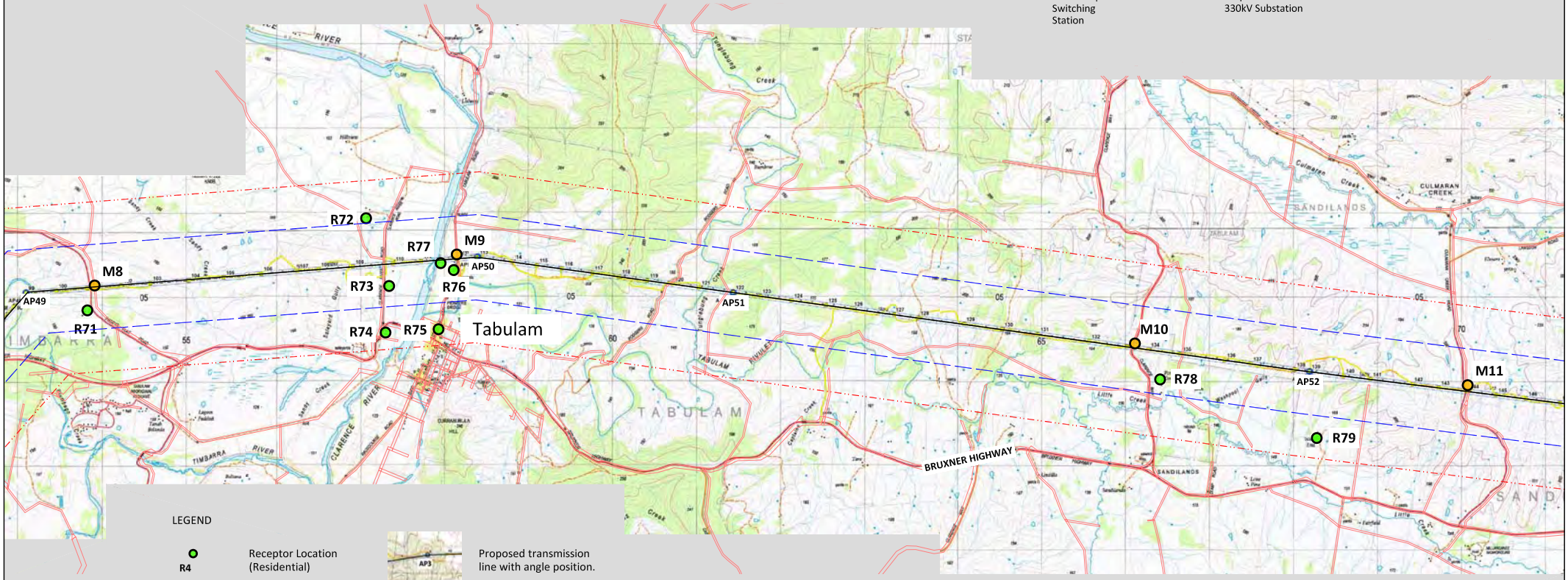
Dumaresq to Lismore 330kV Transmission Line Project - Visual Assessment

General Location Plan



LEGEND

- R4 — Receptor Location (Residential)
- M1 — Receptor Location (Motorist)
- Existing or proposed substation as noted on figures.
- 1km offset (red)
- 500m offset (blue)
- AP3 — Proposed transmission line with angle position.
- Existing road or access track
- Existing river or creek

Source: Copyright Department of Lands Panorama Avenue Bathurst 2795 (www.lands.nsw.gov.au)

0m 500m 1Km

N

Figure 20 - Receptor Locations

Note

Residential receptors are identified from aerial photographs and publicly accessible locations only and are subject to ground-truthing.

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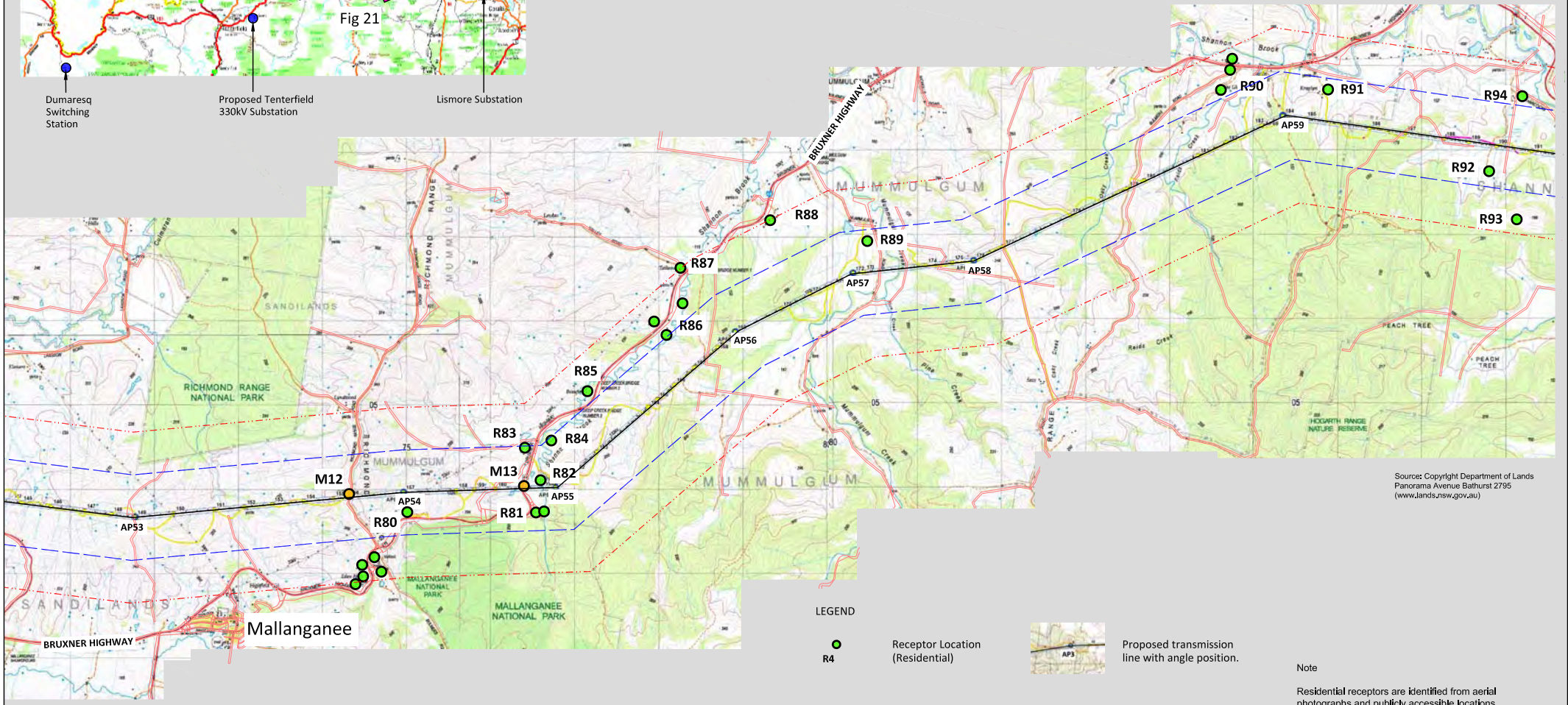
Dumaresq to Lismore 330kV Transmission Line Project - Visual Assessment

General Location Plan



Source: Copyright Department of Lands Panorama Avenue Bathurst 2795 (www.lands.nsw.gov.au)

LEGEND

- R4 — Receptor Location (Residential)
- M1 — Receptor Location (Motorist)
- Existing or proposed substation as noted on figures.
- 1km offset (red)
- 500m offset (blue)
- Proposed transmission line with angle position.
- Existing road or access track
- Existing river or creek

Note

Residential receptors are identified from aerial photographs and publicly accessible locations only and are subject to ground-truthing.

0m 500m 1Km

N

Figure 21 - Receptor Locations

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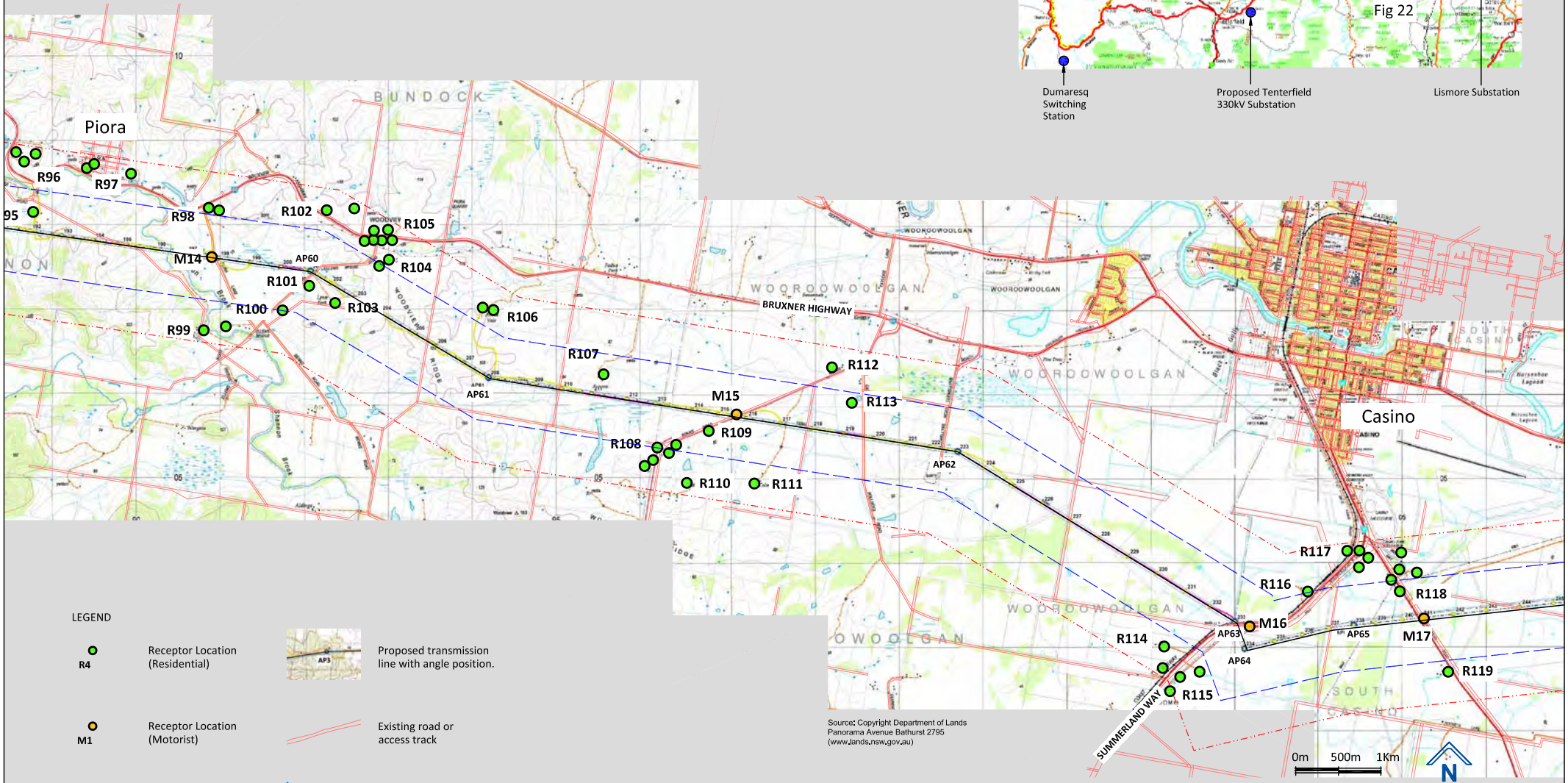
Dumaresq to Lismore 330kV Transmission Line Project - Visual Assessment

