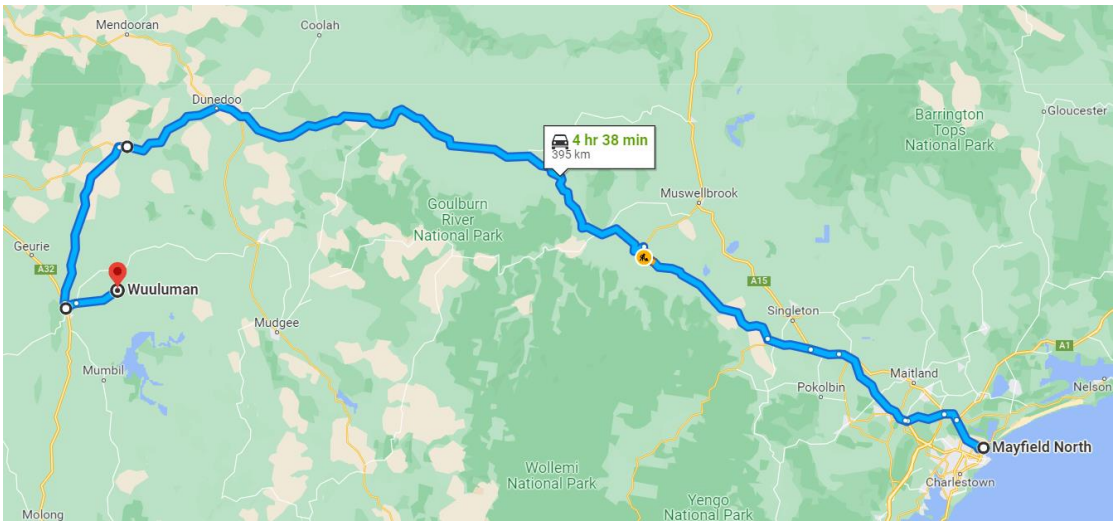
Rex J Andrews Engineered Transportation

Uungula Windfarm
Port of Newcastle to Twelve Mile Road, Uungula

September 2022



C106/215 Pacific Hwy
CHARLESTOWN NSW
Suite701, 91 Phillip Street
Parramatta
PO BOX 278 CHARLESTOWN
NSW 2290
t: 1300 732 293

POWER SOLUTIONS REFERENCE: **5090**

Document Control

Version	Date	Author	Reviewer	Revision Details
A	02/09/2022	Steve Goman	Ben Saxon	Initial Issue
B	13/09/2022	Steve Goman	Ben Saxon	Appendix A updated

1. BACKGROUND / SCOPE OF WORKS

To install the proposed windfarm at Uungula, conductor clearances along the route needed to be verified to ensure there is a minimum of 5.8m across the entire route. This consisted of a site survey and investigation into the existing conductors to ensure there is adequate clearance for the transportation of the windfarm components.

From site survey and investigation of the existing conductors along the route specified by Rex J Andrews, it was found that all conductors are higher than 5.8m above the roadway under all weather conditions. Based on this information, **no changes to the existing Ausgrid or Essential Energy conductors are required for the transportation of the windfarm components.**

It should be noted that Ausgrid and Essential Energy undertake maintenance and upgrades on their network from time to time. When the transportation occurs, some of the spans investigated may be different to what was surveyed. While it is highly unlikely that any new works would be lower than the Distributor requirements, it is important to consider that some of the clearances in this report may have changed since they were surveyed.

2. TRANSPORTATION ROUTE

The route selected by Rex J Andrews is from the Port of Newcastle to Twelve Mile Road Uungula and traverses the following route:

Port of Newcastle via Selwyn Street, George Street, Industrial Drive, Maitland Road, New England Highway, John Renshaw Drive, Hunter Expressway, New England Highway, Golden Highway, Saxa Rd, Mitchell Hwy, Goolma Road, to Twelve Mile Road Uungula.

Site inspection was carried out over several days between 11/08/2022 26/08/2022.

3. DISTRIBUTION AREAS

The electrical infrastructure along the route passes through areas controlled by Ausgrid and Essential Energy.

Each distributor has different standards for conductors over roads and requirements for ground clearances.

Figure 1 – Electrical Distribution areas in NSW

4. OVERHEAD CLEARANCES – AUSGRID

The minimum clearances for Ausgrid assets are outlined in Network Standard NS220:

NS220 Overhead Design Manual Amendment No 3

Table 28 - Minimum clearance from ground

DIMENSION	LOCATION	Distance to ground in any direction				
		Nominal System Voltage				
		LV insulated or bare	11kV, 22kV, and 12.7kV SWER bare or covered	33kV	66kV	132kV
		m	m	m	m	m
A	Over the carriageway of roads	6.0 (5.5)	7.5 (6.7)	7.5 (6.7)	7.5 (6.7)	7.5 (6.7)
B	Over land other than the carriageway of roads	6.0 (5.5)	6.0 (5.5)	6.0 (5.5)	7.0 (6.7)	7.5 (6.7)
C	Over land which, due to its steepness or swampiness, is not traversable by vehicles	5.0 (4.5)	5.0 (4.5)	5.0 (4.5)	6.0 (5.5)	6.0 (5.5)

Figure 2 – Extracts from Ausgrid Network Standard NS220

From the table above it can be seen that the minimum clearance (under all weather conditions) over a road is 6m for an LV conductor and 7.5m for all other conductors.

As the clearance for the windfarm transportation (5.8m) is less than the Ausgrid standard, any conductors found to be less than 5.8m will also be in breach of Ausgrid requirements.

5. CONDUCTOR TEMPERATURES – AUSGRID

As the conductors heat up due to ambient temperature and the electrical load, the conductor will expand and sag between the two connection points.

Ausgrid require all conductors to be modelled at their maximum temperature. (maximum ambient temperature as well as the heat of the conductor) to give an absolute worst-case scenario of maximum conductor sag.

The temperature for each type of conductor is outlined in Ausgrid Network Standard NS220:

Table 6 - Maximum design temperatures for all voltages

Voltage	Conductor	Max Temperature
132kV	ACSR	120°C
132kV	AAC or AAAC	100°C
66kV	ACSR	120°C, if new (see Note 1)
66kV	AAC or AAAC	100°C, if new (see Note 1)
33kV	ACSR	120°C, if new (see Note 1)
33kV	AAC or AAAC	100°C, if new (see Note 1)
11kV	AAC, AAAC or ACSR	75°C
11kV	CCT	80°C
LV	AAC, AAAC or ACSR	75°C (see Note 2)
LV	ABC	80°C
-	OPGW & OHEW	30°C (Design)
-	ADSS	40°C (Design)

Notes:

1. Some existing sub-transmission feeders are rated to 85°C. For existing sub-transmission mains, submit a request for rating to Ratings@ausgrid.com.au. It may be preferred to maintain the existing rating to avoid bulk replacement of structures.
2. In some municipalities the rating of existing bare mains has been 50°C. Submit a request for rating to Ratings@ausgrid.com.au.

Figure 3 – Extract from Ausgrid Network Standard NS220

6. OVERHEAD CLEARANCES – ESSENTIAL ENERGY

The minimum clearances for Essential Energy assets are outlined in CEOM7097:

Nominal System Voltage	Distance to Ground in Any Direction (m)		
	Over the Carriageway of Roads	Over Land Other than the Carriageway of Roads	Over Land Which Due to its Steepness or Swampiness is not Traversable by Vehicles
Bare low voltage (400/230 Volt) Mains	6.0	6.0	5.0
Insulated low voltage (400/230 Volt) Mains	6.0	6.0	5.0
Insulated conductor without earthed screen, bare conductor, or covered conductor:			
11, 22 and 33kV	7.3	6.0	5.0
66 and 132kV*	8.0	7.3	6.0

Table 3.5.6.6.1 – CEOM7097 Clearance from Ground for Overhead Lines other than Insulated Service Lines

Figure 4 – Extract from Essential Energy Standard CEOM7097

From the table above it can be seen that the minimum clearance (under all weather conditions) over a road is 6m for an LV conductor, 7.3m for 11kV, 22kV & 33kV conductors and 8.0m for all other conductors.

As the clearance for the windfarm transportation (5.8m) is less than the Essential Energy standard, any conductors found to be less than 5.8m will also be in breach of Essential Energy requirements.

7. CONDUCTOR TEMPERATURES – ESSENTIAL ENERGY

As the conductors heat up due to ambient temperature and the electrical load, the conductor will expand and sag between the two connection points.

Essential Energy require all conductors to be modelled at their maximum temperature (maximum ambient temperature as well as the heat of the conductor) to give an absolute worst-case scenario of maximum conductor sag.

The temperature for each type of conductor is outlined in Essential Energy Network Standard CEOM7097:

3.5.6.7 Standard Design Temperatures

The Essential Energy standard design temperatures for overhead lines are as provided below:

Nominal Voltage	Conductor Type	Situation/Location	Design Maximum Operating Temperature* (Thermal rating)	Design Temperature for additional safety margin – Refer to clause 3.5.8 of CEOM7097
Low Voltage	All conductors	All locations	65° C	100° C
11kV, 22kV & 33kV	SC/GZ	Where permitted	50° C	80° C
11kV, 22kV & 33kV	ACSR or AAAC including CCT	Minor Rural distribution backbone lines	65° C	100° C
	AAAC	Town mains and Major rural distribution backbone lines	75° C	110° C
66kV & 132kV**	All conductors	All subtransmission locations	85° C	85° C

Table 3.5.6.7

Figure 5 - Extract from Essential Energy Standard CEOM7097

8. SURVEY RESULTS

Each span in urban areas was measured using a hand-held laser height finder and the height of the conductor attachment height on the pole recorded.

