- four dwellings would have a Negligible visual impact.

TABLE 2: SUMMARY OF REVISED VISUAL IMPACT ASSESSMENT

No.	Building ID	Holding No.	Location / address	Property visit undertaken	Preliminary potential visual impact level from EIS	Verified potential visual impact level (pre-mitigation), post field validation	Key factors supporting the verified visual impact level	Potential mitigation measures	Potential residual visual impact level with mitigation (subject to agreement with land holder)
1	422	H90	823 Fernbank Rd, Argoon	No	High	Moderate	<ul style="list-style-type: none"> Main living areas oriented north and not towards the alignment Existing trees surrounding the dwelling would provide some screening of the towers. 	Not required as dwelling not currently occupied	Moderate
2	20519	H094	Thurrowa Road, Bundure	N/A	High	N/A	<ul style="list-style-type: none"> Identified during field validation as not being a dwelling. 	N/A	N/A
3	20522	H113	877 Coonong Road, Morundah	Yes	High	Low-moderate	<ul style="list-style-type: none"> Camp accommodation oriented towards the creek and one of the tower locations Existing creekside vegetation would partly screen the closest tower. 	Additional trees along the western bank of the creek (opposite the campsite) to screen gaps between the existing trees.	Low
4	20523	H113	877 Coonong Road, Morundah	Yes	High	Low	<ul style="list-style-type: none"> Main living areas oriented away from the alignment Existing trees around the camp accommodation and along the creek would provide a high level of screening 	None proposed due to low visual impact level	Low
5	533	H113	877 Coonong Road, Morundah	Yes	High	N/A	<ul style="list-style-type: none"> Identified during field validation as not being a dwelling 	N/A	N/A
6	534	X-3645	Water Ski Club, Coonong Road, Morundah	Yes	High	N/A	<ul style="list-style-type: none"> Identified during field validation as not being a dwelling 	N/A	N/A
7	12943 / 14909	H126	Woodlands, 4536 Boree Creek Road, Urana	Yes	High	Low	<ul style="list-style-type: none"> Dwelling oriented away from the alignment Sheds and vegetation would obstruct the view to the towers. 	None proposed due to low visual impact level	Low
8	12942	H129	The Pines, 1072 Cullivel Road, Cullivel	Yes	High	Low	<ul style="list-style-type: none"> Dwelling oriented towards the alignment, however, the view would be mostly blocked by existing trees and sheds. 	None proposed due to low visual impact level	Low

No.	Building ID	Holding No.	Location / address	Property visit undertaken	Preliminary potential visual impact level from EIS	Verified potential visual impact level (pre-mitigation), post field validation	Key factors supporting the verified visual impact level	Potential mitigation measures	Potential residual visual impact level with mitigation (subject to agreement with land holder)
9	385	H134	Andriskies Lane, Cullivel	Observed from the Lane	Very high	High	<ul style="list-style-type: none"> View would be under and between the towers Panoramic rural view with view to Lake Cullivel (water visible at time of visit) Vegetation surrounding the house directs view towards and beyond the alignment. 	<ul style="list-style-type: none"> Additional trees provided to the northwest and northeast of the residence on adjacent fields or on the perimeter of the garden to provide additional screening and fill gaps between existing trees. 	Moderate
10	12296	H145	747 Urana-Lockhart Road, Lockhart	Yes	High	Low	<ul style="list-style-type: none"> Intervening landform and vegetation along the driveway would screen the view from this dwelling House oriented to the north and not towards the alignment View along the driveway to a tower. 	<ul style="list-style-type: none"> Not required due to low visual impact level and dwelling not currently occupied Investigate the possibility of moving the tower at the end of the driveway further northeast so that it is not in-line with the view from the driveway (<i>Note: resident requested this as part of field verification</i>). 	Negligible
11	450	H172	128 Slys Lane, Milbrulong	Yes	High	High	<ul style="list-style-type: none"> Tower located on a rise in the landscape Dwelling and living areas oriented towards a view to The Rock This is a whole view to The Rock which is a regional icon in the landscape Multiple towers would be seen crossing the view Towers would rise above the skyline, partly obstructing and detracting from the visual prominence of The Rock in this view. 	<ul style="list-style-type: none"> Additional vegetation along the boundary of the garden and / or on adjacent fields would provide some screening of the closer towers to the south, and not crossing the main viewline. Adjust tower locations (if feasible and reasonable) to avoid a tower being directly in line with / obstructing the view to The Rock Adjust tower locations (if feasible and reasonable) to position towers on the downslope of the local rise. 	High-moderate

No.	Building ID	Holding No.	Location / address	Property visit undertaken	Preliminary potential visual impact level from EIS	Verified potential visual impact level (pre-mitigation), post field validation	Key factors supporting the verified visual impact level	Potential mitigation measures	Potential residual visual impact level with mitigation (subject to agreement with land holder)
12	461	H176	'Yarrow' 731 Hendersons Road, Tootool	Yes	High	High-moderate	<ul style="list-style-type: none"> Dwelling, pool and partly constructed tennis court oriented towards the alignment Some trees and shrubs in the garden would screen the view from the dwelling There is more visibility of the alignment from outdoor areas associated with the house, including a view to The Rock from tennis court area. 	<ul style="list-style-type: none"> Additional trees and shrubs to the south of the dwelling to screen views to the nearest towers and fill gaps in the trees Trees along the driveway to reduce the visibility of the towers on the approach to the dwelling. 	Moderate
13	432	H179	'Rosebank' 535 Tuttys Lane, Tootool	Yes	High	Moderate	<ul style="list-style-type: none"> Views south and southeast towards The Rock Water tank and trees on the side of the house closest to the view. 	Not required as dwelling not currently occupied	Moderate
14	249	H181	'Gala' 1066 Bullenbong Road, Tootool	Yes	High	N/A	<ul style="list-style-type: none"> Identified during field validation as not being a dwelling. 	N/A	N/A
14b	N/A (near 249)	H181	'Gala' 1066 Bullenbong Road, Tootool	Yes	Site of demolished dwelling intended for future dwelling, identified by landowner.	Low-moderate	<ul style="list-style-type: none"> View to The Rock partly obstructed by existing mature trees The view includes stored material, sheds and other structures. 	Not required as dwelling not currently occupied	Low-moderate
15	188	H184	Boys Road, The Rock	Observed from Boys Road	High	Negligible	<ul style="list-style-type: none"> Dwelling not orientated towards the alignment Trees and sheds would obstruct view to the alignment. 	None proposed due to low impact level	Negligible
16	1712	H184	Boys Road, The Rock	Observed from Boys Road	High	Negligible	<ul style="list-style-type: none"> Dwelling not orientated towards the alignment Trees and landform would obstruct view to the alignment. 	None proposed due to low impact level	Negligible

No.	Building ID	Holding No.	Location / address	Property visit undertaken	Preliminary potential visual impact level from EIS	Verified potential visual impact level (pre-mitigation), post field validation	Key factors supporting the verified visual impact level	Potential mitigation measures	Potential residual visual impact level with mitigation (subject to agreement with land holder)
17	211	Not line affected	'Stray Leaves' 2 Mcgeachies Lane, The Rock	Observed from Mcgeachies Lane	High	Low-moderate	<ul style="list-style-type: none"> Trees around the dwelling and along the road would partly obstruct the view The landform rises to the south of the road partly enclosing the view south towards the alignment. 	None proposed due to low impact level	Low-moderate
18	468	H185	709 The Rock-Collingullie Rd, The Rock)	Yes	High	N/A	<ul style="list-style-type: none"> Identified during field validation as not being a dwelling. 	N/A	N/A
19	26907	H185	Kiyuga, 709 The Rock-Collingullie Road, The Rock	Yes	High	Low	<ul style="list-style-type: none"> Dwelling not oriented towards the alignment Trees on intervening track around the dwelling would screen the view. 	None proposed due to low impact level	Low
20	208	H185	709 The Rock-Collingullie Road, The Rock	Yes	High	N/A	<ul style="list-style-type: none"> Identified during field validation as not being a dwelling. 	N/A	N/A
21	26908	H185	709 The Rock-Collingullie Road, The Rock	Yes	High	N/A	<ul style="list-style-type: none"> Identified during field validation as not being a dwelling. 	N/A	N/A
21a	26905	H185	709 The Rock-Collingullie Road, The Rock	Yes	Additional dwelling identified by owner	Low-moderate	<ul style="list-style-type: none"> Dwelling and main living areas not oriented towards the alignment View to The Rock from the dwelling oriented away from the alignment Some intervening trees would screen the visibility of the towers. 	None proposed due to low impact level	Low-moderate
22	313	H191	Greendale 389 Uranquinty Cross Road, Uranquinty	No	High	N/A	<ul style="list-style-type: none"> Identified during field validation as not being a dwelling. 	None proposed due to low impact level	N/A

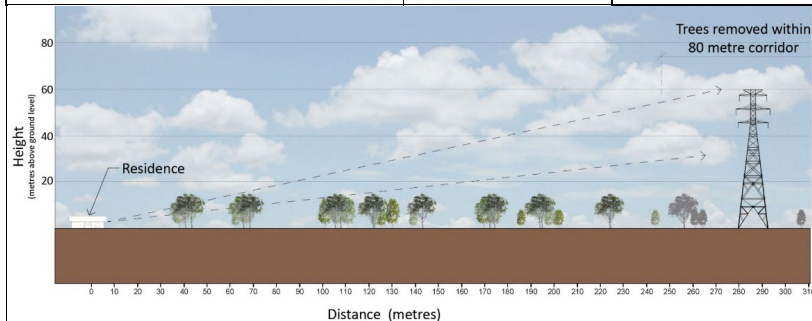
No.	Building ID	Holding No.	Location / address	Property visit undertaken	Preliminary potential visual impact level from EIS	Verified potential visual impact level (pre-mitigation), post field validation	Key factors supporting the verified visual impact level	Potential mitigation measures	Potential residual visual impact level with mitigation (subject to agreement with land holder)
23	185	H193	Glencoin, 5888 Olympic Highway, Uranquinty	Yes	High	Low	<ul style="list-style-type: none"> Dwelling and main living areas oriented away from the alignment Trees in the gardens around the house and several rows of trees, between the house and the alignment, obstruct the view. 	None proposed due to low impact level	Low
24	186	Not line affected	Elswick, 5746 Olympic Highway, Uranquinty	Yes	High	High-moderate	<ul style="list-style-type: none"> Dwelling and main living areas oriented towards the alignment Existing towers visible from the house between intervening trees Trees frame view across fields to the north Views to mountains to the northeast and northwest are features of this view. 	Additional vegetation could be provided along the northern boundary of the property to provide screening of the towers while maintaining views through the towers and to the distant hills.	Moderate
25	26950	H194	Oxley Bridge Road, Uranquinty	No	High	N/A	Identified during field validation as not being a dwelling.	N/A	N/A
26	20533	H195	11146 Oxley Bridge Road, Uranquinty	Yes	High	Low-moderate	<ul style="list-style-type: none"> House oriented away from the alignment Dense vegetation around the house would screen the alignment Local landform may also intervene to screen the towers. 	None proposed due to low impact level	Low-moderate
27	26749	H200	6707 Holbrook Road, Gelston Park, Rowan	Observed from Holbrook Road	High	High	<ul style="list-style-type: none"> Dwelling oriented parallel to the alignment A tower would be located to the northwest of and in close proximity to the pool area A tower would be located prominently on the ridgeline to the northeast and in the middle ground of this view Towers of a large scale and would be prominently located on higher ground. 	Vegetation could be provided to the northwest of the pool area to provide some screening of the nearest tower. Otherwise, there is limited opportunity on this property to screen the view to the most visible tower that would be located to the northeast of the dwelling.	High
28	26750	H200	6701-6739 Holbrook Road, Gelston Park, Rowan	Observed from Holbrook Road	High	N/A	<ul style="list-style-type: none"> Identified during field validation as not being a dwelling 	N/A	N/A