General Location Plan



Source: Copyright Department of Lands Panorama Avenue Bathurst 2795 (www.lands.nsw.gov.au)

LEGEND

- R4 — Receptor Location (Residential)
- M1 — Receptor Location (Motorist)
- Existing or proposed substation as noted on figures.
- 1km offset (red)
- 500m offset (blue)
- Proposed transmission line with angle position.
- Existing road or access track
- Existing river or creek

Figure 22 - Receptor Locations

Note

Residential receptors are identified from aerial photographs and publicly accessible locations only and are subject to ground-truthing.

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Dumaresq to Lismore 330kV Transmission Line Project - Visual Assessment

General Location Plan

LEGEND

R4 — Receptor Location (Residential)

M1 — Receptor Location (Motorist)

Existing or proposed substation as noted on figures.

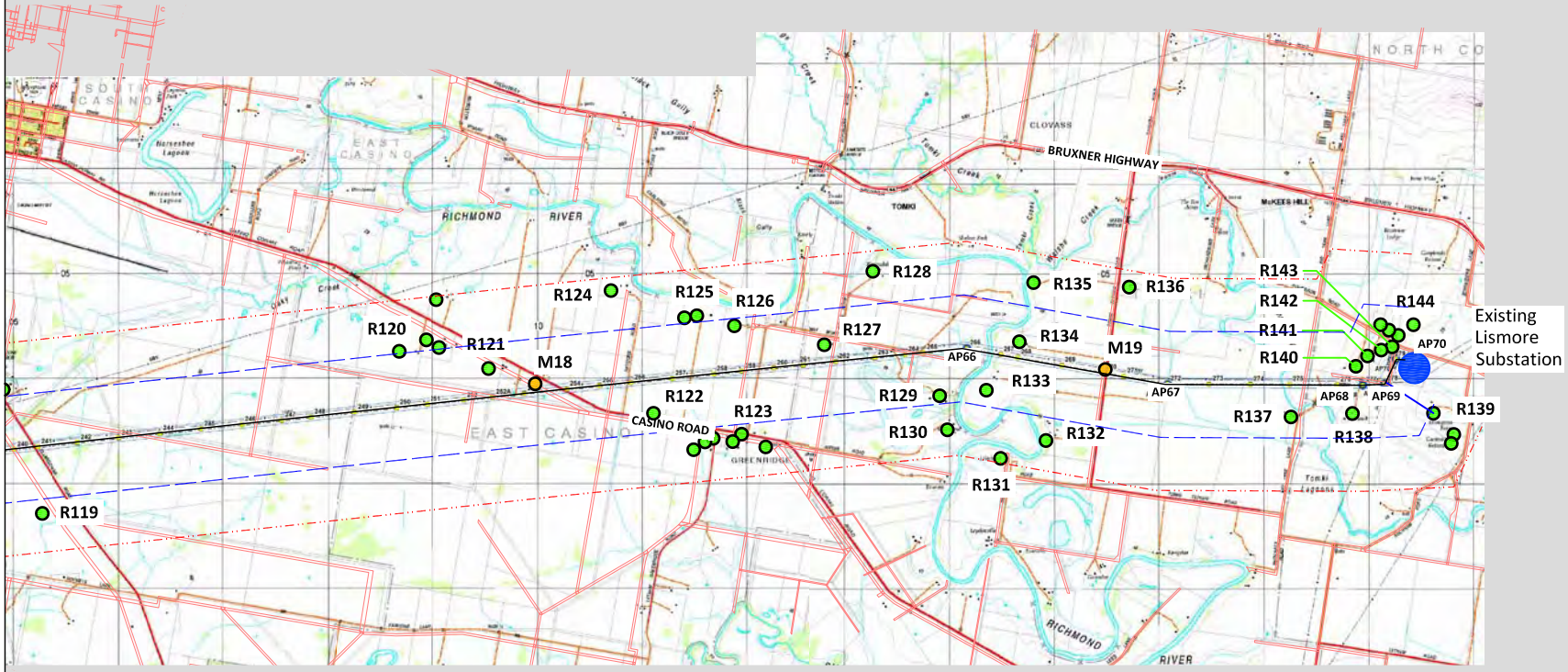
1km offset (red)

500m offset (blue)

AP3 — Proposed transmission line with angle position.

Existing road or access track

Existing river or creek



Source: Copyright Department of Lands
Panorama Avenue Bathurst 2795
(www.lands.nsw.gov.au)

Note

Residential receptors are identified from aerial photographs and publicly accessible locations only and are subject to ground-truthing.

0m 500m 1Km

N

Figure 23 - Receptor Locations

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6.2 Visibility Matrix

Table 4 presents the results of the visual assessment from the various potential residential receptor locations identified during the field inspection. The receptor locations are illustrated in **Figures 13 to 23**.

Table 4 Visibility Matrix – Residential Receptors

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
West Alignment (Dumaresq Switching Station to Tenterfield 330kV Substation)							
R1	Resident	510	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views north from residences toward the Project are generally screened by a combination of landform and vegetation.	Nil
R2	Resident	520	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views south from residence toward the Project are partially screened by localised tree cover and generally restricted by tree planting alongside creek and rising landform.	Low to Moderate
R3	Resident	560	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south east to east from residence toward the Project are partially screened by vegetation with potential for views toward upper portions of support and tension structures.	Low to Moderate
R4	Resident	535	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south east to east from residence toward the Project are partially screened by vegetation with potential for views toward upper portions of support and tension structures.	Low to Moderate

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
R5	Resident	730	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south to south east from residence toward the Project across agricultural land with some potential screening through rising landform and vegetation.	Low
R6	Non residential structure (shooting hut).	90	Varies with occupancy.	Low	High	Potential views south to north east from hut toward the Project occur within the immediate vicinity of the residence, although generally restricted in extent by a combination of landform and vegetation.	Low
R7	Resident	985	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views to north east from residence toward proposed the Project potentially screened by a combination of landform and scattered tree cover.	Low
R8	Resident	925	Varies with daily occupancy – but potential for long term views.	Low	Medium to High	Potential views south from residence toward the Project potentially screened by a combination of landform and scattered tree cover.	Low
R9	Resident	1095	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south from residence toward the Project potentially screened by a combination of landform and scattered tree cover.	Low
R10	Residents	790	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south from residences toward proposed the Project potentially screened by a combination of landform and scattered tree cover.	Low

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
R11	Resident	760	Varies with daily occupancy – but potential for long term views.	Low	Medium to Low	Potential views east from residence toward the Project potentially screened by tree cover.	Low
R12	Resident	160	Varies with daily occupancy – but potential for long term views.	Low	Medium to Low	Potential views east to north east from residence toward the Project extend north to north east along alignment for around 1 to 1.5km.	High
R13	Resident	430	Varies with daily occupancy – but potential for long term views.	Low	Medium to Low	Potential views east from residence toward the Project potentially screened by tree cover.	Low (Nil)
R14	Resident	1000	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views west from residence toward the Project are partially screened by scattered tree cover.	Low
R15	Resident	580	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views west from residence toward the Project are generally screened by scattered tree cover.	Low
R16	Resident	275	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views west from residence toward the Project are partially screened by scattered tree cover.	Low
R17	Resident	825	Varies with daily occupancy – but	Low	Medium	Potential views west from residence toward the Project are generally screened by scattered tree	Low

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
			potential for long term views.			cover.	
R18	Resident	305	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views west to north east from residence toward the Project extend for around 1 to 1.5km beyond the building curtilage with some localised screening provided by farm buildings.	Moderate to High
R19	Resident	478	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views north from residence toward the Project are generally screened by scattered tree cover.	Low
R20	Resident	490	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views south from residence toward the Project are partially screened by scattered tree cover.	Low
R21	Resident	432	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views south from residence toward the Project are generally screened by scattered tree cover.	Low (Nil)
R21a	Resident	570	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views north from residence toward the Project are generally screened by scattered tree cover and farm buildings.	Low (Nil)
R22	Resident	325	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views north to north east from residence toward the Project are generally screened by tree cover.	Nil