As the clearance required for transportation is less than the overhead clearances set out in the Ausgrid and Essential Energy standards, not every span was recorded. Many of the spans outside of the urban areas were found to be well above the 5.8m required and in some cases the connection points could not be safely accessed.

A table of the recorded spans (particularly in the Newcastle area) can be found in Appendix A.

Spans that were measured to be close to the required 5.8m were modelled in the overhead line software package Neara. The conductor types were sourced from Ausgrid and Essential Energy records and modelled at the attachment heights measured. The conductor was then sagged to the maximum allowable temperature and the clearance over the road confirmed.

Case studies have been selected based on the lowest recorded conductors and are outlined in the following sections.

As the low voltage conductor will be the closest to the road in each instance, it is the minimum height requirements for low voltage conductors that have been considered in each case study.

9. CASE STUDY 1: SELWYN STREET

Selwyn Street is the first road from the Port of Newcastle and is the first set of conductors that the transport route passes under.

From Ausgrid records and site inspection, these conductors are 2x15 single phase conductors and are powering the neighbouring street lighting in the area.

Figure 6 – Selwyn Street, looking North towards Port of Newcastle

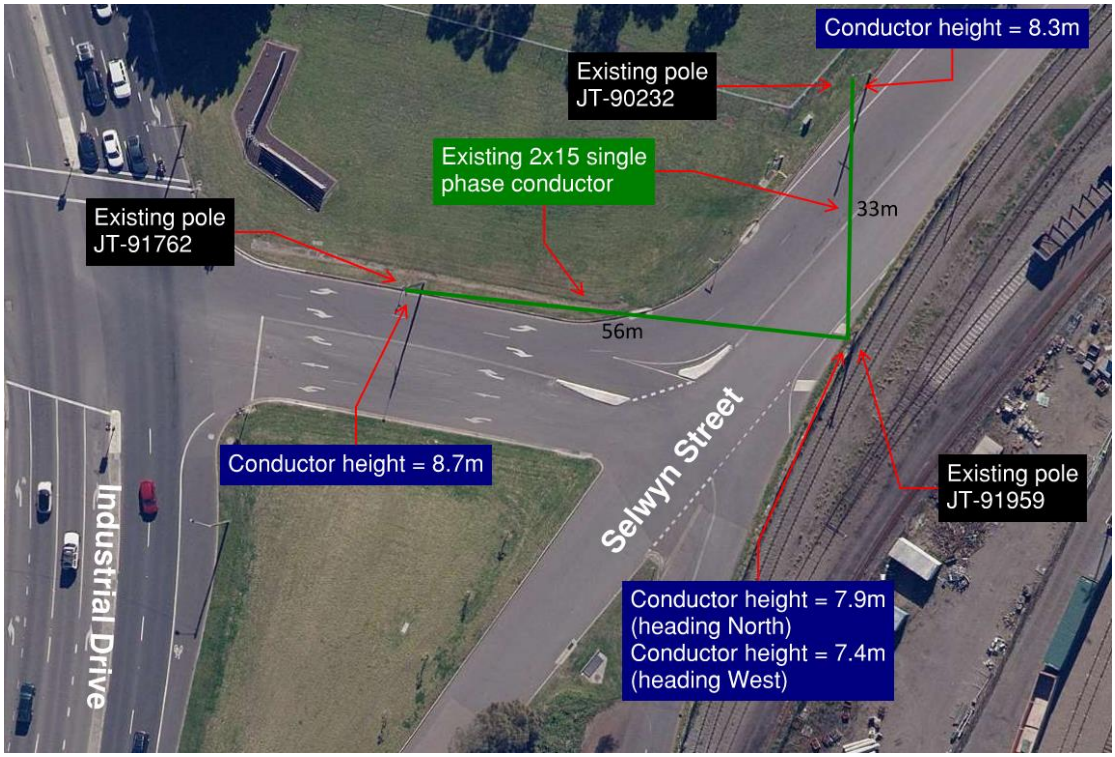


Figure 7 – Selwyn Street conductor arrangement

Using this data, the overhead conductors were modelled in Neara and an overhead profile generated for the conductors at maximum temperature (75°C for an Ausgrid LV bare conductor):

This results in a minimum ground clearance of **6.64m** which is sufficient for the windfarm transportation.

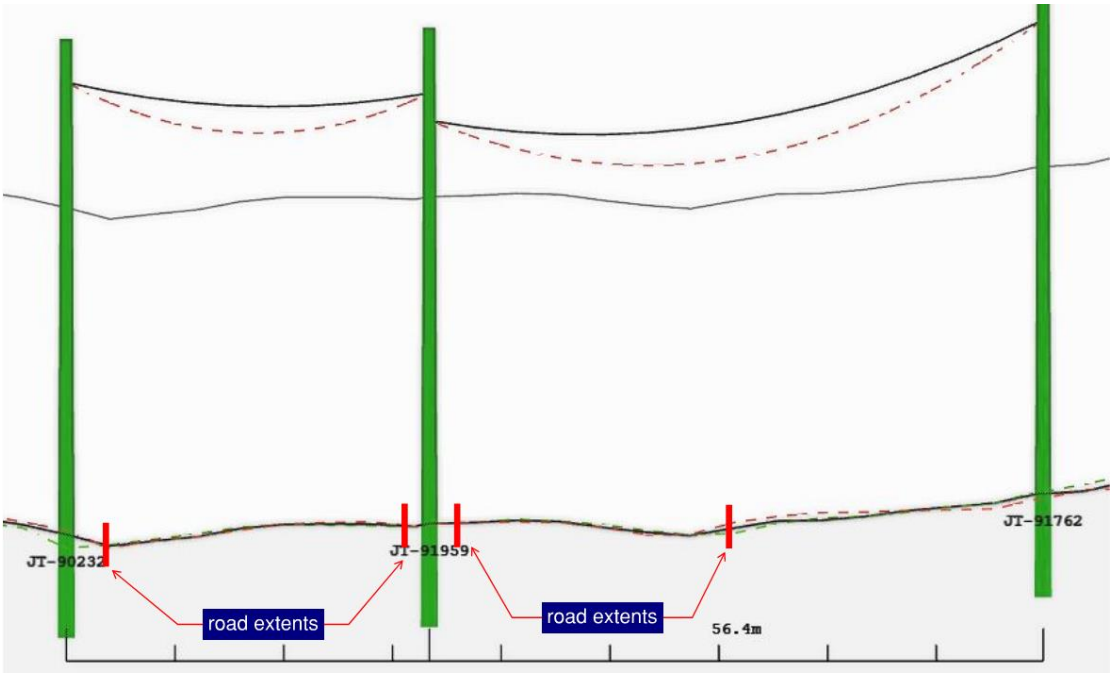


Figure 8 – Selwyn Street Profile (with 6m clearance line)

10.CASE STUDY 2: INTERSECTION OF INDUSTRIAL DRIVE AND PACIFIC HIGHWAY

As Industrial Drive joins onto the Pacific Highway there is another LV conductor of concern that was investigated.

From Ausgrid records and site inspection, the conductor is a 2x66 single phase conductor and is powering the neighbouring street lighting in the area.

Figure 9 – Pacific Highway (looking North)