No.	Building ID	Holding No.	Location / address	Property visit undertaken	Preliminary potential visual impact level from EIS	Verified potential visual impact level (pre-mitigation), post field validation	Key factors supporting the verified visual impact level	Potential mitigation measures	Potential residual visual impact level with mitigation (subject to agreement with land holder)
29	20572	H197	6823 Holbrook Road, Rowan	No	High	N/A	<ul style="list-style-type: none"> Identified during field validation as not being a dwelling. 	N/A	N/A
30	500	Not line affected	Rowanfeyle, 6701 Holbrook Road, Rowan	Observed from Holbrook Road	High	Low-moderate	<ul style="list-style-type: none"> Located on lower slopes, below the alignment Vegetation would intervene and reduce the visibility of the towers Main view line is away from the alignment, towards the valley, so any view would be oblique to the main view line. 	None proposed due to low impact level	Low-moderate
31	501	Not line affected	Ubatuba, 6645 Holbrook Road, Gelston Park	Yes	High	Moderate	<ul style="list-style-type: none"> Elevated location with panoramic view across the valley Towers would be partly screened by intervening vegetation and landform Complex view, with existing transmission lines seen Pool and living areas oriented to the northeast towards the panoramic view Closest towers would be on the periphery of the main view line. 	Limited opportunity on this property to screen the view	Moderate
32	502	Not line affected	6720 Holbrook Road, Rowan	Yes	High	Moderate	<ul style="list-style-type: none"> Main view oriented towards the alignment Tower locations would be either side of the main view line. 	Limited opportunity on this property to screen the view to the nearest tower due to their elevated location. However, some mounded gardens with trees and shrubs could be provided along the western boundary of this property to provide some screening of the closest towers, while maintaining the view to sections of the ridgeline between the towers.	Moderate

No.	Building ID	Holding No.	Location / address	Property visit undertaken	Preliminary potential visual impact level from EIS	Verified potential visual impact level (pre-mitigation), post field validation	Key factors supporting the verified visual impact level	Potential mitigation measures	Potential residual visual impact level with mitigation (subject to agreement with land holder)
33	503	Not line affected	6640 Holbrook Road, Gelston Park	Yes	High	Negligible	<ul style="list-style-type: none"> Existing vegetation between the dwelling and the alignment would provide good screening of this view Limited visibility expected. 	None proposed due to low impact level	Negligible
34	504	Not line affected	6823 Holbrook Road, Rowan	Yes	High	Low-moderate	<ul style="list-style-type: none"> House and pool oriented away from the closest towers Existing vegetation within the gardens has been established to screen the existing transmission lines There may be some reduced leaf cover in winter. 	Additional trees could be provided to the south and southeast of the existing dwelling to provide further screening of the towers.	Low
35	27028	H205	21-275 Rowan Road, Rowan	Yes	High	N/A	<ul style="list-style-type: none"> Identified during field validation as not being a dwelling. 	N/A	N/A
35b	233	H205	21-275 Rowan Road, Rowan	Yes	Dwelling associated with this landholding.	Moderate	<ul style="list-style-type: none"> Approach to the dwelling passes under powerline (would be three in total) House with veranda and living rooms oriented towards the alignment Corner towers and converging lines would not be seen from the house Gardens and sheds to the side of the house would limit views to multiple towers Existing mounded garden beds with trees and dense shrubs established between the house and the alignment screening the view of the existing towers from the house 	Additional trees provided to the north of the existing garden areas to screen the towers within the adjacent fields. Gardens could be mounded to increase the effectiveness of screening.	Low-moderate
36	202	X-002	Benlock, 83 Ashfords Road, Gregadoo	Yes	High	Low	<ul style="list-style-type: none"> Dense trees along the driveway and in the vicinity of the substation limit view. 	None proposed as dwelling currently unoccupied and due to low impact level.	Low

Attachment A – Verification of potential high and very high impacted properties

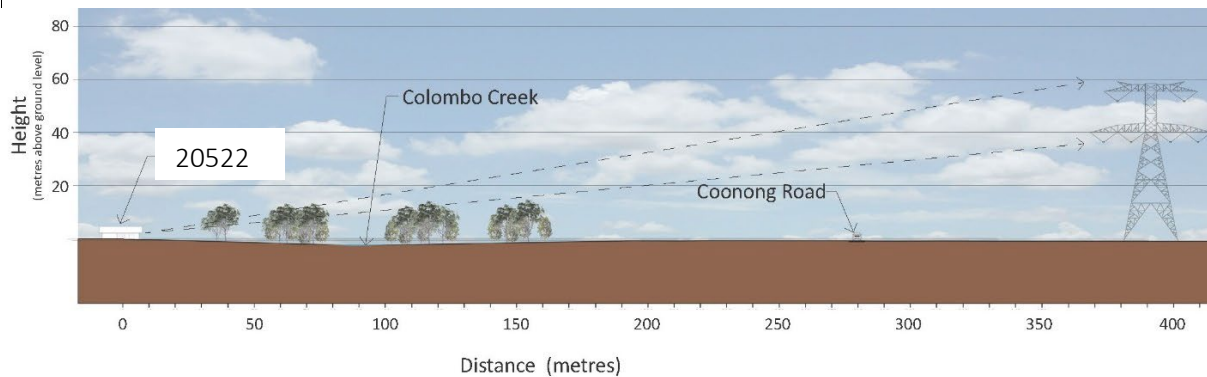
Receiver ID no.	Location / address	Approximate distance to the nearest tower(s)	Line affected	Orientation of impacted view	Verified potential visual impact level (unmitigated)	Potential mitigation measures (subject to agreement with landholder for final measures)	Residual visual impact
422	823 Fernbank Rd, Argoon	0.36km and 0.395km	Yes	Northwest, west and south	Moderate	N/A At the time of inspection this property was unoccupied. Therefore, screening vegetation for mitigation of this potential visual impact is not considered necessary.	Moderate
Step 1 - Affected view The landform is relatively flat and there are some intervening trees between this residence and the alignment. Two towers within close proximity and several seen across the view through scattered trees. Towers would be located approximately equidistant from this receiver to maximise their distance from the residence. Some vegetation removal, access tracks and / or landform change would be visible.		Step 2 - From what part of the property is the view obtained Living areas oriented north and not towards the alignment. Views to the alignment from the rear of the dwelling.	Step 3 – Extent of impact A noticeable change to views, including: <ul style="list-style-type: none"> - Towers or associated infrastructure located in the middle ground - Towers of a moderate to large height and scale - Several towers may be visible or partly seen - Some screening of towers by vegetation surrounding the dwelling. 			Effectiveness of potential mitigation measures N/A	





Photograph of dwelling 422 (view to eastern elevation of the dwelling)

Receiver ID no.	Location / address	Approximate distance to the nearest tower(s)	Line affected	Orientation of impacted view	Verified visual impact level (unmitigated)	Potential mitigation measures (subject to agreement with landholder for final measures)	Residual visual impact
20522	877 Coonong Rd, Morundah	0.362km and 0.4km	No	West and southwest	Low-moderate	Additional trees could be provided along the western bank of the creek (opposite this campsite) to fill the gap in existing riparian vegetation to screen the view of the nearest tower.	Low
Step 1 - Affected view The vegetation along Colombo Creek encloses the view, however, there is a break in the vegetation opposite this campsite and there are views through to the adjacent fields. No existing transmission lines in this view.		Step 2 - From what part of the property is the view obtained Creekside 'camp' (Camp Buck, 1 Windy Way) including basic accommodation (shipping container) and fire pit and creek access. Camp oriented west towards the creek. The camp is oriented towards the alignment.		Step 3 – Extent of impact A noticeable change to this view, including: <ul style="list-style-type: none"> - Towers or associated infrastructure located in the middle to background - Towers of a moderate to large height and scale - Large trees along the creek would provide screening of the towers. The nearest tower may be visible through the gap in the riparian vegetation from areas near the camp 		Effectiveness of potential mitigation measures <ul style="list-style-type: none"> - Vegetation would provide additional screening over time - Dense groups of trees would be in keeping with the character of the creek and enhance the local landscape character, as well as reduce the visibility of the towers - Flat landform would increase the effectiveness of vegetation screening as both the viewer and tower are on the similar level. 	





View to camp accommodation



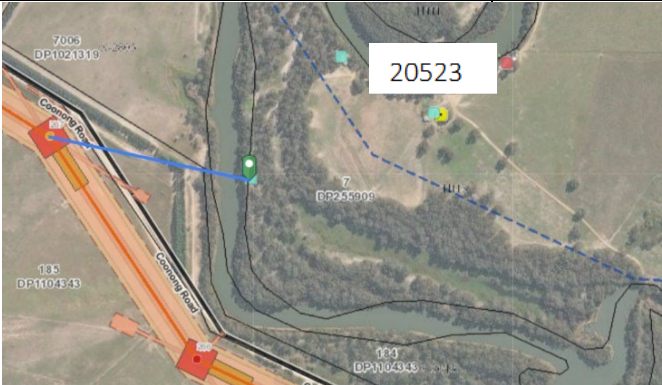


View to outdoor areas of camp including jetty on Columbo Creek



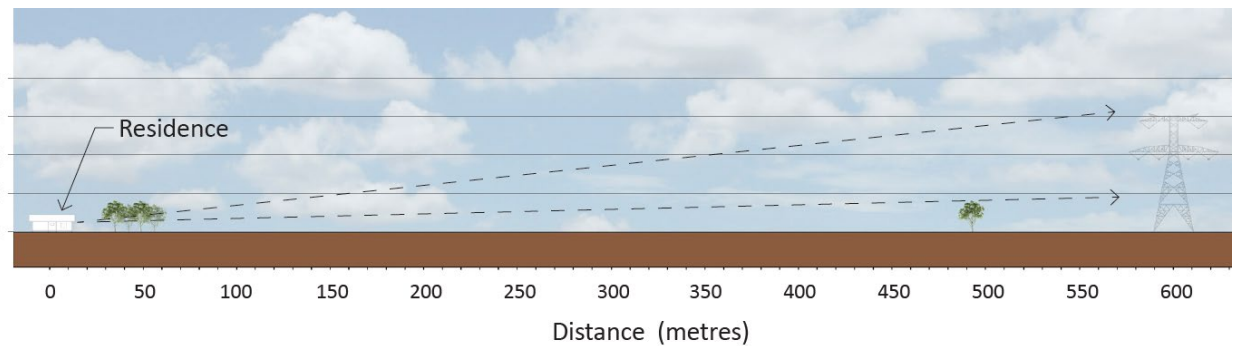
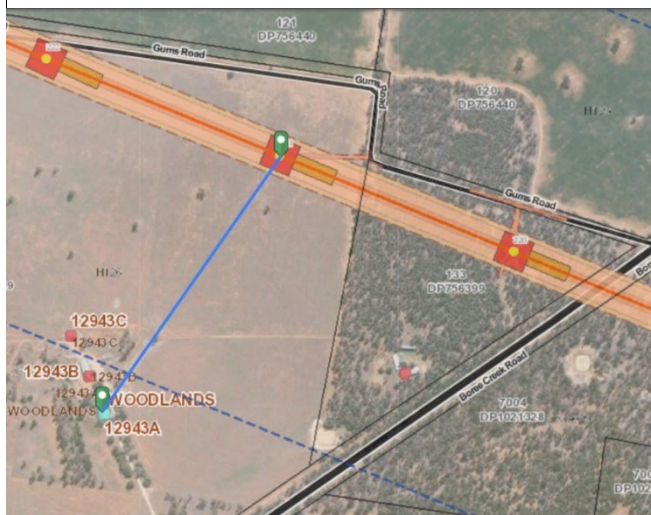
Camp accommodation



View from camp towards the alignment

Receiver ID no.	Location / address		Approximate distance to the nearest tower(s)	Line affected	Orientation of impacted view	Verified visual impact level (unmitigated)	Potential mitigation measures (subject to agreement with landholder for final measures)	Residual visual impact
20523	877 Coonong Rd, Morundah		0.362km and 0.4km	No	West and southwest	Low	Mitigation not required due to low impact level.	Low
Step 1 - Affected view The landform surrounding the creek is relatively flat. The vegetation along Colombo Creek encloses the view, however, there is a break in the vegetation opposite this campsite and there are views through to the adjacent fields.		Step 2 - From what part of the property is the view obtained Creekside 'camp' including basic accommodation (sheds and caravan) with creek access. Camp oriented north and northeast, towards the creek and away from the alignment.		Step 3 – Extent of impact A slight change to the views, including: <ul style="list-style-type: none">- One tower likely could be glimpsed in the background- If seen, the towers would not be prominent- Intervening vegetation encloses the view, limiting the visibility of the tower- The proposal introduces a new element in the view as there is no existing transmission lines visible,				
								
View to camp accommodation from the access track				View to the creek from alongside the camp accommodation				