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
R23	Resident	768	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views north to north east from residence toward the Project are generally screened by tree cover.	Nil
R24	Resident	913	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views north to north east from residence toward the Project are generally screened by tree cover.	Nil
R25	Resident	825	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views north to north east from residence toward the Project are generally screened by tree cover.	Nil
R25a	Resident	470	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views north to north east from residence toward the Project are generally screened by tree planting surrounding the residence.	Low
R26	Resident	429	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views south from residence toward the Project are generally screened by tree cover.	Nil
R27	Resident	628	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views south from residence toward the Project are generally screened by tree cover.	Nil
R28	Resident	663	Varies with daily occupancy – but	Low	Medium	Potential views north to north east from residence extend toward transmission line south and west of	Moderate

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
			potential for long term views.			Black Swamp Road for around 1 to 1.5km	
R29	Resident	410	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views south from residence extend toward transmission line west of Black Swamp Road for around 1 to 1.5km	Moderate
R30	Resident	985	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views south from residence are generally screened vegetation adjoining Black Swamp Creek Road.	Low
East Alignment (Tenterfield 330kV Substation to Lismore Substation generally follows alignment of existing 132kV transmission line). The majority of the existing 132kV transmission line would be deconstructed and removed between the Tenterfield 330kV Substation and Casino.							
R31	Resident	1030 to substation and line.	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views north east toward the proposed transmission line, including views toward preferred Tenterfield 330kV Substation location.	Low for line and substation
R31a	Resident	1475 to substation and line.	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views north east toward the proposed transmission line, including views toward preferred Tenterfield 330kV Substation location.	Low for line and substation
R32	Resident with occasional	228 to line and 528 to substation.	Varies with occupancy.	Low	Medium	Potential views east to south west along proposed transmission line, including views south west toward preferred Tenterfield 330kV Substation location.	Low for line and substation

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
	occupancy.						
R33	Resident	328	Varies with daily occupancy – but potential for long term views.	Low	Medium to Low	Potential views north west to north toward the proposed transmission line location with visual extent constrained by rising landform east and west of residence.	Low
R34	Resident	950	Varies with daily occupancy – but potential for long term views.	Low	Medium to Low	Potential views south to south east toward the proposed transmission line location with visual extent constrained by rising landform east and west of residence.	Low
R35	Resident	273	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views south toward the proposed transmission line location are generally screened by tree cover.	Nil
R36	Resident	530	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views north to north east toward the proposed transmission line location are generally screened by tree cover.	Low
R37	Resident	464	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views south east toward the proposed transmission line location are partially screened by tree cover.	Low
R38	Resident	441	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views south east toward the proposed transmission line location are partially screened by tree cover.	Low

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
R39	Resident	400	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views south east toward the proposed transmission line location are partially screened by tree cover.	Low
R40	Resident	378	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views north toward the proposed transmission line location are partially screened by tree cover.	Low
R41	Resident	978	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views north toward the proposed transmission line location are generally screened by tree cover.	Nil
R42	Resident	952	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views north toward the proposed transmission line location are generally screened by tree cover.	Nil
R43	Resident	592	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views north toward the proposed transmission line location are generally screened by tree cover.	Nil
R44	Resident	100	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views north toward the proposed transmission line location are generally partially screened by local tree cover.	Low
R45	Resident	275	Varies with daily occupancy – but	Low	High	Potential views north west toward the proposed transmission line location are generally partially	Low

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
			potential for long term views.			screened by local tree cover.	
R46	Resident	200	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south toward the proposed transmission line location are partially screened by tree cover.	Low
R47	Resident	191	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south toward the proposed transmission line location are partially screened by tree cover.	Low
R48	Resident	100	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south toward the proposed transmission line location are partially screened by tree cover.	Low
R49	Resident	212	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south toward the proposed transmission line location are generally screened by tree cover.	Nil
R50	Resident	548	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south toward the proposed transmission line location are generally screened by tree cover.	Nil
R51	Resident	787	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south toward the proposed transmission line location are generally screened by tree cover.	Nil

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
R52	Resident	975	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south toward the proposed transmission line location are generally screened by tree cover.	Nil
R53	Resident	526	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views north toward the proposed transmission line location are generally screened by tree cover.	Nil
R54	Resident	328	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views north toward the proposed transmission line location are generally screened by tree cover.	Nil
R55	Resident	162	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views north toward the proposed transmission line location are generally screened by tree cover.	Nil
R56	Resident	240	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south toward the proposed transmission line location are generally screened by tree cover.	Nil
R57	Resident	505	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south toward the proposed transmission line location are generally screened by tree cover.	Nil
R58	Resident	666	Varies with daily occupancy – but	Low	High	Potential views south toward the proposed transmission line location are generally screened by	Nil

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
			potential for long term views.			tree cover.	
R59	Resident	115	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views north toward the proposed transmission line location are generally screened by tree cover.	Nil
R60	Resident	596	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views north toward the proposed transmission line location are generally screened by tree cover.	Nil
R61	Resident	85	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south toward the proposed transmission line location are partially screened by tree cover.	Low
R62	Resident	332	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south toward the proposed transmission line location are generally screened by tree cover.	Nil
R63	Resident	596	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south toward the proposed transmission line location are generally screened by tree cover.	Nil
R64	Resident	247	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views north toward the proposed transmission line location are generally screened by tree cover.	Nil

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
R65	Resident	484	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views north toward the proposed transmission line location are generally screened by tree cover.	Nil
R66	Resident	230	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south toward the proposed transmission line location are partially screened by tree cover.	Low
R67	Resident	270	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south toward the proposed transmission line location are partially screened by tree cover.	Low
R68	Resident	448	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south toward the proposed transmission line location are partially screened by tree cover.	Low
R69	Resident	842	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south toward the proposed transmission line location are partially screened by tree cover.	Low
R70	Resident	90	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views west toward the proposed transmission line location are partially screened by tree cover.	Moderate
R71	Resident	270	Varies with daily occupancy – but	Low	Medium	Potential views west toward the proposed transmission line location extend toward easement	Low

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
			potential for long term views.			although the extent of view is restricted by existing tree cover.	
R72	Resident	556	Varies with daily occupancy – but potential for long term views.	Low	Medium to Low	Potential views south toward the proposed transmission line location are partially screened by localised tree cover surrounding residence.	Low
R73	Resident	260	Varies with daily occupancy – but potential for long term views.	Low	Medium to Low	Potential views north toward the proposed transmission line location extend toward and across the Clarence River.	Low
R74	Resident	802	Varies with daily occupancy – but potential for long term views.	Low	Medium to Low	Potential views north toward the proposed transmission line location are partially screened by existing trees surrounding residence.	Low
R75	Residents	750	Varies with daily occupancy – but potential for long term views.	Low	Medium to Low	Potential views north from Tabulam toward the proposed transmission line location are generally screened by existing tree cover alongside the Clarence River and adjoining creek lines.	Low (Nil)
R76	Resident	140	Varies with daily occupancy – but potential for long term views.	Low	Medium to Low	Potential views north toward the proposed transmission line location extend toward easement and across the Clarence River.	Low
R77	Resident (Caravan)	50	Varies with daily occupancy – but potential for long term views.	Low	Medium to Low	Potential views north toward the proposed transmission line location extend toward easement and across the Clarence River.	Low

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
R78	Resident	327	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views north toward the proposed transmission line location generally screened by scattered tree cover and farm buildings.	Low (Nil)
R79	Resident	762	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views north toward the proposed transmission line location generally screened by scattered tree cover and farm buildings.	Low (Nil)
R80	Residents	216	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views north toward the proposed transmission line location generally screened by scattered tree cover and undulating landform.	Low (Nil)
R81	Resident	285	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views north toward the proposed transmission line location generally screened by scattered tree cover and undulating landform.	Low (Nil)
R82	Resident	90	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views south toward the proposed transmission line location are generally limited by scattered tree cover and undulating landform.	Low
R83	Resident	489	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views south toward the proposed transmission line location are generally limited by scattered tree cover and undulating landform.	Low
R84	Resident	459	Varies with daily occupancy – but	Low	Medium	Potential views south toward the proposed transmission line location are generally limited by	Low

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
			potential for long term views.			scattered tree cover and undulating landform.	
R85	Resident	625	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views south to south east toward the proposed transmission line location are generally limited by scattered tree cover and undulating landform.	Low
R86	Resident	541	Varies with daily occupancy – but potential for long term views.	Low	Medium to High	Potential views south to south east toward the proposed transmission line location are generally screened by tree cover and undulating landform.	Low
R87	Resident	1008	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south to south east toward the proposed transmission line location are generally screened by tree cover and undulating landform.	Low
R88	Resident	974	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south to south east toward the proposed transmission line location are generally screened by tree cover and undulating landform.	Low
R89	Resident	371	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south to south east toward the proposed transmission line location are generally screened by tree cover and undulating landform.	Low
R90	Resident	594	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south to south toward the proposed transmission line location are generally screened by scattered tree cover.	Low

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
R91	Resident	374	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south to south west toward the proposed transmission line location are generally screened by scattered tree cover.	Low
R92	Resident	327	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views north toward the proposed transmission line location are generally screened by scattered tree cover.	Low
R93	Resident	840	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views north toward the proposed transmission line location are generally screened by scattered tree cover.	Low
R94	Resident	618	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south to south east toward the proposed transmission line location are generally screened by tree cover and undulating landform.	Low
R95	Resident	270	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south to south east toward the proposed transmission line location are partially screened by undulating landform.	Low
R96	Residents	807	Varies with daily occupancy – but potential for long term views.	Low	High	Potential views south to south east toward the proposed transmission line location are partially screened by scattered tree cover and undulating landform.	Low
R97	Residents	829	Varies with daily occupancy – but	Low	Medium	Potential views south to south east toward the proposed transmission line location are partially	Low (Nil)

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
			potential for long term views.			screened by scattered tree cover and undulating landform.	
R98	Resident	575	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views south to south east toward the proposed transmission line location are partially screened by undulating landform.	Low
R99	Residents	863	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views north to north east toward the proposed transmission line location are partially screened by tree cover surrounding residence.	Low (Nil)
R100	Resident	498	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views north to north west toward the proposed transmission line.	Low
R101	Resident	140	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views north to north west toward the proposed transmission line.	Low
R102	Resident	746	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views south to south east toward the proposed transmission line location are partially screened by undulating landform.	Low (Nil)
R103	Resident	145	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views north to north west toward the proposed transmission line.	Low