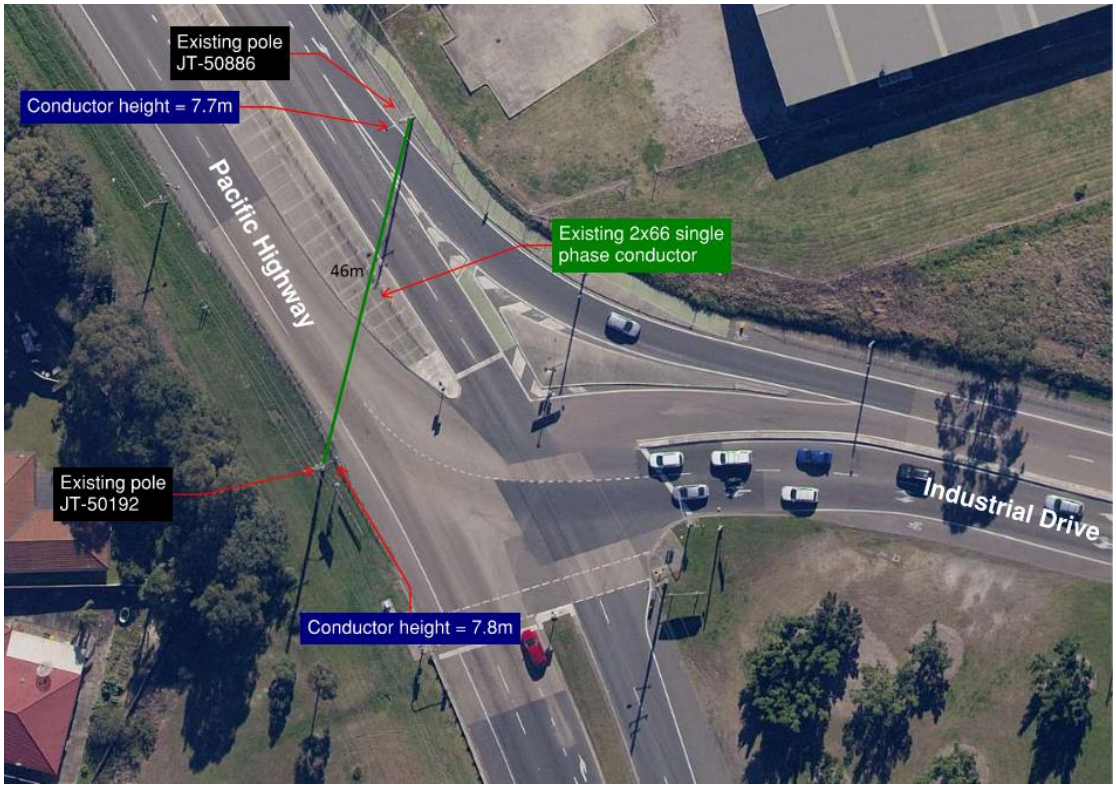


Figure 10 – Pacific Highway & Industrial Drive conductor arrangement

Using this data, the overhead conductors were modelled in Neara and an overhead profile generated for the conductors at maximum temperature (75°C for an Ausgrid LV aerial conductor):

This results in a minimum ground clearance of **6.14m** which is sufficient for the windfarm transportation.

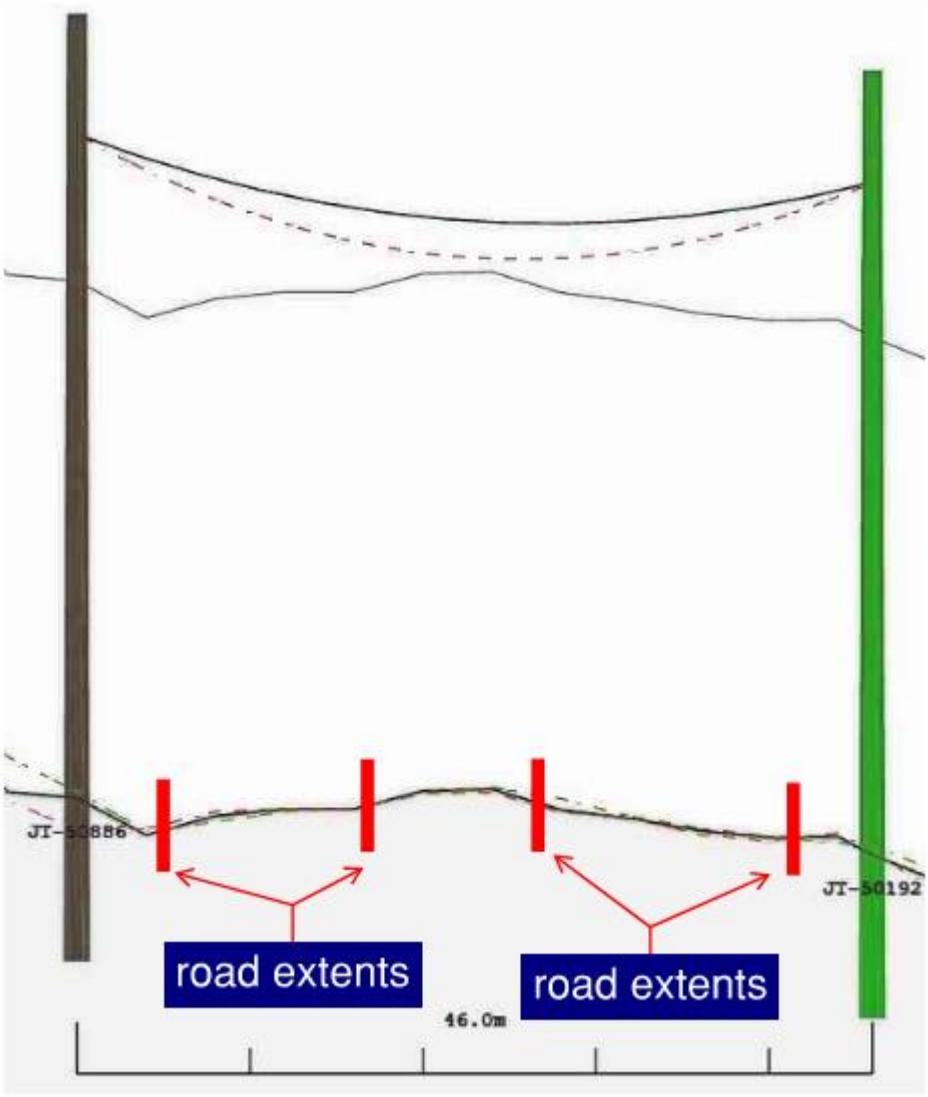


Figure 11 – Industrial Drive profile (showing 6m clearance line)

11.CASE STUDY 3: JOHN RENSHAW DRIVE

Along John Renshaw Drive (near Lings Road) there is an LV crossing that appeared to be lower than the others.

While not listed in the Ausgrid records, from site inspection, the conductor has been identified as a 25AL2 single phase conductor.

Figure 12 – John Renshaw Drive (looking West)

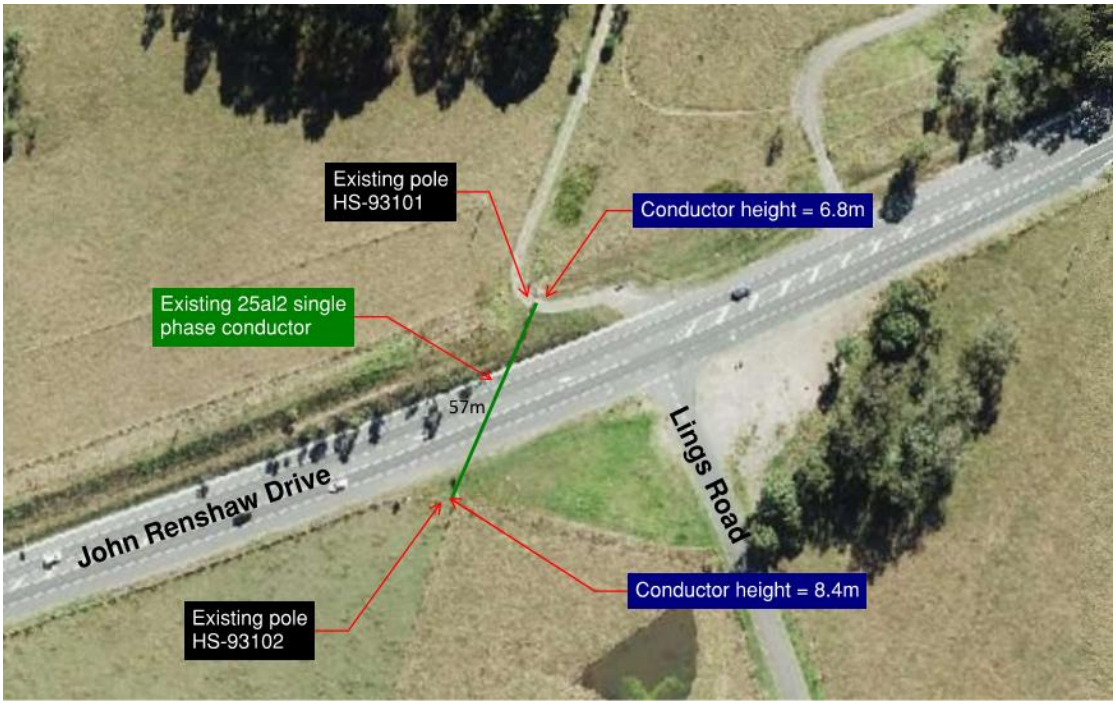


Figure 13 – John Renshaw Drive conductor arrangement

Using this data, the overhead conductors were modelled in Neara and an overhead profile generated for the conductors at maximum temperature (80°C for an Ausgrid LV Aerial Bundled Conductor):

This results in a minimum ground clearance of **6.72m** which is sufficient for the windfarm transportation.