Receiver ID no.	Location / address		Approximate distance to the nearest tower(s)	Line affected	Orientation of impacted view		Verified visual impact level (unmitigated)	Potential mitigation measures (subject to agreement with landholder for final measures)	Residual visual impact
12943 & 14909 (one dwelling)	Woodlands, 4536 Boree Creek Rd, Urana	0.578 kilometres	Yes	Northeast	Low			Mitigation not required due to low impact level.	Low
Step 1 - Affected view Existing trees and sheds to the north and northwest of the dwelling would screen the views to the towers to the north and northeast. The tower within the woodland, to the east, would also be screened by surrounding intervening vegetation.		Step 2 - From what part of the property is the view obtained Dwelling oriented southeast with rear garden and outdoor living areas oriented to the northwest. There are sheds and trees to the rear of the dwelling limiting views to the north and northeast towards the alignment.		Step 3 – Extent of impact Potential for a slight change to the views, including: <ul style="list-style-type: none">- Intervening vegetation and sheds enclose the view, limiting the visibility of the towers- Towers may be glimpsed in the background- The proposal introduces a new element in the view as there is no existing transmission lines visible.			Effectiveness of potential mitigation measures N/A		





Northwestern elevation of the dwelling



Northeastern elevation of the dwelling

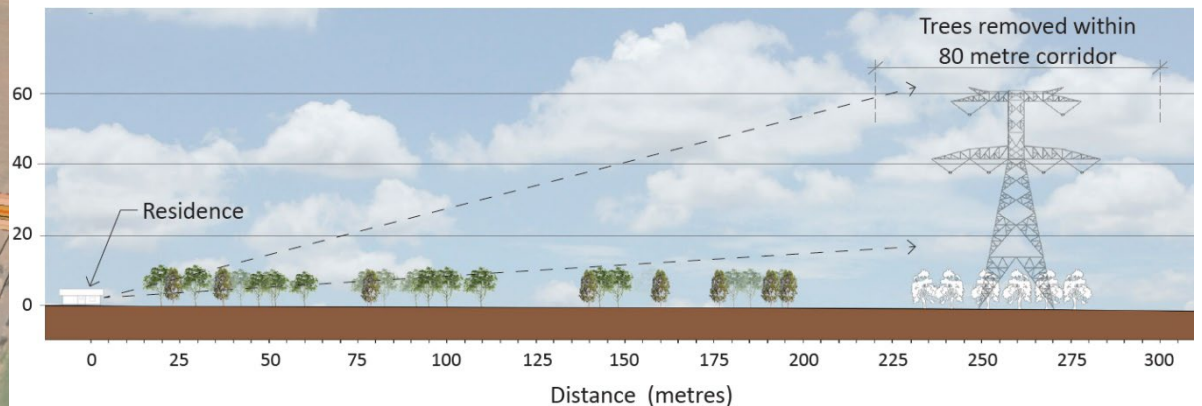


Views from the rear garden towards the alignment showing intervening sheds and structures



Views from the rear gate to the north of the dwelling towards the alignment

Receiver ID no.	Location / address	Approximate distance to the nearest tower(s)	Line affected	Orientation of impacted view	Verified visual impact level (unmitigated)	Potential mitigation measures (subject to agreement with landholder for final measures)	Residual visual impact
12942	The Pines, 1072 Cullivel Rd, Cullivel	0.275 kilometres	Yes	Northwest, north and northeast	Low	Mitigation not required due to low impact level.	Low
Step 1 - Affected view The landform is relatively flat and there are trees and large sheds to the north of the dwelling. Open fields with scattered trees clustered around the dwelling. There is a row of pine trees within the alignment.		Step 2 - From what part of the property is the view obtained Dwelling is oriented north towards the alignment. However, the view to the alignment from the dwelling is screened by large agricultural sheds and trees.	Step 3 – Extent of impact Potential for a slight change to the views, including: <ul style="list-style-type: none"> - Intervening vegetation and sheds enclose the view, limiting the visibility of the towers - Upper portion of the closest tower may be visible in the background - Would be viewed in the context of existing sheds and working areas of the farm - The proposal introduces a new element in the view as there is no existing transmission lines visible - Vegetation removal within easement would not be visible from the dwelling. 			Effectiveness of potential mitigation measures N/A	





View to the northern elevation of the dwelling



View to the trees to the north of the dwelling

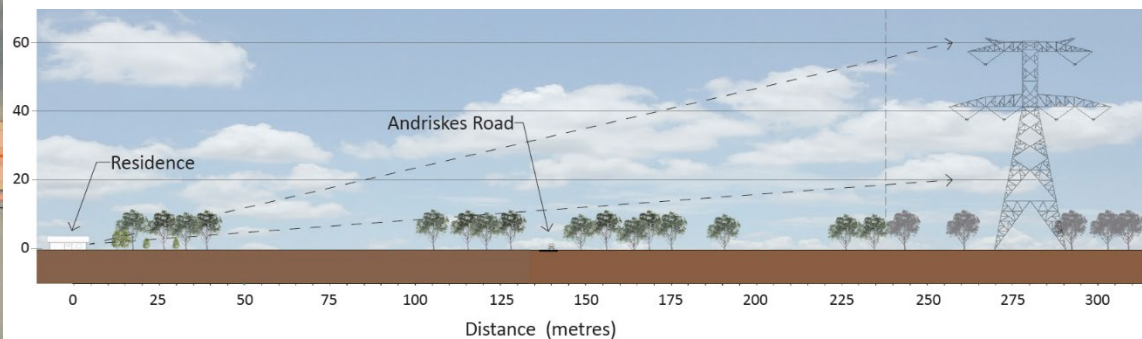
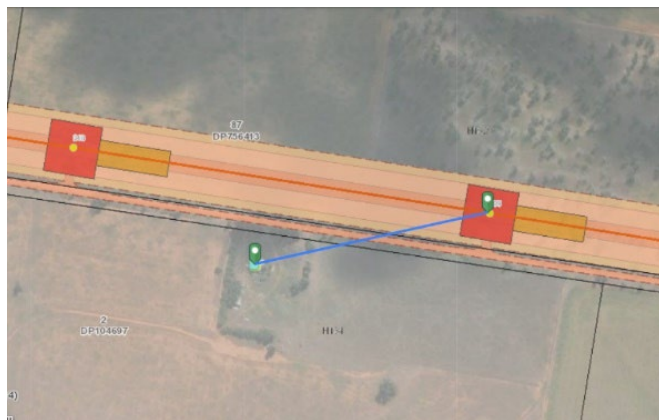


Views from the verandah of the dwelling to existing shed and mature trees



View to the trees within the alignment, out of view from the dwelling

Receiver ID no.	Location / address	Approximate distance to the nearest tower(s)	Line affected	Orientation of impacted view	Potential level of impact (unmitigated)	Potential mitigation measures (subject to agreement with landholder for final measures)	Residual impact
385	Andriskes Lane, Cullivel	0.260km and 0.270km	Yes	Northwest, north, northeast and east	High	Additional trees provided to the northwest and northeast of the residence on adjacent fields or on the perimeter of the garden to provide additional screening and fill gaps between the existing trees.	Moderate
Step 1 - Affected view View north from the dwelling towards Lake Cullivel. The transmission line structures would be located to the east and west of the main viewline. Trees surrounding this residence would provide some close-range screening of these towers. Distant views to the east towards the proposal, the change of direction is unlikely to be seen due to intervening vegetation.		Step 2 - From what part of the property is the view obtained Dwelling oriented to the north towards the proposal, with a veranda along the front. Living areas are likely to be oriented away from the road, over the surrounding fields to the south. Refer to Figure A		Step 3 – Extent of impact Potential for a considerable change to the view, noting: <ul style="list-style-type: none"> - Two towers would potentially be seen in the middle ground of views, above / through vegetation surrounding the dwelling - View north would be directed between towers so that the view to Lake Cullivel would not be obstructed by a tower - Transmission lines extending across but above the main viewline - Vegetation adjacent to dwelling provides screening, however, beyond this, the intervening vegetation would only screen lower portion of the towers - The towers are of a large height and scale - To the southwest distant view to the alignment including a change of direction would be seen in the background - The proposal introduces a new element in the view as there is no existing transmission lines visible 		Effectiveness potential mitigation measure <ul style="list-style-type: none"> - Additional vegetation would prevent localised clearing of trees in the vicinity of the dwelling from revealing an unobstructed view to the towers. - Flat landform would increase the effectiveness of vegetation screening as both the viewer and tower are on the similar level - Trees would provide amenity for the residence and enhance the local landscape character. Reasonableness of this impact The towers have been located approximately equidistant from this receiver to maximise the distance from the dwelling. There is limited scope for adjustment to the tower positions. Alternative alignments would take the transmission line closer to Lake Cullivel, which would adversely impact the visual setting of the lake.	





Dwelling as viewed from the road



View north from the dwelling to Lake Cullivel



View west towards tower location



View east towards tower location

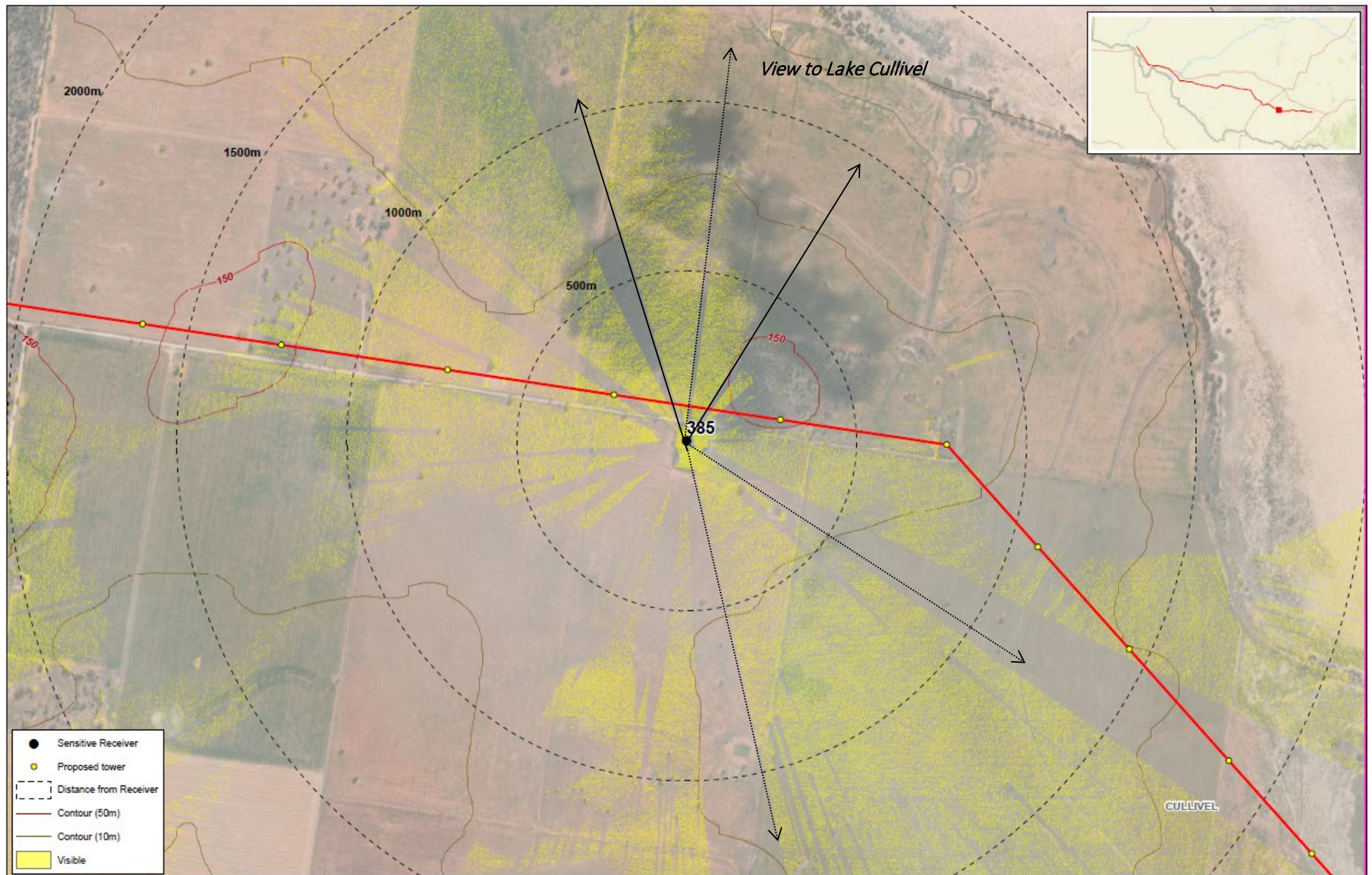


Figure A –Visual catchment - Dwelling ID. 385

Receiver ID no.	Location / address	Approximate distance to the nearest tower(s)	Line affected	Orientation of impacted view	Potential level of impact (unmitigated)	Potential mitigation measures (subject to agreement with landholder for final measures)	Residual impact
12296	747 Urana-Lockhart Rd, Lockhart	0.757 kilometres	No	West, northwest, north and northeast	Low	Potential to adjust the tower location at the end of the driveway so that it is not aligned with the view along the driveway. Adjustment requested by landholder.	Negligible
Step 1 - Affected view The landform rises between the dwelling and the site, screening the view towards the alignment. Existing trees along field boundaries to the northwest and northeast, and vegetation along Lockhart Road, would also screen views to the towers.		Step 2 - From what part of the property is the view obtained Dwelling is oriented northeast, away from the alignment. There would be a view to a tower from the driveway of the property.	Step 3 – Extent of impact There would be a slight change to the views, including: <ul style="list-style-type: none"> - Intervening landform and vegetation limiting the visibility of the towers - The closest tower would be visible, directly in line with the driveway - Vegetation removal within easement would also be visible from the driveway. 		Effectiveness of potential mitigation measures <ul style="list-style-type: none"> - Would reduce the duration of views to the transmission line while travelling along the driveway, on departing the property. 		