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
R104	Residents	470	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views south to south east toward the proposed transmission line location are partially screened by tree cover and farm buildings surrounding residences.	Low (Nil)
R105	Residents	635	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views south to south east toward the proposed transmission line location are partially screened by scattered tree cover surrounding residences.	Low (Nil)
R106	Residents	715	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views south west to south east toward the proposed transmission line.	Low
R107	Resident	220	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views south west to south east toward the proposed transmission line.	Low
R108	Residents	390	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views north to north west toward the proposed transmission line location are partially screened by tree cover surrounding residences.	Low (Nil)
R109	Resident	196	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views north to north west toward the proposed transmission line location are partially screened by tree cover surrounding residence.	Low (Nil)
R110	Resident	854	Varies with daily occupancy – but	Low	Medium	Potential views north toward the proposed transmission line location are partially screened by	Low (Nil)

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
			potential for long term views.			scattered tree cover surrounding residence.	
R111	Resident	740	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views north toward the proposed transmission line location are partially screened by scattered tree cover surrounding residence.	Low (Nil)
R112	Resident	752	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views south toward the proposed transmission line location are partially screened by tree cover and farm buildings surrounding residences.	Low (Nil)
R113	Resident	375	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views south toward the proposed transmission line location are partially screened by tree cover and farm buildings surrounding residences.	Low (Nil)
R114	Residents	682	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views north to north east toward the proposed transmission line location are partially restricted by tree cover.	Low
R115	Residents	620	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views north to north east toward the proposed transmission line location are partially restricted by scattered tree cover around and beyond residences.	Low (Nil)
R116	Resident	511	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views south to south east toward the proposed transmission line location are partially restricted by scattered tree cover around and beyond residences.	Low

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
R117	Resident	665	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views south to south east toward the proposed transmission line location are partially restricted by scattered tree cover around and beyond residences.	Low
The proposed 330kV transmission line would run parallel and approximately 30m to the south of the existing 132kV transmission line from around AP65 to the Lismore Substation. The following Visibility Ratings determine the potential cumulative impact of the proposed 330kV transmission line and the existing 132kV transmission line.							
R118	Resident	330	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views south to south east toward existing 132kV line and proposed transmission line location are partially restricted by scattered tree cover around and beyond residences.	Low
R119	Resident	672	Varies with daily occupancy – but potential for long term views.	Low	Medium	Potential views north to north east toward existing 132kV line and proposed transmission line location are partially restricted by scattered tree cover around and beyond residences.	Low (Nil)
R120	Resident	480	Varies with daily occupancy – but potential for long term views.	Low	Low	Potential views west to east toward existing 132kV line and proposed transmission line location extend across agricultural land.	Low
R121	Resident	230	Varies with daily occupancy – but potential for long term views.	Low	Low	Potential views west to east toward existing 132kV line and proposed transmission line location extend across agricultural land.	Low
R122	Non	350	N/A	Low	Low	N/A	N/A

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
	residential structure						
R123	Residents	629	Varies with daily occupancy – but potential for long term views.	Low	Low	Potential views north toward existing 132kV line and proposed transmission line across agricultural land. Some partial views due to screening by trees surrounding residences.	Low
R124	Resident	841	Varies with daily occupancy – but potential for long term views.	Low	Low	Potential views south toward existing 132kV line and proposed transmission line location extend across agricultural land, and potentially partially screened by trees surrounding residences.	Low
R125	Resident	524	Varies with daily occupancy – but potential for long term views.	Low	Low	Potential views west to east toward existing 132kV line and proposed transmission line location extend across agricultural land.	Low
R126	Resident	394	Varies with daily occupancy – but potential for long term views.	Low	Low	Potential views west to east toward existing 132kV line and proposed transmission line location extend across agricultural land.	Low
R127	Resident	130	Varies with daily occupancy – but potential for long term views.	Low	Low	Potential views west to east toward existing 132kV line and proposed transmission line location extend across agricultural land with the extent of view partially restricted by tree cover surrounding and beyond residence.	Low
R128	Resident	772	Varies with daily occupancy – but potential for long	Low	Low	Potential views south toward existing 132kV line and proposed transmission line location are generally screened by vegetation.	Low (Nil)

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
			term views.				
R129	Resident	458	Varies with daily occupancy – but potential for long term views.	Low	Low	Potential views north toward existing 132kV line and proposed transmission line location are partially screened by existing tree cover, with the extent of view restricted by vegetation alongside the Richmond River.	Low
R130	Resident	785	Varies with daily occupancy – but potential for long term views.	Low	Low	Potential views north toward existing 132kV line and proposed transmission line location are generally screened by existing tree cover, with the extent of view restricted by vegetation alongside the Richmond River.	Low (Nil)
R131	Resident	993	Varies with daily occupancy – but potential for long term views.	Low	Low	Potential views north toward existing 132kV line and proposed transmission line location are generally screened by existing tree cover, with the extent of view restricted by vegetation alongside the Richmond River.	Low (Nil)
R132	Resident	750	Varies with daily occupancy – but potential for long term views.	Low	Low	Potential views north toward existing 132kV line and proposed transmission line location are generally screened by existing tree cover, with the extent of view restricted by vegetation alongside the Richmond River.	Low (Nil)
R133	Resident	199	Varies with daily occupancy – but potential for long term views.	Low	Low	Potential views north to north east toward existing 132kV line and proposed transmission line location extend across agricultural land with some potential screening by tree cover surrounding residential building and alongside the Richmond River.	Low

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
R134	Resident	137	Building unoccupied at time of field work	Low	Low	Potential views south to east across agricultural land toward existing 132kV line and proposed transmission line.	Low
R135	Resident	692	Varies with daily occupancy – but potential for long term views.	Low	Low	Potential views south toward existing 132kV line and proposed transmission line location are generally screened by existing tree cover, with the extent of view restricted by vegetation alongside the Richmond River.	Low (Nil)
R136	Resident	809	Varies with daily occupancy – but potential for long term views.	Low	Low	Potential views south toward existing 132kV line and proposed transmission line location are generally screened by existing tree cover.	Low (Nil)
R137	Resident	337	Varies with daily occupancy – but potential for long term views.	Low	Low	Potential views north toward existing 132kV line and proposed transmission line location extend across agricultural land with some limited screening potential provided by vegetation surrounding the residence.	Low
R138	Resident	302	Varies with daily occupancy – but potential for long term views.	Low	Low	Potential views north toward existing 132kV line and proposed transmission line location extend across agricultural land with some limited screening potential provided by vegetation surrounding the residence.	Low
R139	Resident	536	Varies with daily occupancy – but potential for long term views.	Low	Low	Potential views north toward existing 132kV line and proposed transmission line location extend across agricultural land with some limited screening potential provided by vegetation surrounding the	Low (Nil)

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
						residence.	
R140	Resident	131	Varies with daily occupancy – but potential for long term views.	Low	Low	Potential views south toward existing 132kV line, Lismore Substation and proposed transmission line location with some limited screening potential provided by vegetation surrounding the residence.	Low
R141	Resident	230	Varies with daily occupancy – but potential for long term views.	Low	Low	Potential views south to south east toward existing 132kV line, Lismore Substation and proposed transmission line location with some limited screening potential provided by vegetation surrounding the residence.	Low
R142	Resident	155	Varies with daily occupancy – but potential for long term views.	Low	Low	Potential views south to south east toward existing 132kV line, Lismore Substation and proposed transmission line location with some limited screening potential provided by vegetation surrounding the residence.	Low
R143	Resident	110	Varies with daily occupancy – but potential for long term views.	Low	Low	Potential views south to south east toward existing 132kV line, Lismore Substation and proposed transmission line location with some limited screening potential provided by vegetation surrounding the residence.	Low
R144 North of Rogersons Lane	Resident	215	Varies with daily occupancy – but potential for long term views.	Low	Low	Potential views south to south east toward Lismore Substation and with proposed transmission line location potentially screened by vegetation around residences.	Low

Table 5 presents the results of the visual assessment from the various potential transport corridor and public space receptor locations identified during the field inspection. The receptor locations are illustrated in **Figures 13 to 23**.

Table 5 Visibility Matrix – Transport Corridors and Public Space

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
M1 Bruxner Highway	Motorist	Varies	Short term	Moderate	Low	Short term views from vehicles travelling south west and north east toward transmission line spanning the Bruxner Highway. Views toward the Project are partially contained by adjoining landform and vegetation north of the road corridor.	Low
M2 New England Highway	Motorist	Varies	Short term	High	Moderate	Short term views from vehicles travelling north west and south east toward transmission line spanning the New England Highway. Views toward the Project are generally contained by adjoining landform and vegetation east and west of the road corridor.	Low
M3 Mount Lindesay Highway	Motorist	Varies	Short Term	Moderate	High	Short term views from vehicles travelling north and south toward transmission line spanning the Mount Lindesay Highway. Views toward the Project are generally contained by adjoining landform and vegetation east and west of the road corridor.	Low
M4 Bruxner Highway	Motorist	Varies	Short term	Moderate	Moderate	Short term views from vehicles travelling north east and south west toward transmission line spanning the Bruxner Highway. Views toward the Project are generally contained by adjoining landform and vegetation east and west of the road corridor.	Low

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
M5 Bruxner Highway	Motorist	Varies	Short term	Moderate	High	Short term views from vehicles travelling north and south toward transmission line spanning the Bruxner Highway. Views toward the Project are generally contained by dense timbered vegetation east and west of the road corridor.	Low
M6 Bruxner Highway	Motorist	Varies	Short term	Moderate	High	Short term views from vehicles travelling east and west toward transmission line spanning the Bruxner Highway. Views toward the Project are generally contained by dense timbered vegetation either side of the road corridor.	Low
M7 Bruxner Highway	Motorist	Varies	Short term	Moderate	High	Short term views from vehicles travelling east and west toward transmission line spanning the Bruxner Highway. Views toward the Project are generally contained by dense timbered vegetation either side of the road corridor.	Low
M8 Paddys Flat Road	Motorist	Varies	Short term	Low	Moderate	Short term views from vehicles travelling north and south toward transmission line spanning Paddy's Flat Road. Views toward the Project are generally contained by vegetation either side of the road corridor.	Low
M9 Bottle Creek Road	Motorist	Varies	Short term	Low	Low	Short term views from vehicles travelling north and south toward transmission line spanning Bottle Creek Road. Views toward the Project extend across open farmland for a short to medium distance.	Low
M10 Clarence Way	Motorist	Varies	Short term	Low	High	Short term views from vehicles travelling north and south toward transmission line spanning the	Low