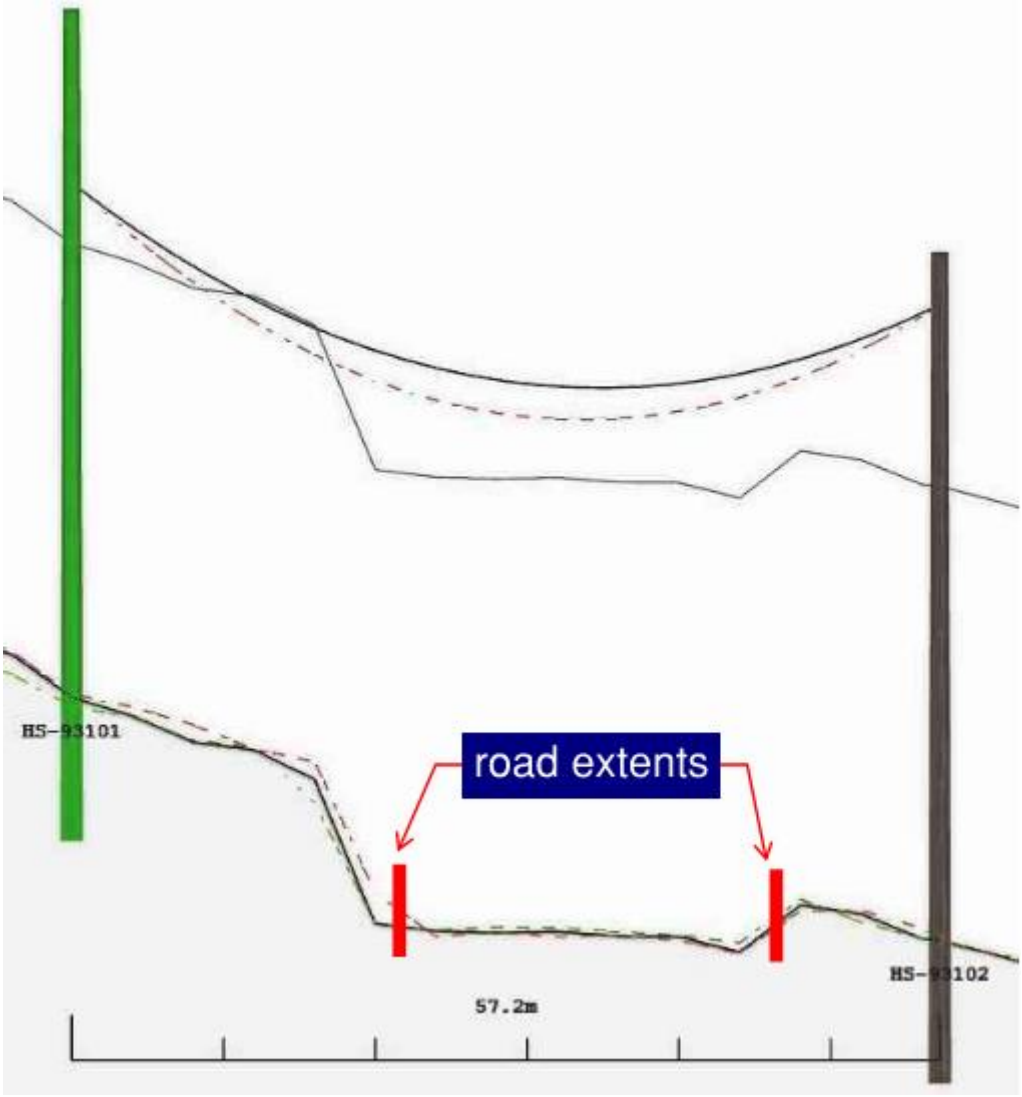


Figure 14 - John Renshaw Drive profile (showing 6m clearance)

12. CASE STUDY 5: DUNEDOO – GOLDEN HIGHWAY AND NOTTS STREET

Along Golden Highway at Dunedoo (near Notts Street) there is an LV crossing that appeared to be lower than the others.

While not listed in the Essential Energy records, from site inspection, the conductor has been identified as a 25AL2 single phase conductor.

Figure 15 – Pole 39056 7084 (looking North)

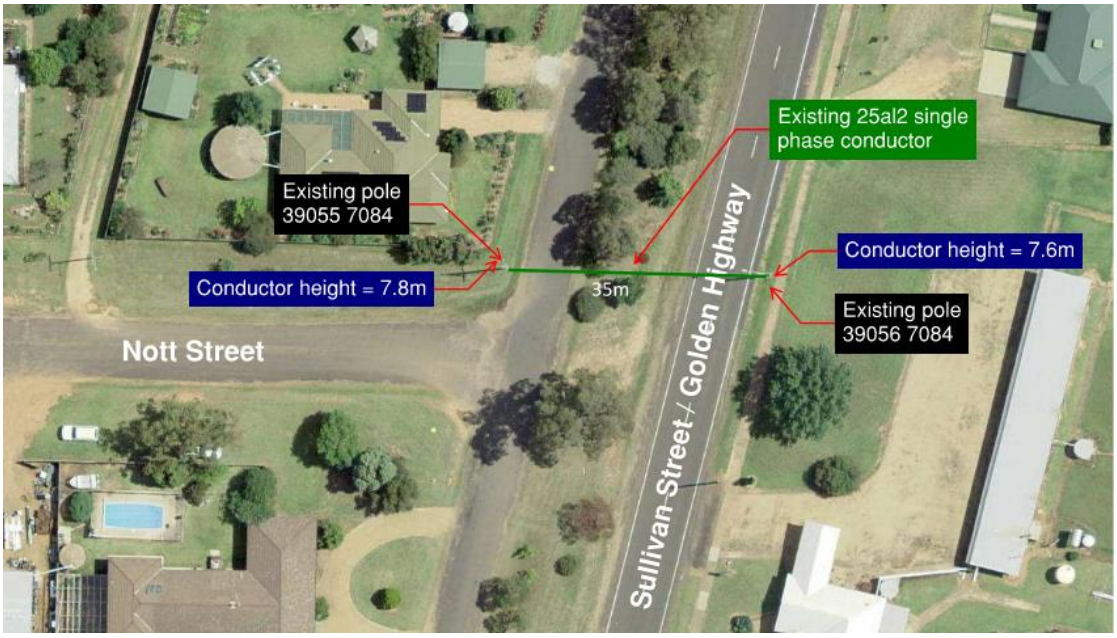


Figure 16 – Golden Highway & Nott Street conductor arrangement

Using this data, the overhead conductors were modelled in Neara and an overhead profile generated for the conductors at maximum temperature (100°C for an Essential Energy LV Conductor):

This results in a minimum ground clearance of **6.69m** which is sufficient for the windfarm transportation.

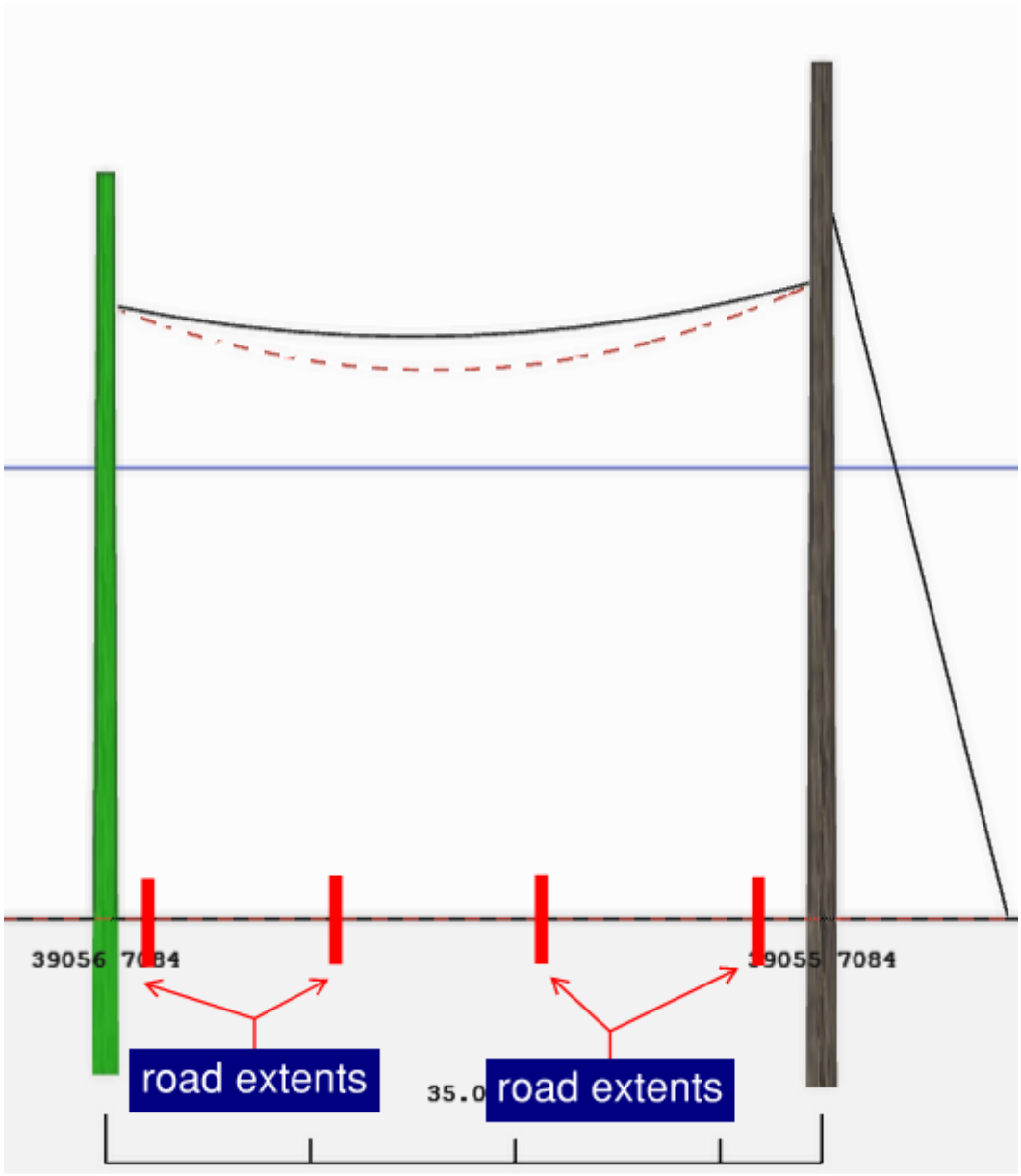


Figure 17 – Golden Highway & Nott Street profile (showing 6m clearance line)

13.CASE STUDY 5: DUNEDOO - GOLDEN HIGHWAY & EVANS STREET

Along Golden Highway at Dunedoo (near Evans Street) there is an LV crossing that appeared to be lower than the others.