North facing elevation of dwelling



South facing elevation of dwelling



View north towards alignment (beyond intervening landform)



View from driveway towards the nearest tower location

Receiver ID no.	Location / address	Approximate distance to the nearest tower(s)	Line affected	Orientation of impacted view	Verified visual impact level (unmitigated)	Potential mitigation measures (subject to agreement with landholder for final measures)	Residual visual impact
450	128 Slys Lane, Milbrulong	0.347km and 0.430 km	Yes	Southwest, south and southeast	High	Adjust tower locations (if feasible and reasonable), so that there will not be a tower directly in line with / and obstructing the view to The Rock from the dwelling. Locate towers (if feasible and reasonable) on the downward slope, rather than on the higher ground. Additional trees along the southeast corner of the garden between the dwelling and the nearest towers to screen the gaps in vegetation and reduce the visibility of the closest towers.	High-moderate
<div> <div> Step 1 - Affected view The landform is undulating with flat open fields to the west, south and east. Mature trees in the gardens of this residence frame the view southeast towards The Rock. This is a whole view (unobstructed) to a regional icon / landscape feature. The dwelling is located on a highpoint, and the landform slopes towards a creek in the southeast. There is an existing, smaller scale, transmission line already crossing this view. </div> <div> Step 2 - From what part of the property is the view obtained The living and entertaining areas of this dwelling are oriented east and southeast towards The Rock. There is a veranda with outdoor dining and a barbeque oriented towards the alignment. There are two small seating areas within the garden, including a seating around a firepit (north of the dwelling) and table and chairs to the south of the garden (closer to the alignment). These views would include several towers (around four within 2km) and wires extending at an angle from the right to the centre of the view. Tower 114 would not be seen in this view, Towers 113 and 112 would be closer but out of the main viewline. Several towers would cross the view to The Rock. Refer to Figure B. </div> <div> Step 3 – Extent of impact There would be a considerable change to views, including: <ul style="list-style-type: none"> - Alignment would be seen crossing a framed view to The Rock - Towers in the middle to background on locally prominent landform - Large tower scale, may rise above skyline, increasing their prominence in the view - Large towers would diminish the prominence of The Rock in this view - Proposal extending across the view, multiple towers would be seen crossing the main viewline (including tower 112, 111, 110) - Vegetation surrounding the residence would provide screening of towers to the south - Distance, landform and vegetation would reduce the prominence of towers in the background of the view - The alignment would be located beyond the existing transmission line corridor, but substantially larger scale structures and towers and at different spacings </div> <div> Effectiveness of potential mitigation measures If the towers do not obstruct the view to The Rock and / or rise above the skyline, this impact level would be reduced. Reasonableness of this impact Transmission line has been located generally parallel to the existing transmission line, grouping like infrastructure together. The towers have been spaced apart, to reduce their number. However, there is potentially an opportunity for further refinement. </div> </div>							

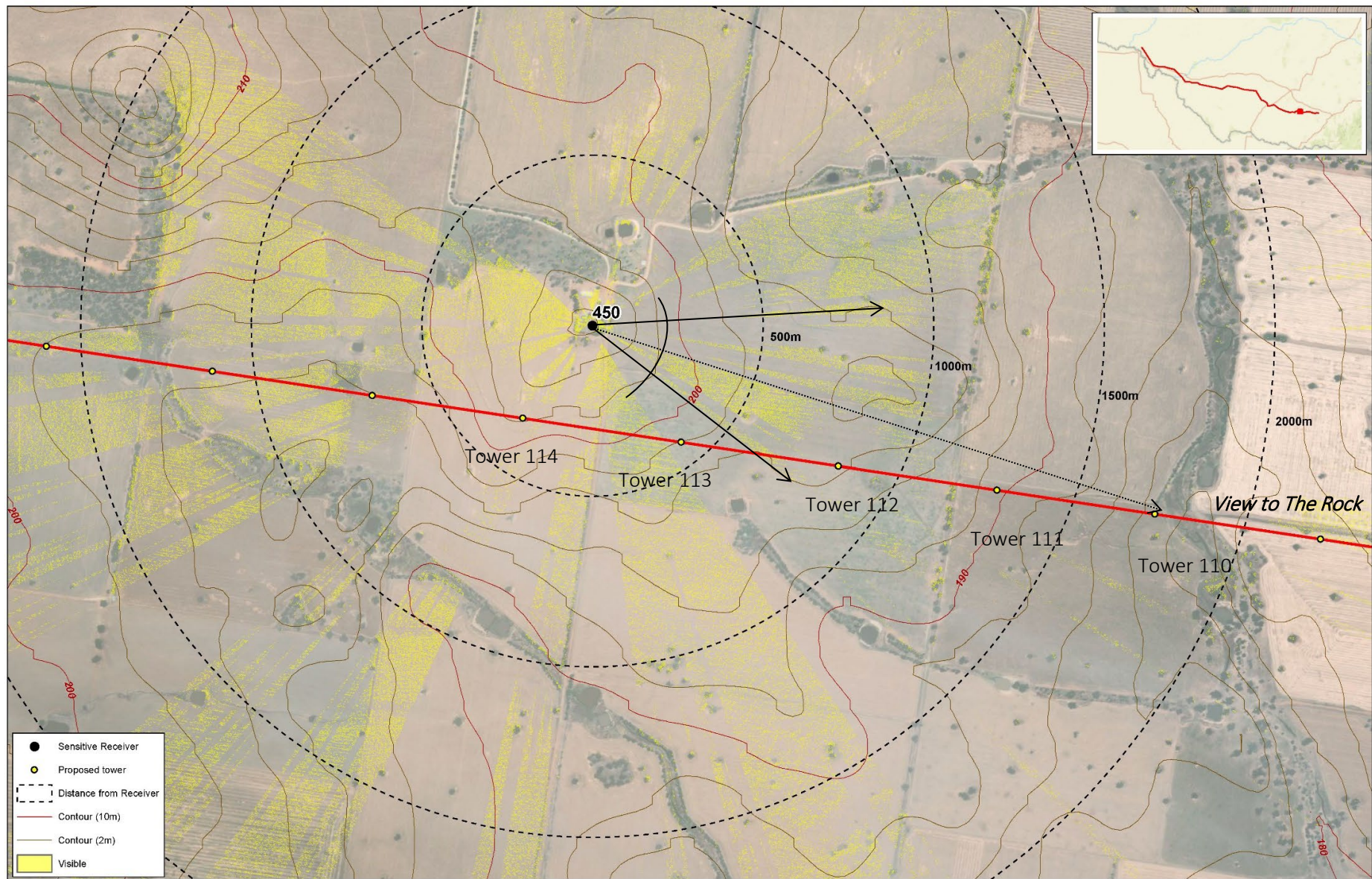


Figure B –Visual catchment - Dwelling ID. 450



Southeast facing elevation of the dwelling



Northeastern corner of the dwelling, firepit and seating area (right of image)



Fire pit and garden seating (north of garden)



Garden seating area (south of garden)



Framed view
to The Rock


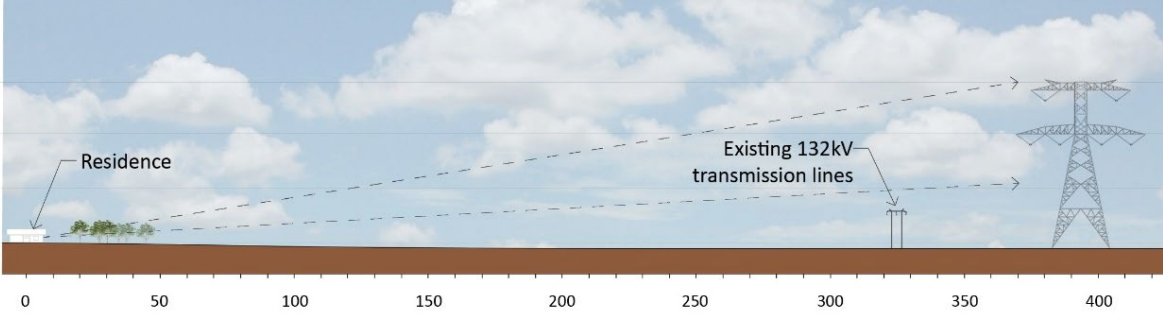
Views from the verandah of the dwelling towards The Rock



Views from the verandah of the dwelling towards The Rock (50mm focal length)



Views from the garden seating area (south of garden)

Receiver ID no.	Location / address		Approximate distance to the nearest tower(s)	Line affected	Orientation of impacted view	Verified visual impact level (unmitigated)	Potential mitigation measures (subject to agreement with landholder for final measures)	Residual visual impact
461	731	Hendersons Rd, Tootool	0.380 kilometres	Yes	Southwest, south and southeast	High-moderate	Additional trees and shrubs to the south of the residence to screen the views to the nearest towers, and fill gaps in the trees through which there may be glimpses to the nearest towers. Minimise the removal of vegetation within the disturbance area where practicable.	Moderate
<div> <div> Step 1 - Affected view <p>The landform is relatively flat and trees to the south of the dwelling partly screen views south towards the alignment.</p> <p>There is a view to The Rock from the driveway outside the entry gates. There is also a glimpse to The Rock from the southern end of the tennis court (under construction). There is an existing, smaller scale, transmission line located to the south of the dwelling.</p> <p>Views from these areas would include the transmission line towers (Tower 97 and 98) and wires as well as vegetation removal.</p> </div> <div> Step 2 - From what part of the property is the view obtained <p>The dwelling is oriented southeast and towards the alignment. This includes the entry porch, bedroom windows, front gardens, a pool area (north of the dwelling) and a tennis court (south of the dwelling).</p> <p>Refer to Figure C.</p> </div> <div> Step 3 – Extent of impact <p>There would be a noticeable change to views, noting:</p> <ul style="list-style-type: none"> - Vegetation surrounding the residence limits views from the dwelling - Proposal extending across the view, two towers would be seen through gaps in the vegetation - The towers would be visible beyond existing transmission line corridor but would be substantially larger scale structures - Large block of existing vegetation (about 500 m away) would be removed, detracting from the view where this is seen - Towers would be visible from the driveway on the approach to the dwelling - Tree removal for tower proposed adjacent to road (to the east) would be seen from the driveway. </div> <div> Effectiveness of potential mitigation measures <ul style="list-style-type: none"> - Vegetation would provide screening over time - Flat landform would increase the effectiveness of vegetation screening as both the viewer and tower are on the similar level - Reduced number of towers visible / reduced area of each tower visible. <p>Reasonableness of this impact</p> <p>Transmission line has been located generally parallel to the existing transmission line, grouping like infrastructure together.</p> </div> </div>								
<div>   </div>								