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
						Clarence Way Road. Views toward the Project are generally contained by undulating landform and vegetation.	
M11 Culmaran Creek Road	Motorist	Varies	Short term	Low	Moderate	Short term views from vehicles travelling north and south toward transmission line spanning the Clarence Way Road. Views toward the Project are generally contained by undulating landform and vegetation.	Low
M12 Cambridge Plateau Road	Motorist	Varies	Short term	Low	Moderate	Short term views from vehicles travelling north and south toward transmission line spanning the Cambridge Plateau Road. Views toward the Project are generally contained by undulating landform and vegetation.	Low
M13 Bruxner Highway	Motorist	Varies	Short term	Moderate	Moderate	Short term views from vehicles travelling north and south toward transmission line spanning the Bruxner Highway. Views toward the Project are generally contained by rising landform and vegetation.	Low
M14 Piora Lane and Ellems Bridge Road	Motorist	Varies	Short term	Low	Moderate	Short term views from vehicles travelling north and south toward transmission line spanning the Piora Land and Ellems Bridge Road. Views toward the Project are generally contained by undulating landform and vegetation.	Low
M15 Benns Road	Motorist	Varies	Short term	Low	Moderate	Short term views from vehicles travelling north east and south west toward transmission line spanning the Benns Road. Views toward the Project are	Low

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
						generally contained by undulating landform and vegetation.	
M16 Summerland Way and North Coast Railway	Motorist or Train	Varies	Short term	Moderate	Moderate	Short term views from vehicles travelling north east and south west toward transmission line spanning the Summerland Way and North Coast Railway. Views toward the Project are generally contained by vegetation either side of the road and rail corridor.	Low
M17 Ellangowan Road	Motorist	Varies	Short term	Low	Moderate	Short term views from vehicles travelling north and south toward transmission line spanning the Ellangowan Road. Views toward the Project are generally contained by vegetation either side of the road corridor.	Low
M18 Casino Road	Motorist	Varies	Short term	Low	Low	Short term views from vehicles travelling north west and south east toward transmission line spanning Casino Road. Views toward the Project are partially contained by vegetation either side of the road corridor.	Low
M19 Tatham Tomki Road	Motorist	Varies	Short term	Low	Low	Short term views from vehicles travelling north west and south east toward transmission line spanning the Tatham Tomki Road. Views toward the Project are partially contained by vegetation either side of the road corridor.	Low

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
A number of Public Spaces with direct or controlled access occur within the general vicinity of the Project area and include State Conservation Areas, National Parks and State Forests. The principal sites are listed below and illustrated in Figure 1.							
Torrington State Conservation Area (and Wilderness Area)	Visitors Picnics Camping Bushwalks 4WD	Varies (> 1km)	Varies with visitation (up to Long term)	Low	High	Views north west to north toward the Project area, including the transmission line and associated infrastructure are screened by a combination of landform and timbered areas.	Nil
Sundown National Park (and Wilderness Area)	Visitors Picnics Camping Bushwalks	Varies (> 1km)	Varies with visitation (up to Long term)	Low	High	Distant views south toward the Project area, including the transmission line and associated infrastructure are screened by a combination of landform and timbered areas.	Nil
Girraween and Bald Rock National Parks (and Wilderness Area)	Visitors Picnics Camping Bushwalks	Varies (> 1km)	Varies with visitation (up to Long term)	Low	High	Distant views south toward the Project area, including the transmission line and associated infrastructure are screened by a combination of landform and timbered areas.	Nil
Basket Swamp National Park	Bushwalks	Varies (> 1km)	Varies with visitation (up to Long term)	Low	High	Distant views south toward the Project area, including the transmission line and associated infrastructure are screened by a combination of landform and timbered areas.	Nil

RECEPTOR LOCATION	CATEGORY OF VIEWER	APPROX. DISTANCE TO LINE (m)	APPROX. PERIOD OF VIEW	NUMBER OF VIEWERS	VAC	PROJECT VISIBILITY	VISUAL IMPACT RATING
Boonoo Boonoo National Park	Visitors Picnics Camping Bushwalks	Varies (> 1km)	Varies with visitation (up to Long term)	Low	High	Distant views toward the Project area, including the transmission line and associated infrastructure are screened by a combination of landform and timbered areas.	Nil
Richmond Range National Park	Visitors Picnics Camping Bushwalks 4WD	Varies (> 1km)	Varies with visitation (up to Long term)	Low	High	Views toward the Project area, including the transmission line and associated infrastructure are screened by a combination of landform and timbered areas from the majority of the National Park.	Nil
Mallangaree National Park	Bushwalks	Varies (> 1km)	Varies with visitation (up to Long term)	Low	High	Views toward the Project area, including the transmission line and associated infrastructure are screened by a combination of landform and timbered areas.	Nil
Girard State Forest	Visitors Picnics Camping Bushwalks 4WD	Varies	Varies with visitation (up to Long term)	Low	High	The transmission line would follow the alignment of the exiting 132kV transmission line and is generally screened from camping and day use areas within the State Forest.	Low
Boonoo State Forest	Visitors Picnics Bushwalks 4WD	Varies (> 1km)	Varies with visitation (up to Long term)	Low	High	Distant views south to south east toward the Project area, including the transmission line and associated infrastructure are screened by a combination of landform and timbered areas.	Nil

6.3 Visual Impact Assessment

A total of 147 potential residential receptor locations were identified through the desk top aerial photograph and mapping study and one of these locations was determined to be unoccupied during the fieldwork study. An assessment of the visibility rating for each residential receptor location determined that:

- 27 of the 147 view locations have been determined to have a **nil** visibility rating;
- 112 of the 147 view locations have been determined to have a **low** visibility rating;
- 6 of the 147 view locations has been determined to have a **moderate** visibility rating;
- 2 of the 147 view locations have been determined to have a **high** visibility rating.

The visual assessment also considered potential visual impacts for motorists and rail passengers at 19 locations along the west and east alignment of the proposed transmission line. The visual assessment determined that the potential visual impact for motorists and rail passengers travelling along local roads, main highways and portions of railway lines would be low. For motorists, the determination of a low visibility rating generally results from a combination of the very short period of view available from vehicles travelling at the permitted road speeds (generally between 80 and 100 kilometres per hour on the main roads and highways) and the partially restricted view beyond the majority of the road corridors due to roadside tree planting or tree cover. The location of main roads and rail corridors are illustrated in **Figures 13** to **23**.

The visual assessment considered visibility from a number of public recreation and conservation areas that include Wilderness Areas, National Parks, State Conservation Areas and State Forests. Some of these areas offer a range of recreational activities such as camping, bushwalking and four wheel drive facilities. The visual assessment determined that the East and West alignments would not be visible from the majority of these areas due to screening by topography and vegetation.

The determination of visibility ratings for receptor locations along the East Alignment (between the proposed Tenterfield 330kV Substation and existing Lismore Substation) has taken into account circumstances where views toward the existing 132kV transmission line structures would be replaced by views toward the proposed 330kV transmission line.

The determination of visibility ratings also acknowledges the fact that the 330kV transmission line supporting structures would be capable of spanning greater distances than the existing 132kV transmission line and that there would be an overall reduction in the number of visible supporting structures along the east alignment.

Photomontage

SECTION 7

7.1 Photomontage

In order to illustrate how the 330kV transmission line may appear following construction, photomontages were prepared from ten typical view locations. The photomontage locations are shown in **Figures 2** to **12**, and include views from:

- Location A – Bruxner Highway.
- Location B – Mole River Road.
- Location C – The New England Highway.
- Location D – Black Swamp Road.
- Location E – Macleod's Creek Road.
- Location F – Drake Village.
- Location G – Bottle Creek Road (Tabulam).
- Location H – Cambridge Plateau Road.
- Location I – Summerland Way (South of Casino).
- Location J – Tomki Bight Road.

The photomontages were generated through the following steps:

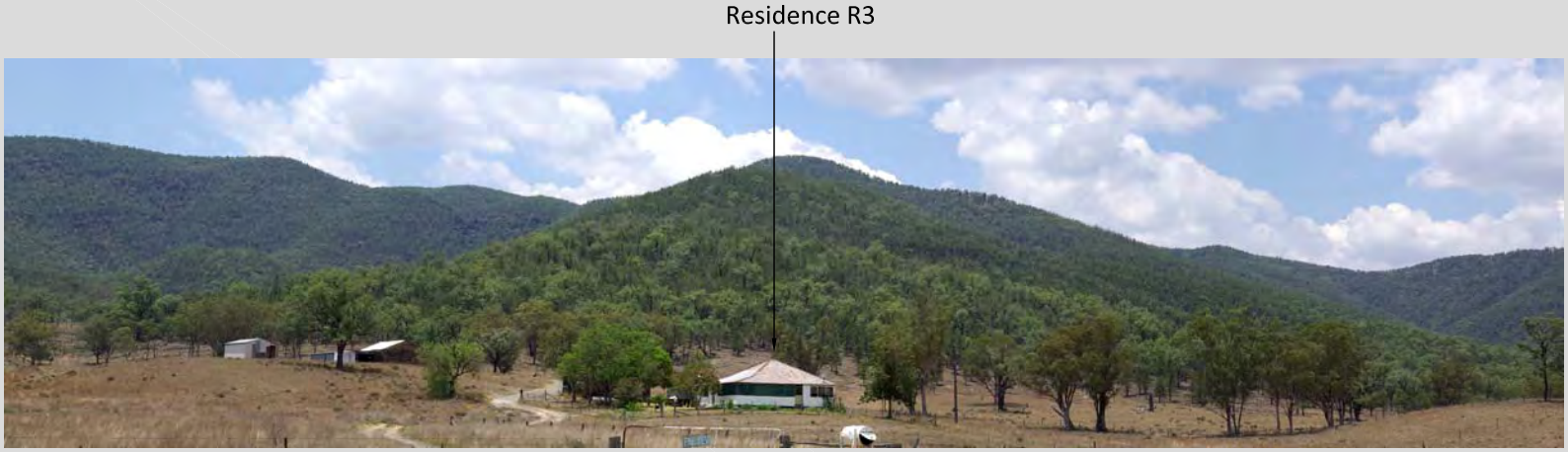
- Photographs were taken from each of the view locations and recorded with GPS coordinate data.
- A digital SLR at 50mm focal length camera was used to take the photographs, as this is generally accepted as most closely representing the primary view cone of the human eye.
- Heights of existing and proposed structures were estimated by reference to surrounding features in the landscape.
- AutoCAD software was used for modelling visually significant components of the Project structures which were then pasted into panoramic images stitched from the individual site photographs.
- Finally the images were imported to Adobe Photoshop for final surface texturing to place the proposed structures within the context of the foreground and background elements of the photographs.