From Essential Energy records and site inspection, the conductor has been identified as a 95AL4 three phase conductor.

Figure 18 – Pole 39049 7084 (looking North)

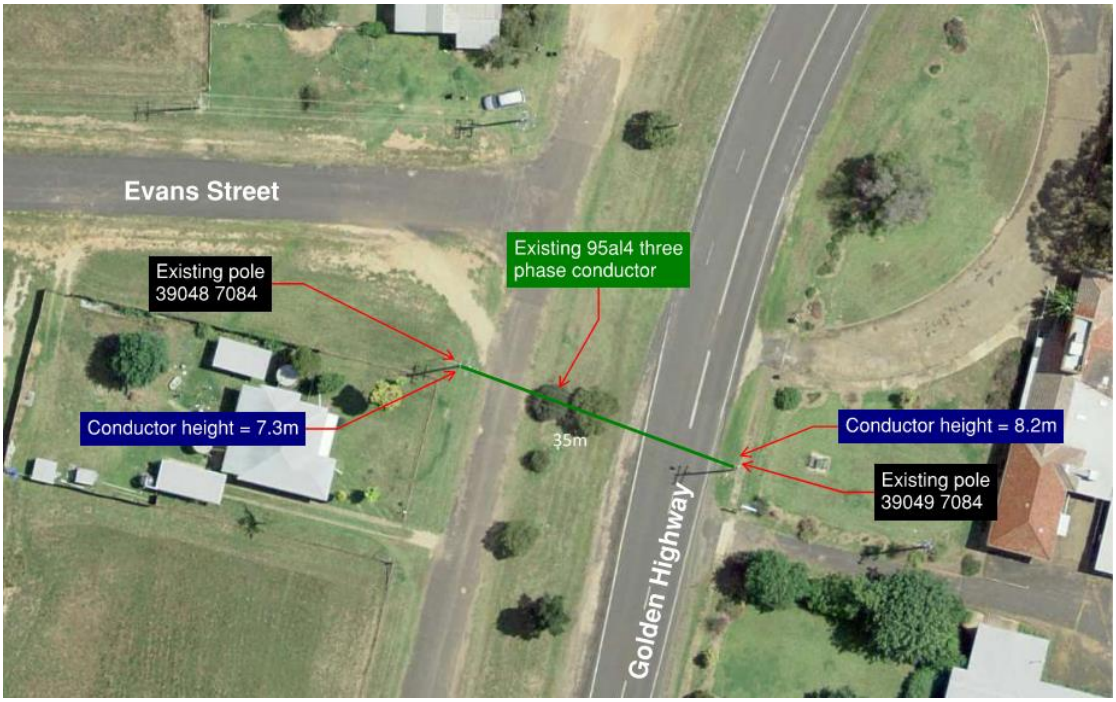


Figure 19 – Golden Highway & Evans Street conductor arrangement

Using this data, the overhead conductors were modelled in Neara and an overhead profile generated for the conductors at maximum temperature (100°C for an Essential Energy LV Conductor):

This results in a minimum ground clearance of **6.99m** which is sufficient for the windfarm transportation.

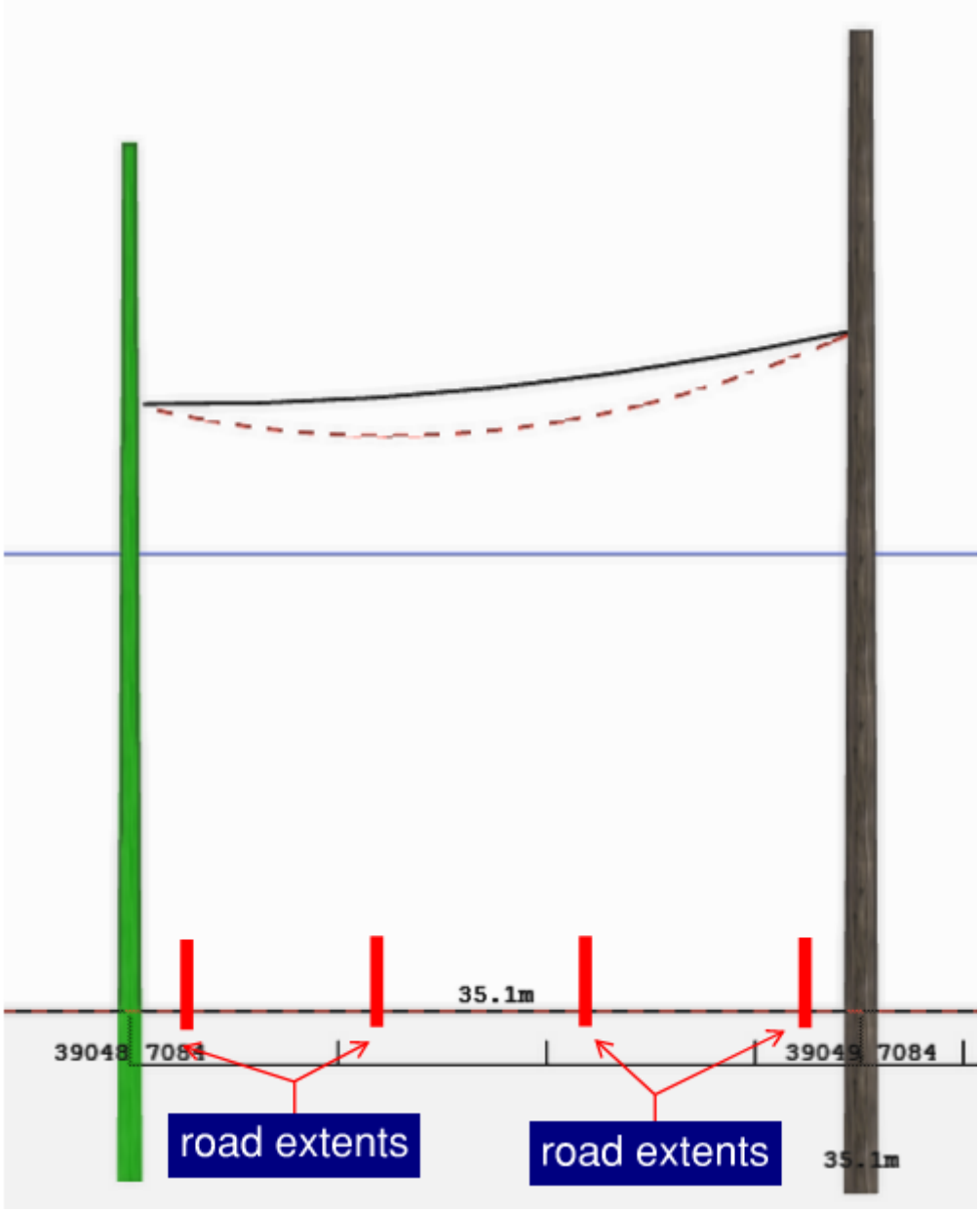


Figure 20 – Golden Highway & Evans Street profile (showing 6m clearance line)

14.CONCLUSIONS

From site survey and investigation of the existing conductors, it was found that all conductors are higher than 5.8m above the roadway under all weather conditions. Based on this information**, no changes to the existing Ausgrid or Essential Energy conductors are required for the transportation of the windfarm components.**

It should be noted that Ausgrid and Essential Energy undertake maintenance and upgrades on their network from time to time. When the transportation occurs, some of the spans investigated may be different to what was surveyed. While it is highly unlikely that any new works would be lower than the Distributor requirements, it is important to consider that some of the clearances in this report may have changed since they were surveyed