Dwelling entry oriented southeast towards the alignment



Pool area to the north of the dwelling



View from the dwelling to the entry gate towards the alignment



View to the dwelling from the driveway

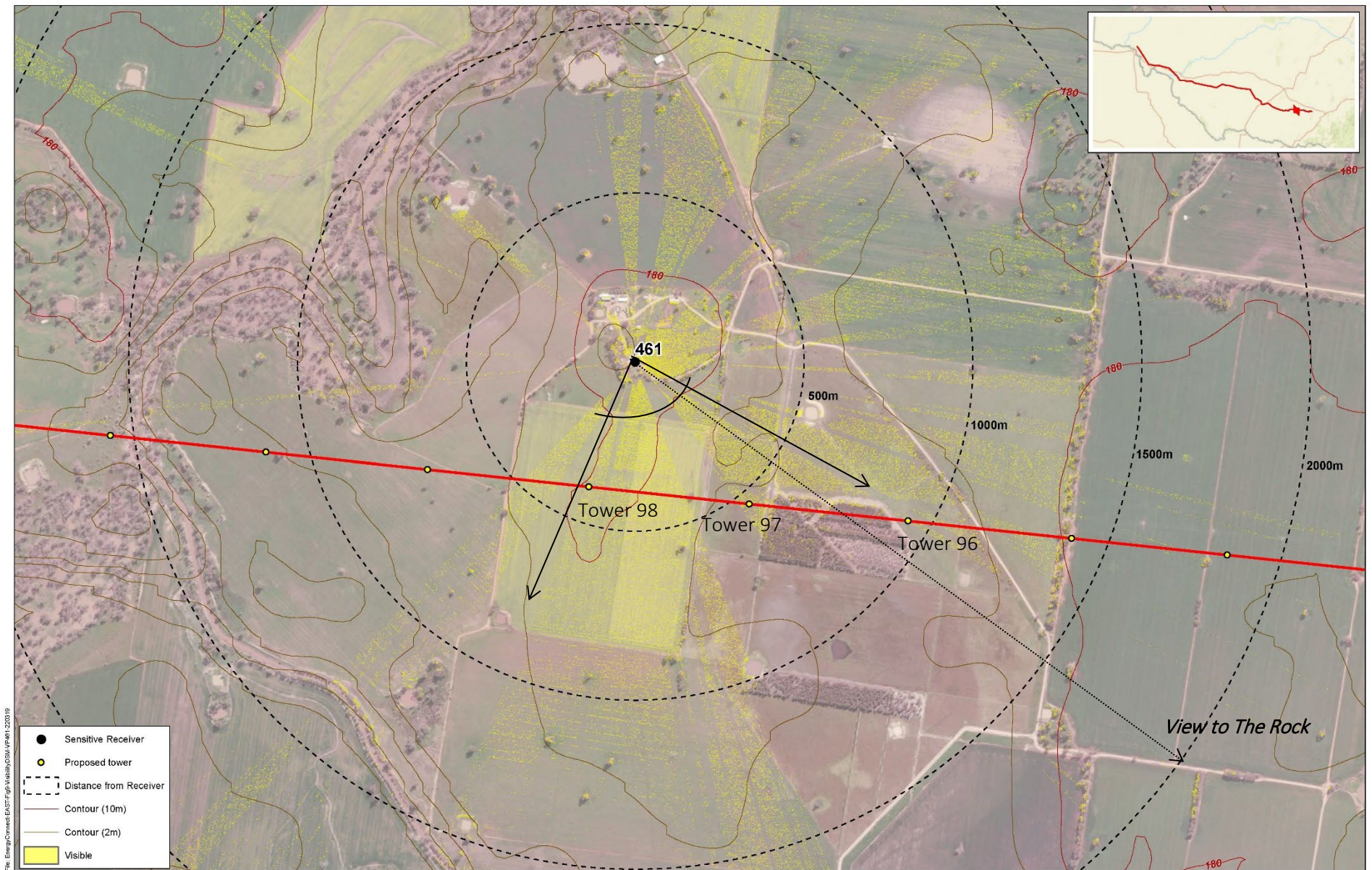


Figure C—Visual catchment - Dwelling ID. 461



View southeast from the pool area towards the alignment



Views from the garden to the south of the dwelling towards the alignment

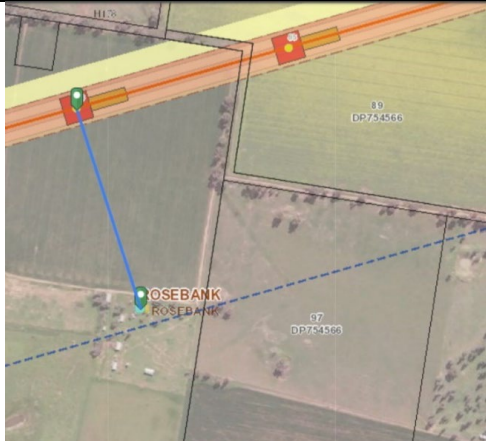


View southeast towards the alignment from the driveway, south of the entry gates near the dwelling



View southeast towards the alignment from the future tennis court

Receiver ID no.	Location / address		Approximate distance to the nearest tower(s)	Line affected	Orientation of impacted view	Verified visual impact level (unmitigated)	Potential mitigation measures (subject to agreement with landholder for final measures)	Residual visual impact	
432	535 Tutty Lane, Tootool		0.458 kilometres	Yes	Northwest and north	Moderate	No mitigation proposed as dwelling currently not occupied.	Moderate	
Step 1 - Affected view The landform is relatively flat with open fields to the west, north and east. Some trees along field boundaries to the north and south of the alignment. Two towers to the north and northwest would be visible within open fields. One tower would be visible to the northeast, beyond the existing trees.		Step 2 - From what part of the property is the view obtained This dwelling, including the front veranda, is oriented to the southeast and away from the alignment where there is a view to The Rock. Views to the alignment would be from the rear of the dwelling which are partly screened by a water tank and existing mature trees. There is a short section of veranda on the northeast side of the dwelling.		Step 3 – Extent of impact There would be a noticeable change to views, noting: <ul style="list-style-type: none">- Main viewline oriented away from the alignment- Vegetation surrounding the residence limits views from the dwelling- Towers would be located in the middle ground with limited screening within adjacent fields- Towers of a moderate to large scale- Several towers visible or partly seen- Some access tracks would be visible- Seen in front of existing transmission lines, but substantially larger scale structures and towers not at similar spacings			Effectiveness of potential mitigation measures <ul style="list-style-type: none">- N/A		





Southern elevation of the dwelling



View northwest from the rear of the dwelling towards the alignment



View north from the verandah of the dwelling



View northeast from near the dwelling (tower would be beyond the trees)

Receiver ID no.	Location / address	Approximate distance to the nearest tower(s)	Line affected	Orientation of impacted view	Verified potential visual impact level (unmitigated)	Potential mitigation measures (subject to agreement with landholder for final measures)	Residual visual impact
N/A (adjacent to 249)	1066 Bullenbong Rd, Tootool	0.873 kilometres	Yes	Southwest, south and southeast	Low-moderate	Mitigation not required due to relatively low impact level.	Low-moderate

Step 1 - Affected view

The landform is relatively flat and there are mature trees scattered around the site of where a dwelling was previously located on this property. This site is located adjacent to several sheds.

There is a view to The Rock partly obstructed by existing mature trees.

Southerly view would include multiple towers extending across the view.

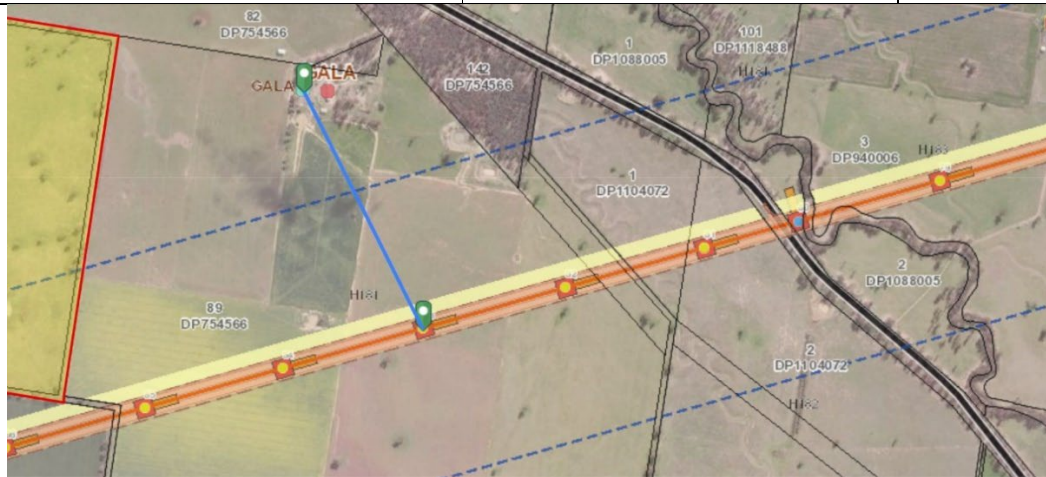
Step 2 - From what part of the property is the view obtained

This is the site of a former dwelling that has been demolished. It is likely that any dwelling that would be built on this site would have a north to north easterly aspect and also have rooms oriented towards a view to The Rock.

Step 3 – Extent of impact

There would be a noticeable change to views, noting:

- Vegetation surrounding the site would partly screen views from any future dwelling
- Towers would be located in the middle to background of views to the south
- Towers of a moderate to large scale
- Several towers would be visible or partly seen
- Proposal extending across the view, multiple towers would be seen
- Seen beyond existing transmission lines, but substantially larger scale structures
- Some access tracks would be visible.





View southwest from the former dwelling site towards The Rock



View to the gate of the former dwelling

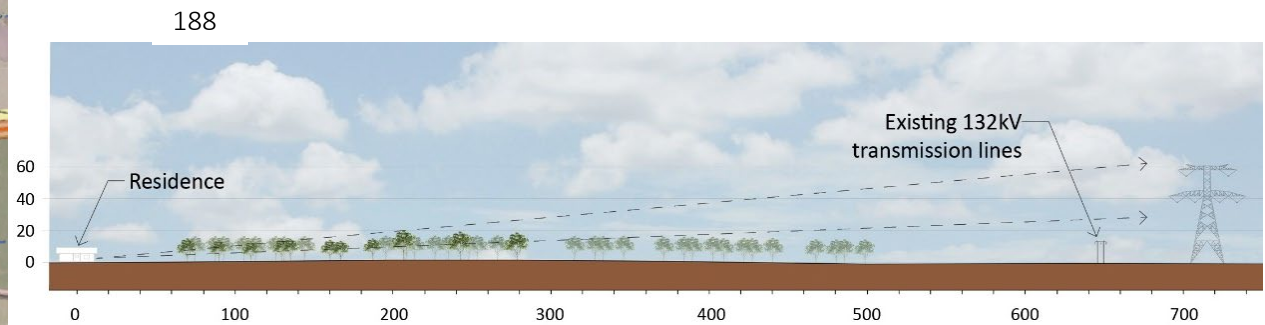


Views east from the former dwelling site



Views southwest from the former dwelling site

Receiver ID no.	Location / address	Approximate distance to the nearest tower(s)	Line affected	Orientation of impacted view	Verified visual impact level (unmitigated)	Potential mitigation measures (subject to agreement with landholder for final measures)	Residual visual impact
188, 1712	Boyd's Rd, The Rock	0.716 kilometres 0.715 kilometres	Yes	Southwest, south, southeast and east	Negligible	Mitigation not required due to low impact level.	Negligible
Step 1 - Affected view There are mounds and undulating landform on this property with dense vegetation screening views to the south. A group of sheds and farm buildings are located to the south of these dwellings. There would not be a view to the alignment from these dwellings.			Step 2 - From what part of the property is the view obtained Dwellings are not oriented towards the alignment.		Step 3 – Extent of impact There would be no change to views from the dwelling, noting: <ul style="list-style-type: none"> - Vegetation and undulating landform to the south of these dwellings would screen the view. 		