The photomontages are illustrated in **Figures 24** to **33** and provided for illustrative purposes only. All structure locations and heights are indicative of the final arrangement which may vary depending on a range of detail design criteria.

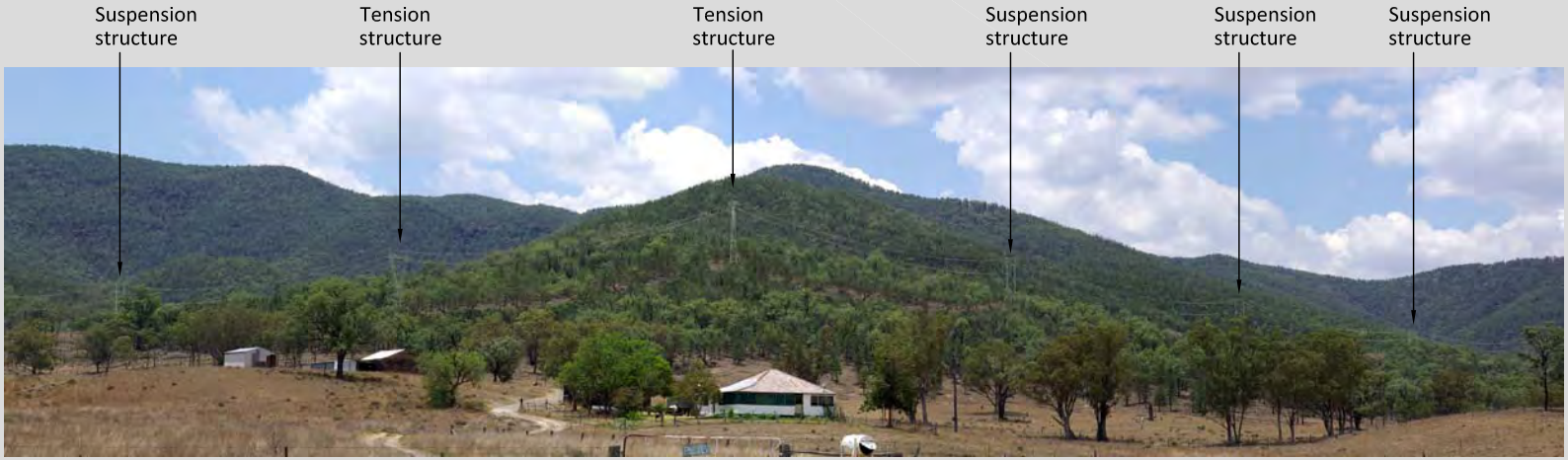
Dumaresq to Lismore 330kV Transmission Line Project - Visual Assessment

Photomontage Location A

Notes
The photomontages are provided for illustrative purposes only. All proposed structure locations and heights are indicative of the final arrangement which may vary depending on a range of final design criteria.



Existing view south from the Bruxner Highway



Proposed view south from the Bruxner Highway

Refer Figure 2 for Photomontage Location A

Photomontage Location Plan

Fig 24 - Photomontage A

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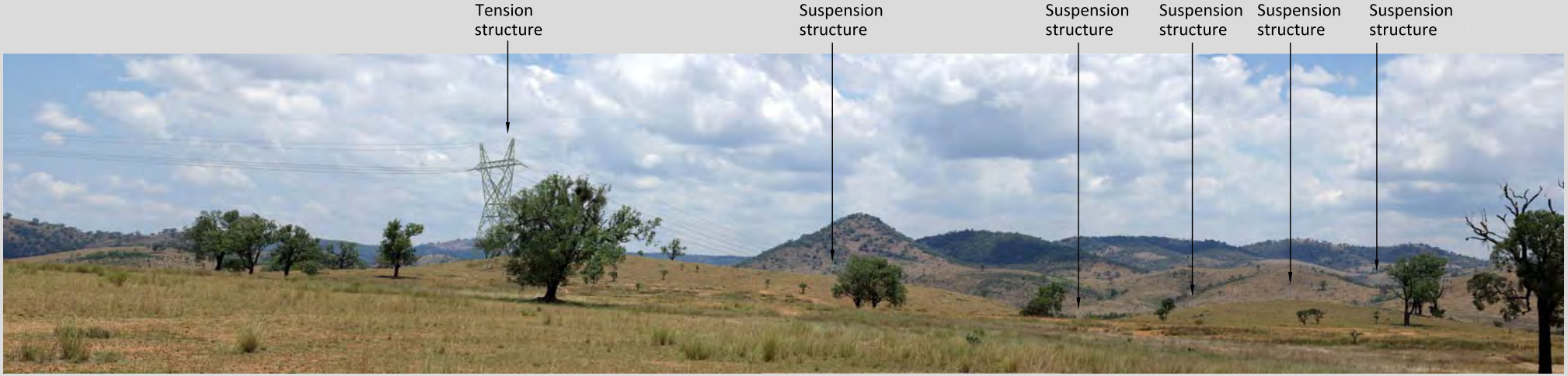
Dumaresq to Lismore 330kV Transmission Line Project - Visual Assessment

Photomontage Location B

Notes
The photomontages are provided for illustrative purposes only. All proposed structure locations and heights are indicative of the final arrangement which may vary depending on a range of final design criteria.

Existing view south west from Mole River Road



Proposed view south west from Mole River Road

Photomontage Location Plan

Refer Figure 3 for Photomontage Location B

Fig 25 - Photomontage B

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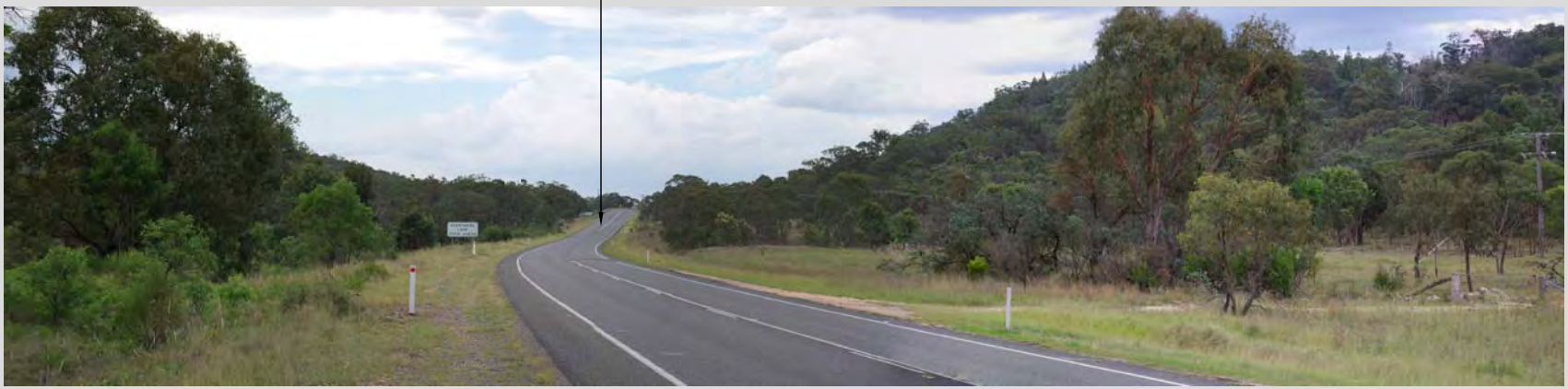
Photomontage Location C

Notes
The photomontages are provided for illustrative purposes only. All proposed structure locations and heights are indicative of the final arrangement which may vary depending on a range of final design criteria.



Existing view north from New England Highway

Proposed view north from New England Highway

Refer Figure 5 for Photomontage Location C

Photomontage Location Plan

Fig 26 - Photomontage C

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Dumaresq to Lismore 330kV Transmission Line Project - Visual Assessment

Photomontage Location D

Black Swamp Road
(beyond trees)

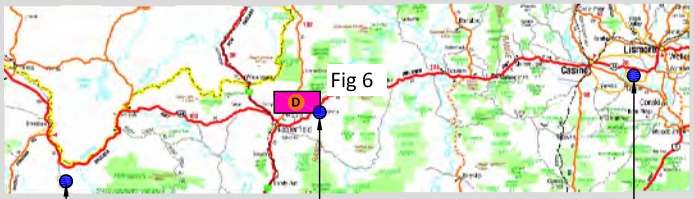
Existing view west from Black Swamp Road

Suspension
structure

Proposed view west from Black Swamp Road

Refer Figure 6 for
Photomontage Location D

Photomontage Location Plan



Notes
The photomontages are provided for illustrative purposes only. All proposed structure locations and heights are indicative of the final arrangement which may vary depending on a range of final design criteria.