15.APPENDIX A: RECORDED POLE INFORMATION

Crossing	Road Name	1st Pole	2nd Pole	Attachment 1	Attachment 2	Pass / Fail
1	Selwyn St	JT-91959	JT-90232	7.9	8.3	Pass
2	Selwyn St	JT-91959	JT-91762	7.4	8.7	Pass
3	Industrial Dr	JT-90166	JT-91762	8.2	8.9	Pass
4	Industrial Dr	JT-90400	JT-91940	9.3	9.6	Pass
5	Industrial Dr	JT-91399	JT-91395	8.6	8.9	Pass
6	Industrial Dr	JT-92201	JT-91660	7.5	9.2	Pass
7	Industrial Dr	JT-91790	JT-91789	9	10.6	Pass
8	Industrial Dr	JT-92064	JT-90024	12.5	6.6	Pass
9	Industrial Dr	JT-92064	JT-90023	12.2	10.8	Pass
10	Industrial Dr	JT-90367	JT-92459	13.3	10.2	Pass
11	Industrial Dr	JT-80266	JT-81466	8.1	8.5	Pass
12	Industrial Dr	JT-80266	JT-80564	9.2	11.3	Pass
13	Industrial Dr	JT-81733	JT-81734	10	13.1	Pass
14	Industrial Dr	JT-80235	JT-82405	11	8.7	Pass
15	Industrial Dr	JT-82404	JT-82405	9.4	8.7	Pass
16	Industrial Dr	JT-80196	JT-82405	8.7	8.8	Pass
17	Industrial Dr	JT-52408	JT-50886	7.8	7.7	Pass
18	Pacific Hwy	JT-50192	JT-50886	8.1	9.2	Pass
19	Pacific Hwy	JT-51499	JT-51425	10.5	10.8	Pass
20	Pacific Hwy	JT-50187	JT-51423	8.9	9.7	Pass
21	Pacific Hwy	JT-50181	JT-57009	7.6	9.3	Pass
22	Pacific Hwy	JT-50179	JT-51877	10	10.6	Pass
23	Pacific Hwy	JT-50174	JT-52483	10.3	9	Pass
24	Pacific Hwy	JT-50174	JT-50687	9.5	8.5	Pass
25	Pacific Hwy	Private sign	JT-51546	8.4	8.7	Pass
26	Pacific Hwy	JT-50168	JT-57092	8.8	9.2	Pass
27	Pacific Hwy	JT-50164	JT-51475	9.1	8.5	Pass
28	Pacific Hwy	JT-50039	JT-50896	9.4	7.2	Pass
29	Pacific Hwy	JT-50031	JT-50956	8.4	10	Pass
30	Pacific Hwy	JT-50030	JT-51059	9.6	13.7	Pass
31	Pacific Hwy	JT-40013	JT-40108	8.6	8.6	Pass
32	Pacific Hwy	JT-10066	JT-10869	8.3	7	Pass
33	Pacific Hwy	JT-10550	JT-10824	8.6	9.1	Pass
34	Pacific Hwy	JT-10098	JT-10097	9.9	9.5	Pass
35	Pacific Hwy	JT-10143	JT-10369	8.4	8.3	Pass
36	Pacific Hwy	JT-10447	JT-10453	9.1	8.9	Pass
37	Pacific Hwy	JT-10448	JT-10096	9.9	9.3	Pass

Crossing	Road Name	1st Pole	2nd Pole	Attachment 1	Attachment 2	Pass / Fail
38	New England Hwy	JS-70056	JS-70261	>7	>7	Pass
39	New England Hwy	JS-70055	JS-70262	>7	>7	Pass
40	New England Hwy	JS-70053	JS-70106	>7	>7	Pass
41	New England Hwy	JS-70051	JS-70126	>7	>7	Pass
42	New England Hwy	JS-70128	JS-70127	>7	>7	Pass
43	New England Hwy	IS-61103	IS-61104	>7	>7	Pass
44	New England Hwy	IS-60036	IS-61107	>7	>7	Pass
45	New England Hwy	IS-60036	IS-60292	>7	>7	Pass
46	New England Hwy	IS-60036	IS-61105	>7	>7	Pass
47	New England Hwy	IS-64013	IS-64014	>7	>7	Pass
48	New England Hwy	IS-63002	IS-61261	>7	>7	Pass
49	New England Hwy	IS-65235	IS-65234	>7	>7	Pass
50	John Renshaw Dr	IS-52051	IS-54013	>7	>7	Pass
51	John Renshaw Dr	IS-82138	IS-82139	>7	>7	Pass
52	John Renshaw Dr	IS-72011	IS-72010	>7	>7	Pass
53	John Renshaw Dr	IS-72021	IS-72023	>7	>7	Pass
54	John Renshaw Dr	HS-92027	HS-92028	>7	>7	Pass
55	John Renshaw Dr	HS-99676	HS-99678	>7	>7	Pass
56	John Renshaw Dr	HS-92039	HS-92038	>7	>7	Pass
57	John Renshaw Dr	HS-92039	HS-92038	>7	>7	Pass
58	John Renshaw Dr	HS-92040	HS-93101	6.8	8.4	Pass
59	John Renshaw Dr	HS-93102	HS-93101	>7	>7	Pass
60	John Renshaw Dr	HS-80003	HS-80004	>7	>7	Pass
61	Hunter Expy	HS-80010	HS-80009	>8	>8	Pass
62	Hunter Expy	HS-84021	HS-84022	>8	>8	Pass
63	Hunter Expy	HS-89845	HS-89848	>8	>8	Pass
64	Hunter Expy	HS-79633	HS-79630	>8	>8	Pass
65	Hunter Expy	HS-79636	HS-79639	>8	>8	Pass
66	Hunter Expy	HS-79275	HS-79276	>8	>8	Pass
67	Hunter Expy	HS-49920	HS-49336	>8	>8	Pass
68	Hunter Expy	HS-49920	HS-49910	>8	>8	Pass
69	Hunter Expy	HS-41231	HS-41218	>8	>8	Pass
70	Hunter Expy	GS-63422	GS-63418	>8	>8	Pass
71	Hunter Expy	GS-31246	GS-31229	>8	>8	Pass
72	Hunter Expy	GS-39365	GS-39339	>8	>8	Pass
73	Hunter Expy	GR-89353	GR-82020	>8	>8	Pass
74	Hunter Expy	GR-81269	GR-81268	>8	>8	Pass
75	Hunter Expy	GR-41609	GR-41608	>8	>8	Pass

Crossing	Road Name	1st Pole	2nd Pole	Attachment 1	Attachment 2	Pass / Fail
76	Hunter Expy	GR-10004	GR-10005	>8	>8	Pass
77	Hunter Expy	FR-34654	GR-14646	>8	>8	Pass
78	Hunter Expy	FQ-95184	FQ-95185	>8	>8	Pass
79	Hunter Expy	FQ-54726	FQ-54725	>8	>8	Pass
80	Hunter Expy	FQ-53016	FQ-53017	>8	>8	Pass
81	New England Hwy	EQ-30014	EQ-30118	>7	>7	Pass
82	New England Hwy	EQ-30015	EQ-30118	>7	>7	Pass
83	New England Hwy	Private Pole	EQ-30012	>7	>7	Pass
84	New England Hwy	EQ-30033	EQ-30032	>7	>7	Pass
85	New England Hwy	EQ-20001	EQ-20069	>7	>7	Pass
86	New England Hwy	EQ-20039	EQ-20065	>7	>7	Pass
87	New England Hwy	EQ-10375	EQ-10023	>7	>7	Pass
88	New England Hwy	EQ-10374	EQ-10019	>7	>7	Pass
89	New England Hwy	EQ-10413	EQ-10007	>7	>7	Pass
90	New England Hwy	DQ-30624	DQ-30623	>7	>7	Pass
91	New England Hwy	DQ-30622	DQ-30621	>7	>7	Pass
92	New England Hwy	DP-91214	DP-91213	>7	>7	Pass
93	New England Hwy	DP-90504	DP-90505	>7	>7	Pass
94	New England Hwy	DP-80497	DP-80024	>7	>7	Pass
95	New England Hwy	DP-71254	DP-80001	>7	>7	Pass
96	New England Hwy	DP-70345	DP-80638	>7	>7	Pass
97	Putty Road	DP-70052	DP-70065	>7	>7	Pass
98	Putty Road	DP-70052	DP-70220	>7	>7	Pass
99	Putty Road	DP-70050	DP-70064	>7	>7	Pass
100	Putty Road	DP-70560	DP-70559	>7	>7	Pass
101	Jerrys Plains Rd	DP-70567	DP-70570	>7	>7	Pass
102	Jerrys Plains Rd	DP-40007	DP-40084	>7	>7	Pass
103	Jerrys Plains Rd	DP-40007	DP-40004	>7	>7	Pass
104	Jerrys Plains Rd	DP-40083	DP-40086	>7	>7	Pass
105	Jerrys Plains Rd	MT-60176	MT-60177	>7	>7	Pass
106	Jerrys Plains Rd	MT-60512	MT-60510	>7	>7	Pass
107	Jerrys Plains Rd	MT-30021	MT-30022	>7	>7	Pass
108	Jerrys Plains Rd	MT-30605	MT-30501	>7	>7	Pass
109	Jerrys Plains Rd	MT-30255	MT-30271	>7	>7	Pass
110	Jerrys Plains Rd	MT-20258	MT-20257	>7	>7	Pass
111	Jerrys Plains Rd	MT-10573	MT-10574	>7	>7	Pass
112	Jerrys Plains Rd	MT-10371	MT-10340	>7	>7	Pass