View west from Boyds Road to the property showing mounded landform, dense vegetation and sheds to the south of the property facing the alignment



View from Boyds Road to the property showing dense vegetation and mounded landform





View south from Boyds Road towards dwelling 1712 and 188



View south to dwelling 1712 from Boyds Road




View to dwelling 188 from Boyds Road

Receiver ID no.	Location / address	Approximate distance to the nearest tower(s)	Line affected	Orientation of impacted view	Verified visual impact level (unmitigated)	Potential mitigation measures (subject to agreement with landholder for final measures)	Residual visual impact
211	2 McGeachies Lane, The Rock	0.421 kilometres	No	Southwest	Low-moderate	Mitigation not required due to relatively low impact level.	Low-moderate
Step 1 - Affected view View through trees across McGeachies Lane towards rural fields with scattered trees and gently undulating landform. Views would include the transmission line structures and wires as well as some vegetation removal in the mid to background. Trees surrounding this residence and on intervening fields would provide some screening of the towers.		Step 2 - From what part of the property is the view obtained This dwelling is oriented to the south and there are views to the southwest towards the alignment. There appear to be living areas with large windows on the southern elevation of the dwelling, however, the view from the dwelling would be partly screened by trees and shrubs within the garden. Views to the southeast are enclosed by trees along the adjacent road and fields.			Step 3 – Extent of impact There would be a noticeable change to views, noting: <ul style="list-style-type: none">- Towers would be in the middle ground with some screening by intervening trees- Towers of a large scale- Several towers visible or partly seen- Vegetation surrounding the residence limits views to the proposal- The proposal would be visible but not prominent- Seen in front of existing transmission lines, but substantially larger scale structures and towers not at similar spacings.		
							
Location plan		View to dwelling from McGeachies Lane					

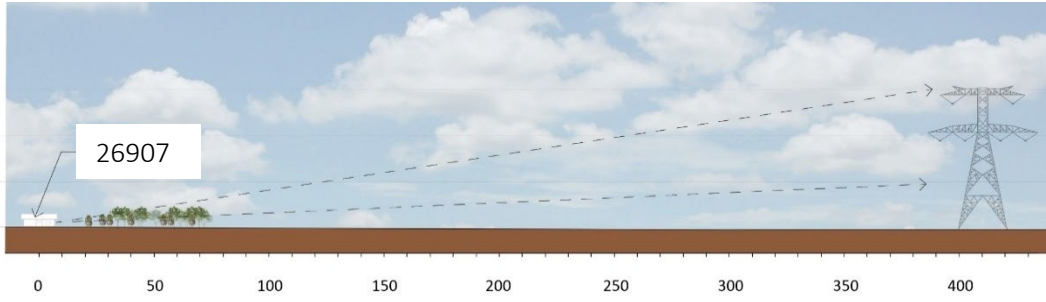


View southwest from the road adjacent to the dwelling

Receiver ID no.	Location / address	Approximate distance to the nearest tower(s)	Line affected	Orientation of impacted view	Verified visual impact level (unmitigated)	Potential mitigation measures (subject to agreement with landholder for final measures)	Residual visual impact
26907	Kiyuga, 709 The Rock-Collingullie Road, The Rock	0.413 kilometres	Yes	Northwest, north and northeast	Low	Mitigation not required due to low impact level.	Low
Step 1 - Affected view Dense trees to the north of this dwelling and within the gardens screen views towards the alignment. There may be distant, oblique views of the towers to the northeast in the background.		Step 2 - From what part of the property is the view obtained This dwelling is oriented to the east and away from the alignment. There are well maintained gardens to the north of the dwelling, however, there would not be a view to the north from the garden.		Step 3 – Extent of impact Potential for a slight change to the views, may include: <ul style="list-style-type: none">- Towers may be glimpsed in the background- The proposal may be visible but not prominent.			



Location plan



Indicative cross section





Dense corridor of trees and small building to the north of the garden screen views to the north



Vegetation and gardens to the north of the dwelling would screen views



View north from the road, located to the north of the dwelling

Receiver ID no.	Location / address	Approximate distance to the nearest tower(s)	Line affected	Orientation of impacted view	Potential level of impact (unmitigated)	Potential mitigation measures (subject to agreement with landholder for final measures)	Potential residual impact
26905	709 The Rock-Collingullie Road, The Rock	0.247 kilometres	Yes	Northwest, north and northeast	Low-moderate	Mitigation not required due to relatively low impact level.	Low-moderate
Step 1 - Affected view View to the northwest is mostly screened by vegetation surrounding the dwelling. The landform is undulating and rises to the north. There are open fields, on a rise, including existing transmission lines in the middle to background of the view. Main viewline is to the south and towards The Rock. To the northwest one tower would be visible, located in an open field.			Step 2 - From what part of the property is the view obtained Dwelling oriented to the south where there are views to The Rock. A veranda is located on all sides of the dwelling, including to the north. There are out buildings to the northwest of the dwelling.		Step 3 – Extent of impact Potential for a noticeable change to views, noting: <ul style="list-style-type: none">- A tower visible in the middle to background- Tower of a large height and scale- Existing transmission lines also visible, but substantially larger scale towers.		
							
Location plan			Photo of dwelling				



View to the eastern elevation of the dwelling



View northwest from near the dwelling



View south towards The Rock (away from the alignment)

Receiver ID no.	Location / address	Approximate distance to the nearest tower(s)	Line affected	Orientation of impacted view	Potential level of impact (unmitigated)	Potential mitigation measures (subject to agreement with landholder for final measures)	Potential residual impact
185	Glencoin, 5888 Olympic Hwy, Uranquinty	0.619 kilometres	Yes	West, southwest, south, and southeast	Low	Mitigation not required due to low impact level.	Low
Step 1 - Affected view Dense mature trees to the south of the dwelling screens views to the alignment.		Step 2 - From what part of the property is the view obtained The residence is oriented away from the alignment.		Step 3 – Extent of impact There would be a slight change to the view, noting: <ul style="list-style-type: none"> - Towers unlikely to be visible or would not be prominent if seen - Viewed alongside existing large scale transmission line infrastructure visible - May be glimpses to vegetation removal, access tracks and / or landform change 			



Location plan



Dwelling with mature gardens and dense surrounding trees




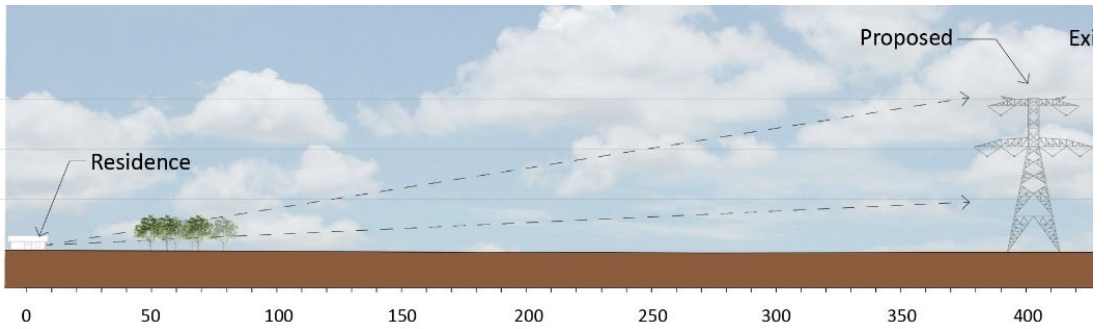
Rows of trees to the south of the dwelling

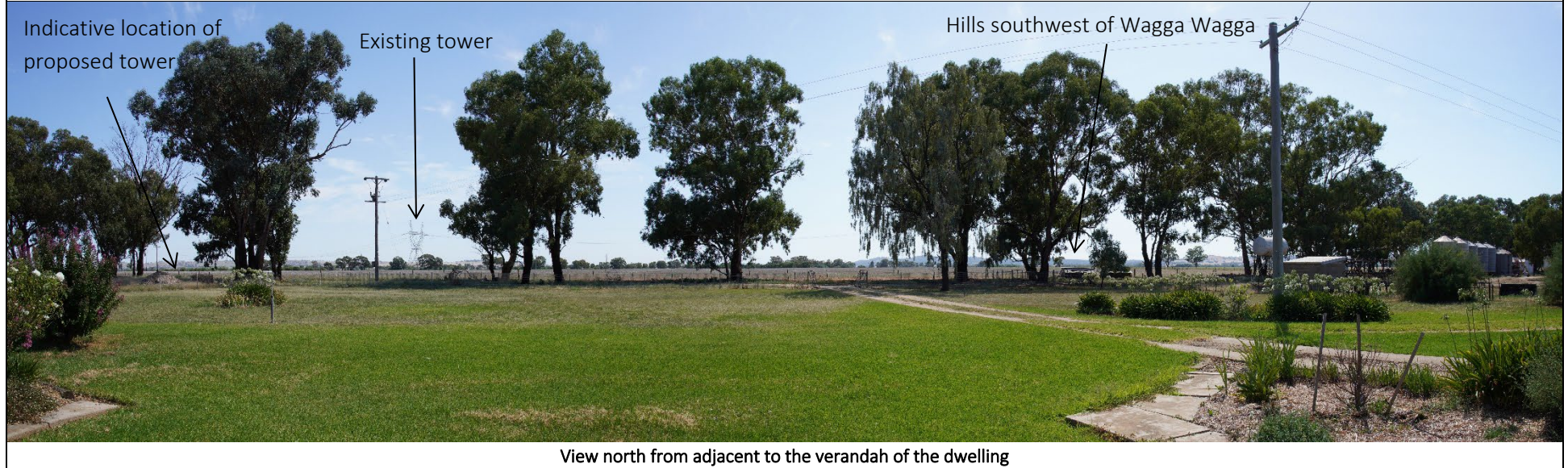


View from west across fields between the dwelling and the alignment

Receiver ID no.	Location / address	Approximate distance to the nearest tower(s)	Line affected	Orientation of impacted view	Potential level of impact (unmitigated)	Potential mitigation measures (subject to agreement with landholder for final measures)	Potential residual impact
186	Elswick, 5746 Olympic Hwy, Uranquinty	0.402kilometres	No	North and northeast	High-moderate	Additional trees could be provided to the north of the existing residence to screen the two closest towers along the property boundary. This planting would be located to allow the view to the fields and backdrop of hills to be maintained.	Moderate
Step 1 - Affected view Northerly view through existing mature trees to relatively flat rural fields with existing large scale transmission lines towers. There are glimpses to distant hills to the northwest and northeast of this panorama. Several existing transmission line towers can be seen in this view. There would be additional transmission line towers, closer to the dwelling, located to the northwest and northeast of the dwelling. This would include a larger tower where the alignment changes direction (west of view).			Step 2 - From what part of the property is the view obtained The dwelling is oriented north towards the alignment. This includes a veranda and well-maintained gardens.		Step 3 – Extent of impact A noticeable change to views, noting: <ul style="list-style-type: none">- Towers located in the middle ground- Towers of a large height and scale- Several towers would be partly seen through the existing trees- Existing transmission lines also visible, also large-scale structures and towers, but not the same shape and at different spacings- Flat landform, would be seen through vegetation along the property perimeter, and limited vegetation within fields to screen the tower.		Effectiveness of potential mitigation measures <ul style="list-style-type: none">- Vegetation would provide some screening of the towers over time- The flat landform would increase the effectiveness of vegetation screening as both the viewer and tower are on the similar level.- May also screen views to the existing transmission line towers, improving the amenity of the existing view.









View from the dwelling (50mm)

Receiver ID no.	Location / address	Approximate distance to the nearest tower(s)	Line affected	Orientation of impacted view	Potential level of impact (unmitigated)	Potential mitigation measures (subject to agreement with landholder for final measures)	Potential residual impact
20533	11146 Oxley Bridge Rd, Uranquinty	0.488 kilometres	Yes	West, northwest and north	Low-moderate	Mitigation not required due to relatively low impact level.	Low-moderate

Step 1 - Affected view

Trees to the north of the residence screen views to the towers to the north.

There is a panoramic north easterly view from the dwelling which includes an undulating rural landscape and the hills of Rowan in the background. This view includes glimpses to the existing large scale transmission line towers in the middle to background. These towers remain below the skyline and are not prominent in this view.

The vegetation clearing where the transmission line corridor would cross the highpoint to the east in Rowan would be visible.