Fig 27 - Photomontage D

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Dumaresq to Lismore 330kV Transmission Line Project - Visual Assessment

Photomontage Location E

Notes
The photomontages are provided for illustrative purposes only. All proposed structure locations and heights are indicative of the final arrangement which may vary depending on a range of final design criteria.

Existing view east from Macleods Creek Road

Proposed view east from Macleods Creek Road

Refer Figure 7 for
Photomontage Location E

Photomontage Location Plan

Fig 28 - Photomontage E

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Dumaresq to Lismore 330kV Transmission Line Project - Visual Assessment

Photomontage Location F

Notes
The photomontages are provided for illustrative purposes only. All proposed structure locations and heights are indicative of the final arrangement which may vary depending on a range of final design criteria.

Existing view east from Drake Village (East)

Proposed view east from Drake Village (East)

Photomontage Location Plan

Refer Figure 8 for Photomontage Location F

Fig 29 - Photomontage F

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Dumaresq to Lismore 330kV Transmission Line Project - Visual Assessment

Photomontage Location G

Notes
The photomontages are provided for illustrative purposes only. All proposed structure locations and heights are indicative of the final arrangement which may vary depending on a range of final design criteria.

Residence R76

Clarence River

Existing view south west to west from Bottle Creek Road

Suspension structure

Suspension structure

Proposed view south west to west from Bottle Creek Road

Refer Figure 9 for Photomontage Location G

Photomontage Location Plan

Fig 30 - Photomontage G

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Dumaresq to Lismore 330kV Transmission Line Project - Visual Assessment

Photomontage Location H

Notes
The photomontages are provided for illustrative purposes only. All proposed structure locations and heights are indicative of the final arrangement which may vary depending on a range of final design criteria.

Existing view west from Cambridge Plateau Road

Proposed view west from Cambridge Plateau Road

Photomontage Location Plan

Refer Figure 10 for Photomontage Location H

Fig 31 - Photomontage H

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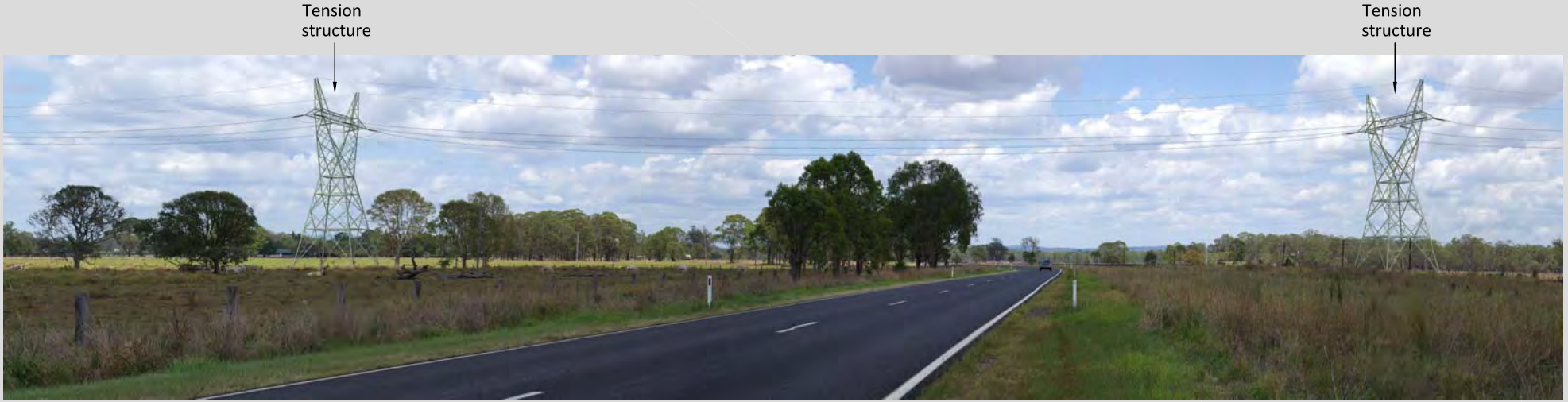
Dumaresq to Lismore 330kV Transmission Line Project - Visual Assessment

Photomontage Location I

Notes
The photomontages are provided for illustrative purposes only. All proposed structure locations and heights are indicative of the final arrangement which may vary depending on a range of final design criteria.

Existing view south from Summerland Way



Proposed view south from Summerland Way

Photomontage Location Plan

Refer Figure 11 for Photomontage Location I

Fig 32 - Photomontage I

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Dumaresq to Lismore 330kV Transmission Line Project - Visual Assessment

Photomontage Location J

Notes
The photomontages are provided for illustrative purposes only. All proposed structure locations and heights are indicative of the final arrangement which may vary depending on a range of final design criteria.

Existing view west from Tomki Bight Road

Proposed view west from Tomki BIght Road

Refer Figure 12 for Photomontage Location J

Photomontage Location Plan

Fig 33 - Photomontage J

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Tenterfield 330kV Substation

SECTION 8

8.1 Tenterfield 330kV Substation location

In order to maintain the existing 132kV supply to Tenterfield, a new 330kV Substation located approximately 14km north east of the town would be established. The substation configuration would be finalised at the detailed design stage. The maximum footprint of a fenced substation would be approximately 200x200m.

The proposed substation site would be located approximately 400m south east of the Bruxner Highway, with the closest permanently occupied residential dwelling around 1km to the south west. The existing 132kV transmission line would continue on the existing alignment from the proposed substation to the Tenterfield 132kV Substation for approximately 14km.

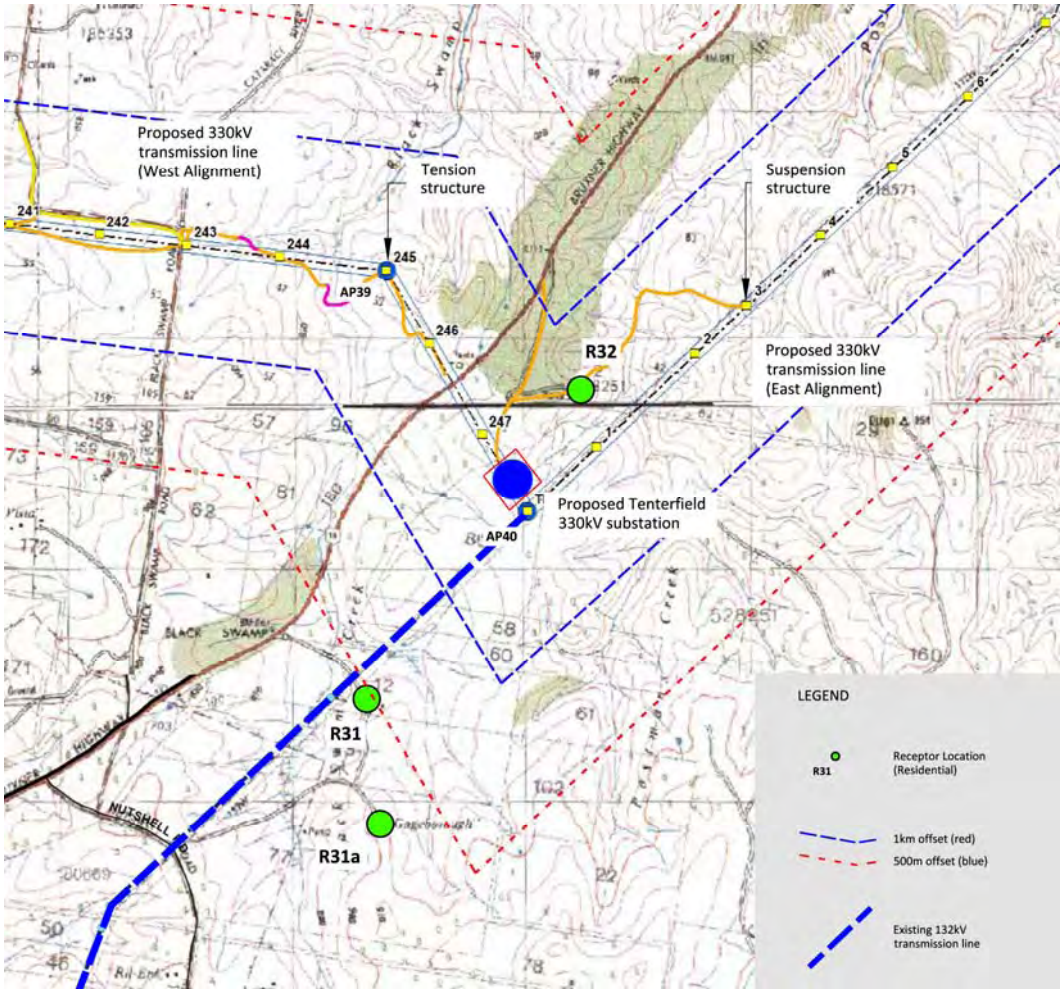

Figure 34 *Proposed Tenterfield 330kV Substation – General Location Plan (Not to Scale)*

8.2 Tenterfield 330kV Substation description

The main visual components of the Tenterfield 330kV Substation would likely comprise:

- A single storey control building;
- A sealed access road;
- Various switch bays and transformers;
- A communications pole;
- Lightning masts;
- Water tank;
- Lighting for security and maintenance;
- Security fencing including a 3.2m high palisade fence and internal chainmesh fence; and
- Landscape works including tree, shrub and groundcover planting.

The following photograph illustrates an indicative arrangement for the proposed Tenterfield 330kV Substation.

Plate 31. Photomontage detail for the proposed Tenterfield 330kV Substation.

8.3 Visibility

The proposed substation may be visible from a small number of residences located on high ground to the south of the substation site (at a distance of around 1.5 to 2km). Views from the Bruxner Highway are likely to be for a short duration and would be potentially screened by scattered tree cover alongside the road corridor. The proposed substation would be generally screened from other distant view locations by a combination of undulating landform and tree cover and are likely to be further mitigated in the medium term by existing wind break planting located within the proposed substation vicinity. An assessment of visibility from the small number of residential dwellings has been determined and described in the **Table 4** Visibility Matrix.