Crossing	Road Name	1st Pole	2nd Pole	Attachment 1	Attachment 2	Pass / Fail
113	Jerrys Plains Rd	MT-10571	MT-10572	>7	>7	Pass
114	Jerrys Plains Rd	MT-10007	MT-10023	>7	>7	Pass
115	Jerrys Plains Rd	MT-10333	MT-10334	>7	>7	Pass
116	Jerrys Plains Rd	MD-70304	MD-70306	>7	>7	Pass
117	Jerrys Plains Rd	MD-70302	MD-70282	>7	>7	Pass
118	Jerrys Plains Rd	MD-70031	MD-70283	>7	>7	Pass
119	Jerrys Plains Rd	MD-70275	MD-70274	>7	>7	Pass
120	Jerrys Plains Rd	MD-70073	MD-70072	>7	>7	Pass
121	Jerrys Plains Rd	MD-40860	MD-40859	>7	>7	Pass
122	Jerrys Plains Rd	WT-50002	WT-50003	>7	>7	Pass
123	Jerrys Plains Rd	WT-50239	WT-50224	>7	>7	Pass
124	Jerrys Plains Rd	WT-50239	WT-50238	>7	>7	Pass
125	Jerrys Plains Rd	WT-20251	WT-20159	>7	>7	Pass
126	Jerrys Plains Rd	WT-20252	WT-20460	>7	>7	Pass
127	Jerrys Plains Rd	WT-20253	WT-20255	>7	>7	Pass
128	Jerrys Plains Rd	WT-20268	PRIVATE	>7	>7	Pass
129	Jerrys Plains Rd	WT-10291	WT-10298	>7	>7	Pass
130	Jerrys Plains Rd	WT-10074	WT-10073	>7	>7	Pass
131	Jerrys Plains Rd	WT-10081	WT-10005	>7	>7	Pass
132	Jerrys Plains Rd	WT-10118	WT-10004	>7	>7	Pass
133	Jerrys Plains Rd	BN-70127	BN-70121	>7	>7	Pass
134	Jerrys Plains Rd	BN-70078	BN-70079	>7	>7	Pass
135	Jerrys Plains Rd	BN-70074	BN-70075	>7	>7	Pass
136	Pagan St	BN-70066	BN-70094	>7	>7	Pass
137	Pagan St	BN-70065	BN-70095	>7	>7	Pass
138	Pagan St	BN-70063	BN-70096	>7	>7	Pass
139	Pagan St	BN-70063	BN-70097	>7	>7	Pass
140	Pagan St	BN-70045	BN-70046	>7	>7	Pass
141	Pagan St	BN-70034	BN-70035	>7	>7	Pass
142	Pagan St	BN-70032	BN-70115	>7	>7	Pass
143	Pagan St	BN-70027	BN-70028	>7	>7	Pass
144	Pagan St	BN-70023	BN-70118	>7	>7	Pass
145	Pagan St	AN-90014	AN-90015	>7	>7	Pass
146	Lonsdale St	BN-70018	BN-70019	>7	>7	Pass
147	Pringle St	AN-90059	AN-90063	>7	>7	Pass
148	Jerrys Plains Rd	AN-90526	AN-90527	>7	>7	Pass
149	Jerrys Plains Rd	AN-90530	AN-90531	>7	>7	Pass

Crossing	Road Name	1st Pole	2nd Pole	Attachment 1	Attachment 2	Pass / Fail
150	Jerrys Plains Rd	AN-60476	AN-60477	>7	>7	Pass
151	Jerrys Plains Rd	AN-60486	AN-60487	>7	>7	Pass
152	Jerrys Plains Rd	AN-60519	AN-60488	>7	>7	Pass
153	Jerrys Plains Rd	AN-60523	AN-60494	>7	>7	Pass
154	Jerrys Plains Rd	AN-60640	AN-60509	>7	>7	Pass
155	Jerrys Plains Rd	AN-50514	AN-60513	>7	>7	Pass
156	Jerrys Plains Rd	AN-20575	AN-20574	>7	>7	Pass
157	Jerrys Plains Rd	AN-20001	AN-20036	>7	>7	Pass
158	Jerrys Plains Rd	AN-20027	AN-20028	>7	>7	Pass
159	Jerrys Plains Rd	AN-20029	AN-10027	>7	>7	Pass
160	Jerrys Plains Rd	AN-10016	AN-10020	>7	>7	Pass
161	Jerrys Plains Rd	AN-10054	AN-10007	>7	>7	Pass
162	Jerrys Plains Rd	9M90004	9M90005	>7	>7	Pass
163	Jerrys Plains Rd	9M80011	9M80003	>7	>7	Pass
164	Jerrys Plains Rd	9M40030	9M40029	>7	>7	Pass
165	Jerrys Plains Rd	9M40014	9M40013	>7	>7	Pass
166	Jerrys Plains Rd	9M40011	9M40010	>7	>7	Pass
167	Jerrys Plains Rd	9M10073	9M10072	>7	>7	Pass
168	Jerrys Plains Rd	9M10066	9M10067	>7	>7	Pass
169	Jerrys Plains Rd	9M10011	9m10010	>7	>7	Pass
170	Jerrys Plains Rd	9M10041	9M10054	>7	>7	Pass
171	Jerrys Plains Rd	9M10039	9M10040	>7	>7	Pass
172	Jerrys Plains Rd	9M10145	9M10148	>7	>7	Pass
173	Golden Highway	9M10093	9M10137	>7	>7	Pass
174	Golden Highway	8M30524	8M30583	>7	>7	Pass
175	Golden Highway	8M30572	8M30584	>7	>7	Pass
176	Golden Highway	8M30591	9M30592	>7	>7	Pass
177	Golden Highway	8M30452	8M30451	>7	>7	Pass
178	Crinoline St	8M30446	8M30445	>7	>7	Pass
179	Crinoline St	8M30639	8M30640	>7	>7	Pass
180	Palace St	8M30271	8M30506	>7	>7	Pass
181	Palace St	8M30261	8M30262	>7	>7	Pass
182	Palace St	8M30517	8M30518	>7	>7	Pass
183	Palace St	8M30252	8M30330	>7	>7	Pass
184	Palace St	8M30329	8M30330	>7	>7	Pass
185	Palace St	8M30539	8M30538	>7	>7	Pass
186	Palace St	8M30536	8M30535	>7	>7	Pass

Crossing	Road Name	1st Pole	2nd Pole	Attachment 1	Attachment 2	Pass / Fail
187	Palace St	8M30706	8M30500	>7	>7	Pass
188	Merriwa Rd	8M30717	8M30718	>7	>7	Pass
189	Merriwa Rd	8M30073	8M30077	>7	>7	Pass
190	Merriwa Rd	8M30072	8M30070	>7	>7	Pass
191	Merriwa Rd	8M30502	8M30064	>7	>7	Pass
192	Merriwa Rd	8M129419	8L90392	>7	>7	Pass
193	Golden Highway	8L80001	8L80157	>7	>7	Pass
194	Golden Highway	8L80141	8L80140	>7	>7	Pass
195	Golden Highway	8L80397	8L80139	>7	>7	Pass
196	Golden Highway	8L50132	8L50131	>7	>7	Pass
197	Golden Highway	8L40098	8L40127	>7	>7	Pass
198	Golden Highway	8L40055	8L40091	>7	>7	Pass
199	Golden Highway	8L40049	8L40048	>7	>7	Pass
200	Golden Highway	8L40339	8L40337	>7	>7	Pass
201	Golden Highway	8L40090	8L40337	>7	>7	Pass
202	Golden Highway	8L40101	8L40085	>7	>7	Pass
203	Golden Highway	8L40086	8L40004	>7	>7	Pass
204	Golden Highway	7L60007	7L60550	>7	>7	Pass
205	Golden Highway	7L60546	7L60548	>7	>7	Pass
206	Golden Highway	7L90001	7L90535	>7	>7	Pass
207	Golden Highway	7L90534	7L90533	>7	>7	Pass
208	Golden Highway	7L90531	7L90530	>7	>7	Pass
209	Golden Highway	7L80528	7L90529	>7	>7	Pass
210	Golden Highway	7L80527	7L60253	>7	>7	Pass
211	Golden Highway	7L50014	7L50206	>7	>7	Pass
212	Golden Highway	7L128577	7L50190	>7	>7	Pass
213	Golden Highway	7L128572	7L50188	>7	>7	Pass
214	Golden Highway	7L50187	7L50185	>7	>7	Pass
215	Golden Highway	7L50184	7L50182	>7	>7	Pass
216	Golden Highway	7L50133	7L50134	>7	>7	Pass
217	Golden Highway	Private Pole	7L50135	>7	>7	Pass
218	Golden Highway	7L50523	7L50137	>7	>7	Pass
219	Golden Highway	7L50260	7L50137	>7	>7	Pass
220	Golden Highway	7L50109	7L50110	>7	>7	Pass
221	Golden Highway	7L50092	7L50024	>7	>7	Pass
222	Golden Highway	7L40101	7L40100	>7	>7	Pass
223	Golden Highway	7L40054	7L40055	>7	>7	Pass