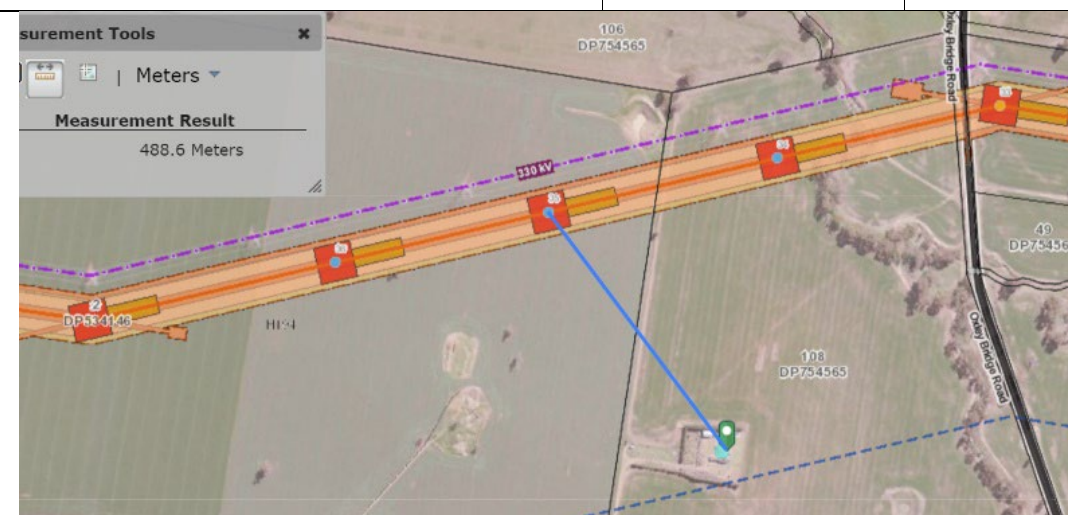
Step 2 - From what part of the property is the view obtained

The dwelling is oriented to the east and towards the hills of Rowan. The view is generally parallel to the alignment. This includes a veranda and outdoor living areas.

Step 3 – Extent of impact

There would be a slight change to the view, noting:

- Closest towers would be screened by existing vegetation
- Some towers would be viewed alongside existing large scale transmission line infrastructure and below the skyline in the middle and background of the view
- There may be a view to the towers and vegetation clearing to the east at the crossing of the hills
- The towers would be visible but not prominent





View to the dwelling from Oxley Bridge Road



View east from the front garden of the dwelling (adjacent to the veranda)

Receiver ID no.	Location / address	Approximate distance to the nearest tower(s)	Line affected	Orientation of impacted view	Potential level of impact (unmitigated)	Potential mitigation measures (subject to agreement with landholder for final measures)	Potential residual impact
504	6823 Holbrook Rd, Rowan	0.385 kilometres	No	South, southeast and east	Low-moderate	Additional trees could be provided along the south and southeast of the existing residence, along the property boundary, to provide further screening of the towers.	Low
Step 1 - Affected view The views from this dwelling are oriented northeast across the valley, and away from the alignment. The view south and east from this dwelling (towards the alignment) are enclosed by trees within the gardens of this property. There may be some further glimpses to the alignment during winter through the deciduous trees and shrubs with reduced leaf cover.		Step 2 - From what part of the property is the view obtained The dwelling has north facing living areas and a veranda which wraps along the northern and around the eastern side of the dwelling. There is a pool area and tennis court to the north of the dwelling with views oriented away from the alignment.	Step 3 – Extent of impact There would be a slight change to the view, noting: <ul style="list-style-type: none"> - Closest towers would be located beyond the existing towers, slightly down the slope, and mostly screened by existing vegetation - Some towers may be viewed alongside existing large scale transmission line infrastructure in the background (view to the north) and below the skyline - The towers would be visible but not prominent - Towers approximately equidistant from this residence to maximise the distance. 		Effectiveness of potential mitigation measures <ul style="list-style-type: none"> - Vegetation would provide additional screening of the towers over time - Additional vegetation near the residence would reduce the amount of each tower that would be visible through gaps in the existing vegetation. 		





North facing verandah and living areas



View to Pool area north of the dwelling



View northeast across the pool area



View northeast across the tennis court from the garden



Views from the side garden towards the alignment



Views from the gate of the side garden standing beyond the screening trees

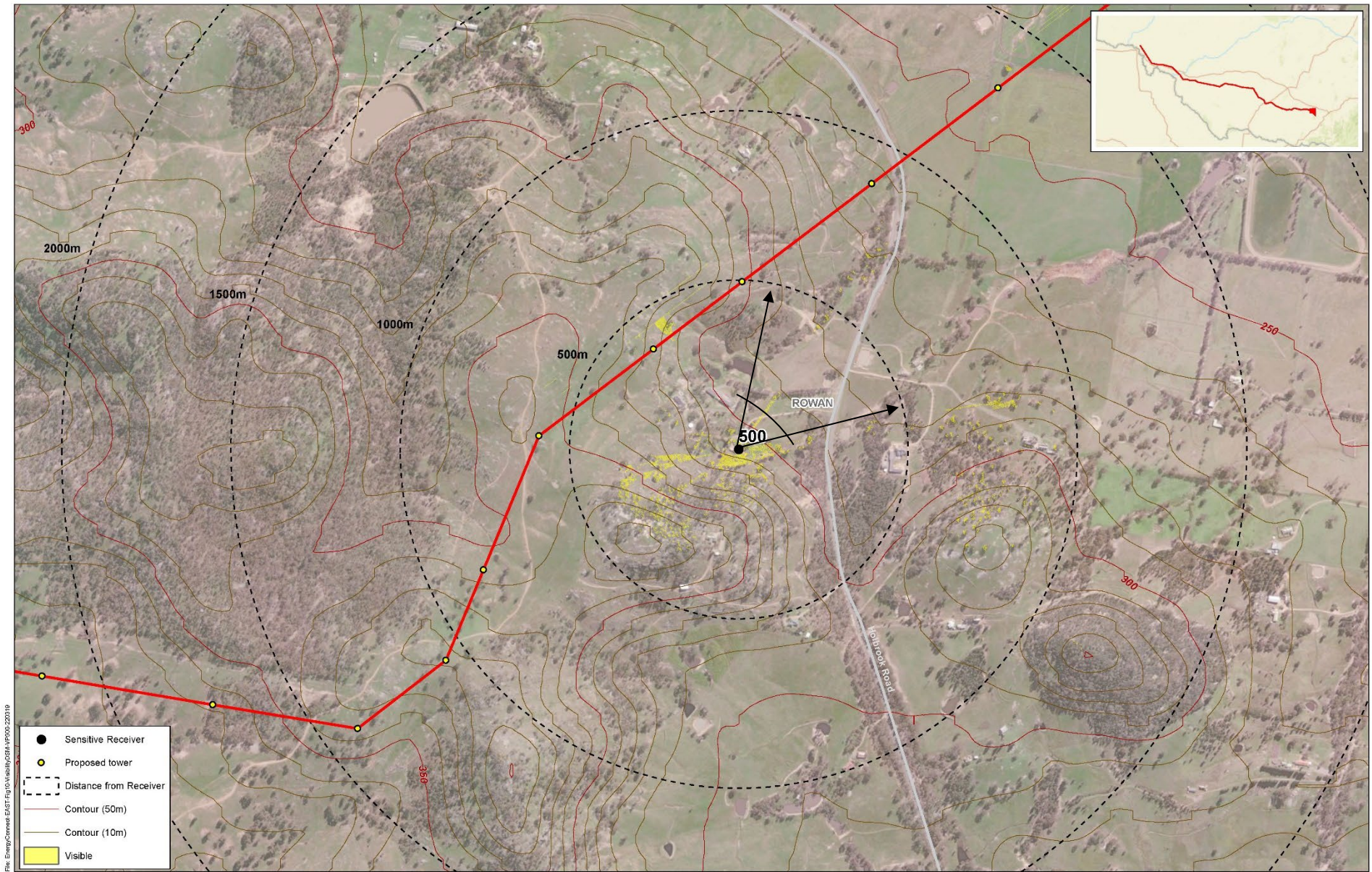



Figure E –Visual catchment - Dwelling ID. 500



View from property boundary towards dwelling, showing dense vegetation to the north and east, screening the alignment



View from property boundary towards dwelling, showing dense vegetation to the north and east, screening the alignment

Receiver ID no.	Location / address	Approximate distance to the nearest tower(s)	Line affected	Orientation of impacted view	Potential level of impact (unmitigated)	Potential mitigation measures (subject to agreement with landholder for final measures)	Potential residual impact	
501	6645 Holbrook Rd, Gelston Park	0.394 kilometres	No	Southwest, west, northwest and north	Moderate	Limited opportunity on this property to screen the view to the nearest towers.	Moderate	
Step 1 - Affected view There are panoramic views from this dwelling to the northeast across the valley. To the north and west of this panorama (towards the alignment), several existing transmission towers can be seen on a ridgeline cleared of vegetation. This view is partly enclosed by trees on the lower slopes of this property. The towers would be located below the existing transmission line towers, and closer to this dwelling. However, the intervening trees would screen part of the towers.				Step 2 - From what part of the property is the view obtained The dwelling appears to be oriented to the northeast with north facing living areas and a veranda which extends along the north eastern side of the dwelling.		Step 3 – Extent of impact There would be a noticeable change to the view, noting: <ul style="list-style-type: none">- Closest towers would be located in front of the existing towers, slightly down the slope, and partly screened by intervening vegetation- Some towers may be viewed alongside existing large scale transmission line infrastructure in the middle ground (view to the north and west) and below the skyline- The towers would be of a large height and scale- Several towers would be partly seen		Effectiveness of potential mitigation measures N/A -
								



View across the pool and living areas of the dwelling



View from the dwelling across the pool showing a panoramic view



Existing transmission
line towers

Existing transmission
line towers

Existing
transmission
line towers

View northwest from the pool area (50mm focal length, closest to what the eye sees)

Receiver ID no.	Location / address	Approximate distance to the nearest tower(s)	Line affected	Orientation of impacted view	Potential level of impact (unmitigated)	Potential mitigation measures (subject to agreement with landholder for final measures)	Potential residual impact
26749 (dwelling) 26750 (a shed)	6707 Holbrook Rd, Rowan	0.135 kilometres	No	Southwest, west, northwest and north	High	Vegetation could be provided to the northwest of the pool area to provide some screening of the nearest tower. Otherwise, there is limited opportunity on this property to screen the view to the most visible tower (Tower 16).	High
Step 1 - Affected view There are panoramic views from this dwelling to the northeast across the valley. To the north and northeast of this panorama (towards the alignment), several existing transmission towers are visible on the ridgeline which is cleared of vegetation. The proposal would be located to the south of the existing transmission line towers, and closer to this dwelling.			Step 2 - From what part of the property is the view obtained The dwelling appears to be oriented to the northeast with north and northeast living areas, a pool area to the north of the dwelling. Refer to Figure F.		Step 3 – Extent of impact There would be a considerable change to the view, noting: <ul style="list-style-type: none">- Closest tower (Tower 17) would be located in front of the existing towers, slightly down the slope, and in close proximity to the outdoor pool areas of the dwelling- The tower to the north-east of the dwelling (Tower 16 as shown below) would be located on an elevated location on the periphery of the main view from the dwelling across the valley- There would be limited screening opportunity for intervening vegetation.		Effectiveness of potential mitigation measures <ul style="list-style-type: none">- Vegetation could be provided to partly screen one of the towers over time- However, the towers would be prominent in this view due to their size and proximity to the dwelling. Reasonableness of this impact The location of the proposal alongside the existing transmission line reduces the potential for new areas of visual impact on surrounding properties that do not currently see transmission lines.