In order to minimise potential visual impacts, the 3.2m high palisade fence would be finished with an appropriate powder coat application colour. Subject to final design, the colour would be selected to reflect existing tree planting in the surrounding landscape, rather than

the grass pasture background surrounding the substation which would be subject to colour change through seasonal variations and climatic conditions.

Subject to the final design of the substation site, tree planting to the south and north of the proposed substation would screen any significant views from surrounding residential receptors toward the substation.

Access Tracks

SECTION 9

9.1 Access Tracks

On and off site easement access tracks would be constructed to provide access to the 330kV transmission line easement during construction and operation, as well as access to the Tenterfield 330kV Substation.

The access tracks have been split into three categories depending on the level and types of works each one requires. The three categories are:

Category 1: Minor upgrades to existing tracks (i.e. resurfacing, widening etc.). Some imported sand and gravel may be required.

Category 2: Construction of tracks through flat or undulating timbered / rocky areas where existing tracks do not exist. These can range from tracks required over flat plains country (which would require grader formed tracks typically with a crown 300mm above the natural ground surface and constructed with table drains on each side), or involve the formation of tracks after cut and fill, rock removal and / or levelling. Newly constructed Category 2 access tracks would typically be topped with approved gravel with a compacted thickness of 50mm, leaving the track 150mm above the natural ground level, however bitumen surface may be required at selected locations.

Category 3: Typical construction would require excavation of unstable material, drainage works and the import of rock material.

Category 2 and 3 access tracks would be constructed up to a maximum of 6m width, and Category 1 tracks are expected to be 4m in width.

The final access track design would be developed on a number of environmental grounds, including minimising the potential for visual impact by considering:

- the overall length and extent;
- the need for clearing vegetation;
- the potential for erosion;
- the extent of cut and fill;
- the sourcing of local construction materials where available; and
- the potential to maximise rehabilitation at completion of the construction phase.

Mitigation

SECTION 10

10.1 Mitigation

A number of mitigation measures have been developed where possible to avoid, reduce and offset the level of visual impact associated with the Project. Both primary measures, which comprise part of the development design through an iterative process, and secondary measures that specifically address residual effects, have been considered.

10.2 Avoidance

The location of the alignment considered within this visual assessment has followed a number of years of planning which has included a Feasibility Study, key constraints identification, implementation of a consultation programme, constraints mapping, a Route Selection Study and an integrated environmental assessment and engineering design process.

One of the key aims of the route selection process is to minimise potential visual impact wherever possible. A key consideration within the process has been to avoid residential dwellings and sensitive receptors wherever possible.

Wherever possible, angle positions have been selected and placed in strategic locations to minimise potential visual impact (e.g. avoiding, where possible, skyline views) and to provide a maximum setback from residences and roads.

10.3 Reduction

The tension and support structures would be finished with a selected green colour to reduce the contrast between the structures and the overall rural and agricultural background views along the majority of the west and east alignments. The selection of construction materials would also consider use of low reflectivity material to reduce the potential for sunlight glint.

10.4 Offset

Offset mitigation measures such as tree and shrub screen planting would be employed to reduce the visual impact of the Project's major components including transmission line and substation elements.

Screen planting strategies would be developed within the framework of a landscape management plan and consider areas that have been identified with a resultant high or moderate visual impact from the Project construction.

Strategic tree or large shrub planting may help to minimise the potential impact of the Project, and may be located between the receptor and the Project, or located beyond the Project to form a backdrop against which the transmission line may be viewed.

Landscape treatments such as screen planting are a long term, but effective, mitigation measure, and would require individual site assessment to achieve maximum screening benefits. Appropriate plant species and specific planting locations would be identified in direct consultation with residents and landowners.

Table 6 provides a summary of the mitigation measures which have been adopted during the design phase of the project, and those that are recommended as the project progresses.

Table 6 – Mitigation Measures

Component	Potential Mitigation	Life Cycle Stage
General alignment	A careful and considered route selection process has been undertaken to avoid sensitive receptors and loss of existing vegetation where possible.	Planning, Construction and Operation.
Structure location	Wherever possible, angle positions have been selected and placed in strategic locations to minimise potential visual impact (e.g. avoiding, where possible, skyline views) and to provide a maximum setback from residences and roads.	Planning and Construction.
Structure design	Selection of suitable component materials and selected green colour treatment with low reflective properties.	Construction and Operation.
Conductors	Selection of materials with low reflective properties.	Construction and Operation.
Insulators	Selection of materials with low reflective properties.	Construction and Operation.
Erosion control	Appropriate control and removal of spoil from construction areas.	Construction.
Construction materials and equipment storage areas	Selection of suitable storage areas for materials or plant with minimum visibility from residences and roads with screening where necessary.	Construction.
Screen planting	Strategic tree or shrub planting between the receptor and the Project in consultation with affected residents and landowners.	Construction and Operation.

Conclusion

SECTION 11

11.1 Conclusion

Overall the visual impact assessment concludes that the Dumaresq to Lismore 330kV transmission line and the Tenterfield 330kV Substation would generally have a low visual impact on the majority of people travelling through and residing in areas surrounding the Project and substation, and would not represent an unacceptable level of change to the existing landscape. The key findings of the landscape and visual assessment are summarised below.

The landscape along the west and east alignment was determined to have a predominantly Medium to High VAC, primarily due to vegetation cover (tree clumps and scattered trees combined) and by the undulating landform identified along a significant portion of the Project route.

Small portions of the alignment were determined to have a Low VAC, primarily due to a combination of cleared and level agricultural land located in river or creek flood plains.

Of the 205km Project alignment:

- 204km (53%) was determined to be within a High VAC landscape;
- 83km (40%) was determined to be within a Medium VAC landscape; and
- 13km (7%) was determined to be within a Low VAC landscape.

A total of 147 residential receptor locations were identified, and included:

- 27 with a nil visibility rating;
- 112 with a low visibility rating;
- 6 with a moderate visibility rating; and
- 2 with a high visibility rating.

The visual assessment determined that the Project may have a potential high visual impact on two residential receptor locations, and generally results from the proximity of the Project to the receptor, as well as the orientation and distance of transmission line that may be visible. Implementing the proposed mitigation measures, including the development and installation of suitable landscape treatments, would contribute to minimising the visual impact at a number of these locations.

The visual assessment determined that the Project may have a potential moderate visual impact on six residential receptor locations, and generally results from the residence orientation and distance of transmission line that may be visible. Implementing the proposed mitigation measures, including the development and installation of suitable

landscape treatments, would contribute to minimising the visual impact at a number of these locations.

The visual assessment determined that the majority of residential receptor locations (95%) are likely to experience a low or nil visual impact as a result of the Project construction.

A small number of residential receptors along the east alignment, and within a proximate location to the proposed 330kV transmission line, have been determined to have a low visibility rating. The low visibility rating generally results from a combination of factors, including the screening influence of localised tree cover, the orientation of residential dwellings toward the Project and the resultant reduction in visibility toward supporting structures following the deconstruction of the existing 132kV transmission line.

The potential cumulative impact for the section of proposed 330kV transmission line, where viewed in addition to the section of existing 132kV transmission line to be retained (around 14km between Casino and Lismore) has been determined as low for the majority of residential receptors located within the viewshed of this section. The low visibility rating results from occasional tree screening and distance between receptor locations and the Project.

The visual assessment determined that the construction of the Project would generally not result in any significant visual impacts on the majority of views from road and rail corridors approaching or passing beneath the transmission line.

A moderate to high number of potential receptors were identified on some of the roads passing beneath, or in the vicinity of the proposed transmission line, including the New England Highway and Summerland Way. Views from vehicles travelling along these roads are likely to be for a very short period of time and transitory in nature, and are therefore likely to be a low visibility rating.

The Project has the potential to impact people engaged in predominantly farming or recreational activities, where views toward components of the Project occur from surrounding agricultural areas. Ultimately the level of impact would depend on the type of activities engaged in as well as the location of the activities together with the degree of screening provided by local landform or vegetation within individual properties. Whilst views toward the Project may occur from a wide area of surrounding rural agricultural land, the visual assessment has determined that the sensitivity of visual impacts is less for those employed or carrying out work in rural areas compared to potential views from residential dwellings.

Overall the landscape along and surrounding the Projects west and east alignment has a low population density, therefore the number of potential receptors is likely to be low.

A number of the rural residential dwellings identified along the proposed route are occasionally screened by tree planting around them, or combined with agricultural

structures, sheds, workshops or silos which tend to screen immediate views toward the surrounding landscape.

Portions of the landscape along the west and east alignment of the proposed 330kV transmission line contain existing 132kV transmission line together with a number of 11kV and 66kV transmission lines.

The proposed transmission line is unlikely to be visible from the recreation areas within surrounding National Parks, Conservation Areas and State Forests, including camping and day use areas.

Work associated with the upgrade of the existing Dumaresq Switching Station and Lismore Substation is unlikely to result in any significant additional visual impact on surrounding receptor locations.

There are no anticipated significant visual impacts associated with the establishment or maintenance of on and off easement access tracks.

Limitations

Green Bean Design has prepared this report in accordance with the usual care and thoroughness of the consulting profession for the use of URS Australia Pty Ltd and only those third parties who have been authorised in writing by Green Bean Design to rely on the report. It is based on generally accepted practices and standards at the time it was prepared. No other warranty, expressed or implied, is made as to the professional advice included in this report. It is prepared in accordance with the scope of work and for the purpose outlined in the Green Bean Design Proposal dated 3rd November 2008.

The methodology adopted and sources of information used are outlined in this report. Green Bean Design has made no independent verification of this information beyond the agreed scope of works and Green Bean Design assumes no responsibility for any inaccuracies or omissions. No indications were found during our investigations that information contained in this report as provided to Green Bean Design was false.

This report was prepared between November 2009 and November 2010 and is based on the conditions encountered and information reviewed at the time of preparation. Green Bean Design disclaims responsibility for any changes that may have occurred after this time.

This report should be read in full. No responsibility is accepted for use of any part of this report in any other context or for any other purpose or by third parties. This report does not purport to give legal advice. Legal advice can only be given by qualified legal practitioners.