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Measurement Tools

Meters

Measurement Result

135.6 Meters

Lat: -35.212
Long: 147.328
Scale level: 17 (1:4,514)

Holbrook Road

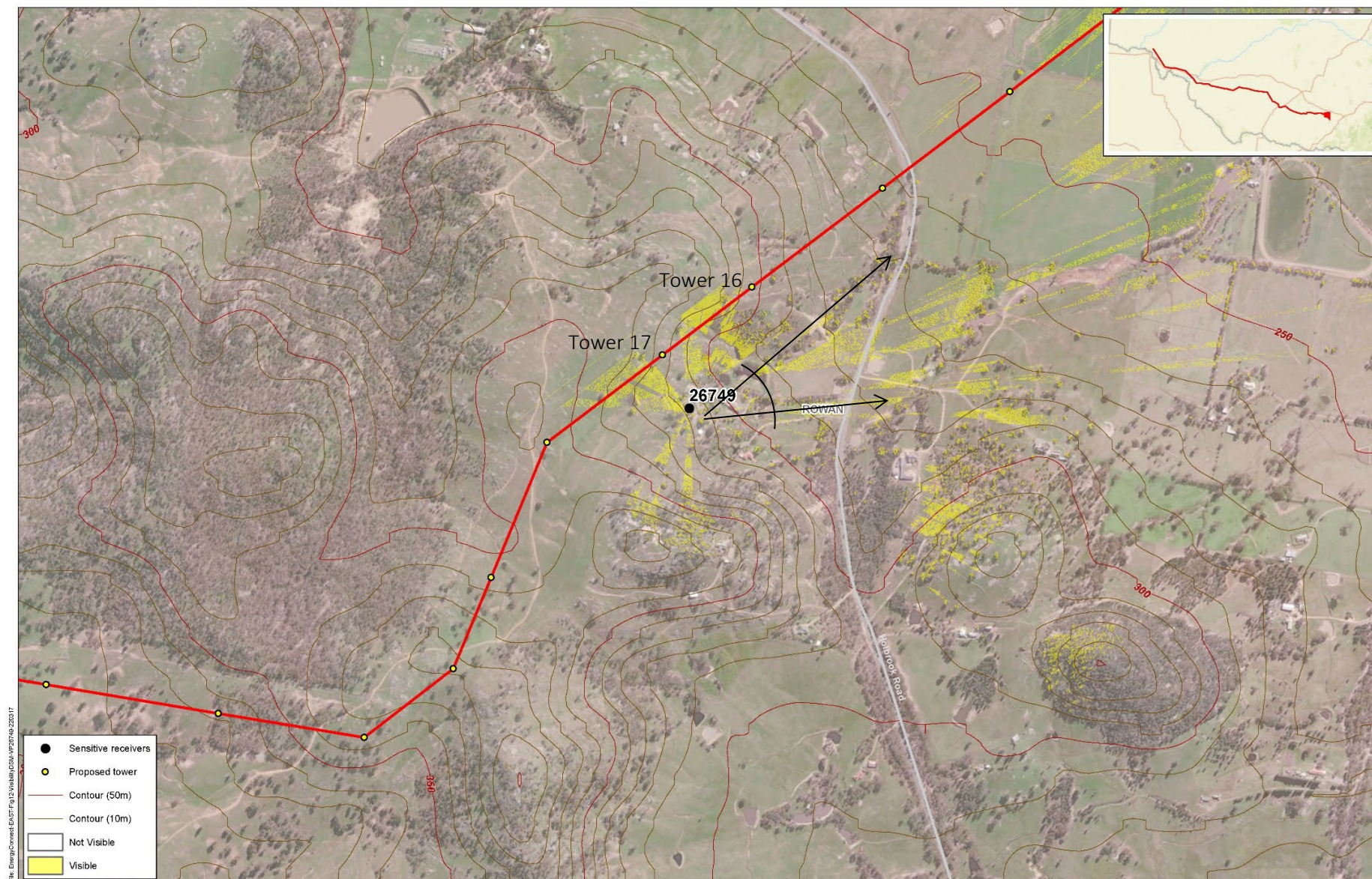


Figure F –Visual catchment - Dwelling ID. 26749

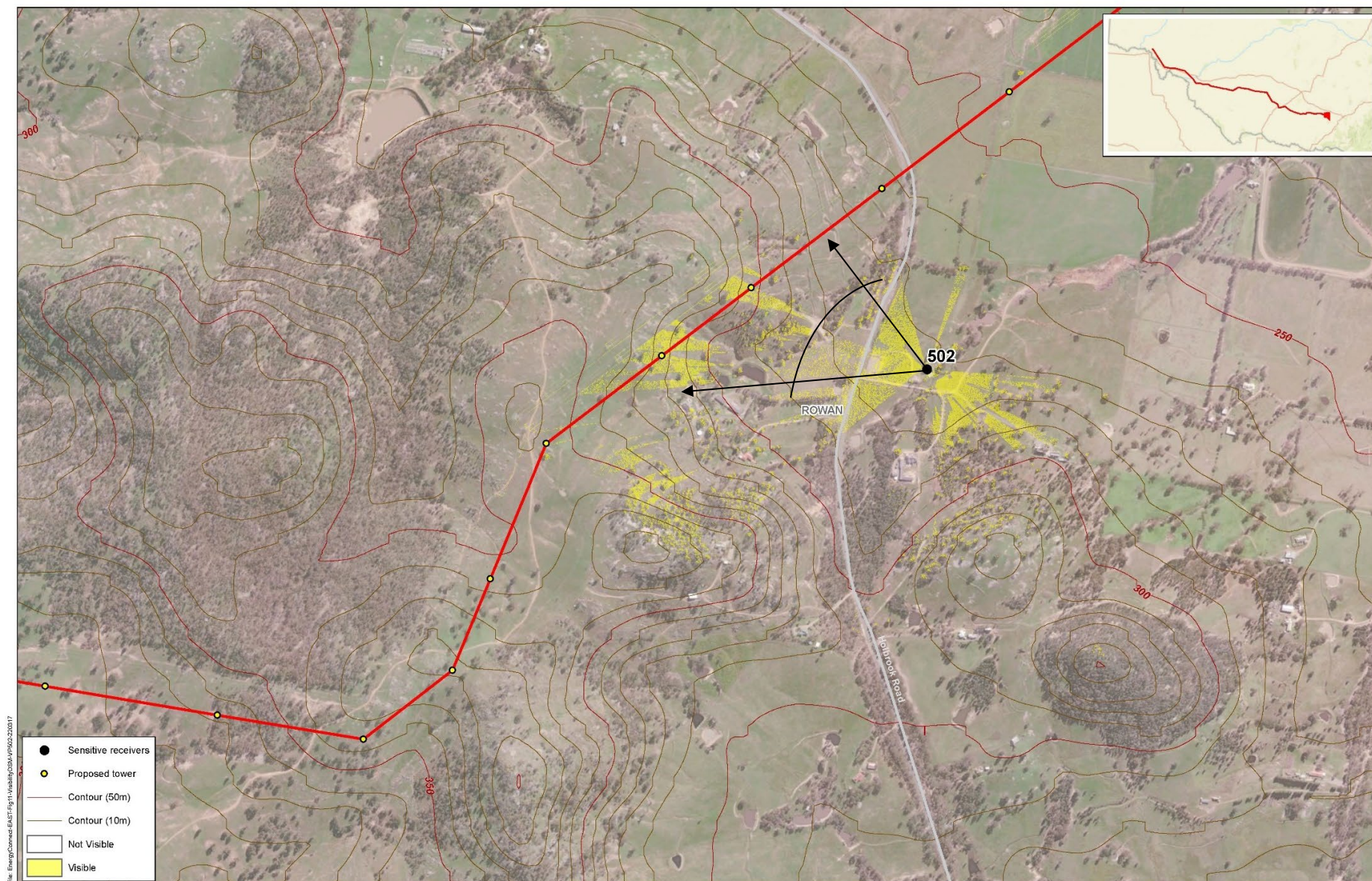


Views towards the dwelling from property boundary adjacent to Holbrook Road



Views northeast from the dwelling towards the alignment (OneAgency, www.realestate.com)

Receiver ID no.	Location / address	Approximate distance to the nearest tower(s)	Line affected	Orientation of impacted view	Potential level of impact (unmitigated)	Potential mitigation measures (subject to agreement with landholder for final measures)	Potential residual impact
502	6720 Holbrook Rd, Rowan	0.563 kilometres	No	Southwest, west, northwest and north	Moderate	There is limited opportunity on this property to screen the view to the nearest tower due to their elevated location. However, some mounded gardens with trees and shrubs could be provided along the western boundary of this property to provide some screening of the closest towers, while maintaining the view to sections of the ridgeline between the towers.	Moderate
Step 1 - Affected view The westerly view across Holbrook Road includes a series of hills with a ridgeline descending towards the valley. This view includes two transmission lines with several pairs of large towers visible prominently on the ridgeline. This view includes groups of mature trees mostly within the valley. The proposed towers would be located below the existing transmission line towers, and closer to this dwelling.		Step 2 - From what part of the property is the view obtained The dwelling is oriented to the west. There is a veranda along the western façade of the building, and living rooms oriented towards this view.		Step 3 – Extent of impact There would be a noticeable change to the view, noting: <ul style="list-style-type: none"> - Closest towers would be located in front of the existing towers, slightly down the slope - The towers would be viewed alongside the existing large scale transmission line infrastructure - Several towers would be partly seen - The towers would be of a large height and scale - The towers would rise above the ridgeline. 		Effectiveness of potential mitigation measures <ul style="list-style-type: none"> - This additional vegetation would provide some amenity improvements to the existing view - The towers would not be fully screened, and the effect would occur over time. 	






View to the western façade of the dwelling



View from the verandah of this dwelling towards the alignment



View west from the dwelling towards the alignment

Receiver ID no.	Location / address	Approximate distance to the nearest tower(s)	Line affected	Orientation of impacted view	Potential level of impact (unmitigated)	Potential mitigation measures (subject to agreement with landholder for final measures)	Potential residual impact
503	6640 Holbrook Rd, Gelston Park	0.677 kilometres	No	Southwest, west, northwest and north	Negligible	Mitigation not required due to low impact level.	Negligible
Step 1 - Affected view The views from this dwelling are oriented northeast and away from the alignment. The view northwest and west of this dwelling (towards the alignment) are enclosed by trees.			Step 2 - From what part of the property is the view obtained The dwelling is oriented to the northeast and there is a veranda and living areas at the front of this dwelling.		Step 3 – Extent of impact No change visible or the infrastructure would not be discernible in the view.		
							



View to dwelling entry




View to dwelling showing vegetation and ridgeline to the west



View northwest from the dwelling, alignment screened by trees



View north from the dwelling, trees would screen the alignment

Receiver ID no.	Location / address	Approximate distance to the nearest tower(s)	Line affected	Orientation of impacted view	Potential level of impact (unmitigated)	Potential mitigation measures (subject to agreement with landholder for final measures)	Potential residual impact
233	Berkley, 99 Rowan Rd, Rowan	0.309 kilometres	Yes	North	Moderate	Additional trees provided to the north of the existing gardens to screen the towers within the adjacent fields. Gardens could be mounded to increase the effectiveness of screening.	Low-moderate
Step 1 - Affected view View north towards the alignment, mostly screened by trees within the gardens of the dwelling. There would be glimpses to the upper portion of the transmission line The driveway would pass under the transmission line corridor.		Step 2 - From what part of the property is the view obtained The dwelling is oriented to the northeast and there is a veranda and living areas at the front of this dwelling. There are existing mounded gardens to the north of the dwelling which screen the existing transmission line towers.		Step 3 – Extent of impact There would be a noticeable change to the view, noting: <ul style="list-style-type: none">- Closest tower would be partly seen above intervening vegetation- The towers would be viewed alongside the existing large scale transmission line infrastructure- Seen in the context of existing transmission lines and substation, similarly large-scale structures and towers, but not the same shape and at different spacings- Towers seen from driveway on approach to building (passes through easement)- Some vegetation removal may be seen.		Effectiveness of potential mitigation measures <ul style="list-style-type: none">- Vegetation would provide additional screening of the nearest tower over time- The proposed tower to the northeast may still be seen above the vegetation due to its large scale- The flat landform would increase the effectiveness of vegetation screening as both the viewer and tower are on the similar level.	
							



Dwelling oriented north towards the alignment



Existing trees to the north of the dwelling including mounded gardens with shrubs



Gardens to the north west of the dwelling, trees and agricultural sheds screen the alignment



View north along the driveway, view includes upper portion of existing towers



View north towards the alignment from the dwelling, showing upper portion of existing transmission lines



View from the driveway north of the dwelling


Receiver ID no.	Location / address	Approximate distance to the nearest tower(s)	Line affected	Orientation of impacted view	Potential level of impact (unmitigated)	Potential mitigation measures (subject to agreement with landholder for final measures)	Potential residual impact
202	Benlock, 83 Ashfords Rd, Gregadoo	0.288 kilometres	No	Southwest, west and northwest	Low	Mitigation not required due to low impact level.	Low
Step 1 - Affected view The landform is relatively flat with open fields. Mature trees around the residence, along the driveway and along Ashfords Road limit views to the southwest and west. These views include existing transmission line towers and wires.		Step 2 - From what part of the property is the view obtained Dwelling oriented southwest along the driveway where vegetation directs the view and encloses the view. There may also be living rooms to the north, oriented towards the alignment.		Step 3 – Extent of impact Potential for a slight change to views, including: <ul style="list-style-type: none">- Glimpses to some vegetation removal, and the proposed expansion of the Wagga Wagga substation.- Additional transmission line towers and substation may be visible between the trees- Similarly large-scale towers, but not the same shape and at different spacings- If seen, the infrastructure would not be prominent and seen in the context of existing transmission lines and substation.			

Measurement Tools

Meters

Measurement Result

288.8 Meters





West facing elevation of the dwelling



View northwest to the existing substation



View south west from near the dwelling showing existing trees and existing transmission line infrastructure



View west to existing mature trees