Crossing	Road Name	1st Pole	2nd Pole	Attachment 1	Attachment 2	Pass / Fail
224	Golden Highway	7L40043	7L40045	>7	>7	Pass
225	Golden Highway	7L40031	7L40030	>7	>7	Pass
226	Golden Highway	7L40473	7L40012	>7	>7	Pass
227	Golden Highway	7L40025	7L40024	>7	>7	Pass
228	Golden Highway	7L10017	7L10016	>7	>7	Pass
229	Golden Highway	6L30049	6L30048	>7	>7	Pass
230	Golden Highway	6L30011	6L30012	>7	>7	Pass
231	Golden Highway	6K90002	6K90004	>7	>7	Pass
232	Golden Highway	6K90064	6K90065	>7	>7	Pass
233	Golden Highway	6K90056	6K90007	>7	>7	Pass
234	Golden Highway	6K90054	6K60007	>7	>7	Pass
235	Golden Highway	6K90054	6K60196	>7	>7	Pass
236	Golden Highway	6K60251	6K60250	>7	>7	Pass
237	Golden Highway	6K60050	6K60049	>7	>7	Pass
238	Merriwa St	6K60017	6K60045	>7	>7	Pass
239	Merriwa St	6K60195	6K60016	>7	>7	Pass
240	Merriwa St	6K60042	6K60043	>7	>7	Pass
241	Merriwa St	6K60274	6K60003	>7	>7	Pass
242	Merriwa St	6K60038	6K60004	>7	>7	Pass
243	Merriwa St	6K50027	6K50101	>7	>7	Pass
244	Merriwa St	6K20022	6K20091	>7	>7	Pass
245	Golden Highway	6K20219	6K20220	>7	>7	Pass
246	Golden Highway	6K20219	6K20316	>7	>7	Pass
247	Golden Highway	6K20078	6K20079	>7	>7	Pass
248	Golden Highway	6K20212	6K20035	>7	>7	Pass
249	Golden Highway	6K20005	6K20306	>7	>7	Pass
250	Golden Highway	6K20003	6K20002	>7	>7	Pass
251	Golden Highway	6J407931	6J80279	>7	>7	Pass
252	Golden Highway	6J80069	6J80070	>7	>7	Pass
253	Golden Highway	6J80151	6J80150	>7	>7	Pass
254	Golden Highway	6J80061	6J80141	>7	>7	Pass
255	Golden Highway	6J80060	6J80059	>7	>7	Pass
256	Golden Highway	6J80078	6J80136	>7	>7	Pass
257	Golden Highway	6J80056	6J80058	>7	>7	Pass
258	Golden Highway	6J50053	6J50132	>7	>7	Pass
259	Golden Highway	6J50130	6J50126	>7	>7	Pass
260	Golden Highway	6J50050	6J50002	>7	>7	Pass

Crossing	Road Name	1st Pole	2nd Pole	Attachment 1	Attachment 2	Pass / Fail
261	Golden Highway	6J50112	6J50113	>7	>7	Pass
262	Golden Highway	6J50039	6J50038	>7	>7	Pass
263	Golden Highway	6J40253	6J40102	>7	>7	Pass
264	Golden Highway	6J40097	6J40096	>7	>7	Pass
265	Golden Highway	6J40254	6J40093	>7	>7	Pass
266	Golden Highway	6J10082	6J10083	>7	>7	Pass
267	Golden Highway	6J10021	6J10007	>7	>7	Pass
268	Golden Highway	6J10002	6J10003	>7	>7	Pass
269	Golden Highway	5J30117	5J30116	>7	>7	Pass
270	Golden Highway	5J30135	5J30134	>7	>7	Pass
271	Golden Highway	5J30207	5J30133	>7	>7	Pass
272	Golden Highway	5J30132	5J30131	>7	>7	Pass
273	Golden Highway	5J30206	5J30130	>7	>7	Pass
274	Golden Highway	5J30121	5J30120	>7	>7	Pass
275	Golden Highway	5J30193	5J30118	>7	>7	Pass
276	Golden Highway	5I80904	5I80905	>7	>7	Pass
277	Golden Highway	5I106498	5I80872	>7	>7	Pass
278	Golden Highway	5I80867	5I80858	>7	>7	Pass
279	Golden Highway	5I80856	5I80855	>7	>7	Pass
280	Golden Highway	5I80845	5I80844	>7	>7	Pass
281	Golden Highway	5I80839	5I80838	>7	>7	Pass
282	Golden Highway	5I80024	5I80006	>7	>7	Pass
283	King George V Ave	5I80332	5I80333	>7	>7	Pass
284	King George V Ave	5I80329	5I106923	>7	>7	Pass
285	King George V Ave	5I80327	5I80328	>7	>7	Pass
286	King George V Ave	5I80324	5I80339	>7	>7	Pass
287	King George V Ave	5I80324	5I80321	>7	>7	Pass
288	King George V Ave	5I80322	5I80321	>7	>7	Pass
289	King George V Ave	5I70320	5I70319	>7	>7	Pass
290	King George V Ave	5I70318	5I70317	>7	>7	Pass
291	King George V Ave	5I70315	5I70314	>7	>7	Pass
292	King George V Ave	5I70411	5I70314	>7	>7	Pass
293	King George V Ave	5I70306	5I70305	>7	>7	Pass
294	King George V Ave	5I70304	5I70303	>7	>7	Pass
295	King George V Ave	5I70300	5I70299	>7	>7	Pass
296	King George V Ave	5I70297	5I40295	>7	>7	Pass
297	King George V Ave	5I70583	5I40294	>7	>7	Pass

Crossing	Road Name	1st Pole	2nd Pole	Attachment 1	Attachment 2	Pass / Fail
298	Bettington St	5I40289	5I40288	>7	>7	Pass
299	Bettington St	5I278425	5I40285	>7	>7	Pass
300	Bettington St	5I70549	5I40284	>7	>7	Pass
301	Bettington St	5I40741	5I40740	>7	>7	Pass
302	Bettington St	5I40281	5I40280	>7	>7	Pass
303	Bettington St	5I40279	5I40277	>7	>7	Pass
304	Bettington St	5I40278	5I40277	>7	>7	Pass
305	Bettington St	5I40276	5I40275	>7	>7	Pass
306	Bettington St	5I40011	5I40274	>7	>7	Pass
307	Bettington St	5I40524	5I40274	>7	>7	Pass
308	Bettington St	5I40271	5I40270	>7	>7	Pass
309	Bettington St	5I40261	5I40269	>7	>7	Pass
310	Bettington St	5I40267	5I40266	>7	>7	Pass
311	Bettington St	5I40264	5I40106	>7	>7	Pass
312	Golden Highway	5I40264	5I106910	>7	>7	Pass
313	Golden Highway	5I70760	5I70761	>7	>7	Pass
314	Golden Highway	5I70758	5I70763	>7	>7	Pass
315	Golden Highway	4I90001	4I90149	>7	>7	Pass
316	Golden Highway	4I80151	4I80152	>7	>7	Pass
317	Golden Highway	4I50009	4I50008	>7	>7	Pass
318	Golden Highway	4I50006	4I50007	>7	>7	Pass
319	Golden Highway	4I40008	4I40007	>7	>7	Pass
320	Golden Highway	4I40013	4I40007	>7	>7	Pass
321	Golden Highway	4I40002	4I40003	>7	>7	Pass
322	Collaroy St	4I40039	4I40015	>7	>7	Pass
323	Collaroy St	4I40042	4I40016	>7	>7	Pass
324	Collaroy St	4I108267	4I40043	>7	>7	Pass
325	Collaroy St	4I40046	4I40045	>7	>7	Pass
326	Collaroy St	4I40046	4I40019	>7	>7	Pass
327	Golden Highway	4I40067	4I40068	>7	>7	Pass
328	Golden Highway	3I60109	3I60108	>7	>7	Pass
329	Golden Highway	3I60106	3I60108	>7	>7	Pass
330	Golden Highway	3I60106	3I60107	>7	>7	Pass
331	Golden Highway	3I60101	3I60100	>7	>7	Pass
332	Golden Highway	3I60053	3I60093	>7	>7	Pass
333	Golden Highway	3I50169	3I50168	>7	>7	Pass
334	Golden Highway	3I50085	3I50086	>7	>7	Pass

Crossing	Road Name	1st Pole	2nd Pole	Attachment 1	Attachment 2	Pass / Fail
335	Golden Highway	3I50079	3I50080	>7	>7	Pass
336	Golden Highway	3I50077	3I50078	>7	>7	Pass
337	Golden Highway	3I50153	3I50155	>7	>7	Pass
338	Golden Highway	3I50024	3I50001	>7	>7	Pass
339	Golden Highway	3I50020	3I50021	>7	>7	Pass
340	Golden Highway	3I10182	3I10183	>7	>7	Pass
341	Golden Highway	2I30010	2I30009	>7	>7	Pass
342	Golden Highway	61147 8023	61146 8023	>7	>7	Pass
343	Golden Highway	36928 8023	36927 8023	>7	>7	Pass
344	Golden Highway	36909 8023	36908 8023	>7	>7	Pass
345	Golden Highway	36875 8023	36874 8023	>7	>7	Pass
346	Golden Highway	101530 8023	61110 8023	>7	>7	Pass
347	Golden Highway	36806 8023	36813 8023	>7	>7	Pass
348	Golden Highway	36806 8023	36807 8023	>7	>7	Pass
349	Golden Highway	61100 8023	10968 8059	>7	>7	Pass
350	Golden Highway	10952 8059	10951 8059	>7	>7	Pass
351	Golden Highway	CE20306	10949 8059	>7	>7	Pass
352	Golden Highway	CE20305	10947 8059	>7	>7	Pass
353	Golden Highway	10941 8059	10940 8059	>7	>7	Pass
354	Golden Highway	10939 8059	10938 8059	>7	>7	Pass
355	Golden Highway	10937 8059	10936 8059	>7	>7	Pass
356	Golden Highway	10933 8059	10932 8059	>7	>7	Pass
357	Golden Highway	51136 8059	10930 8059	>7	>7	Pass
358	Golden Highway	10898 8059	51162 8059	>7	>7	Pass
359	Golden Highway	30613 8059	51162 8059	>7	>7	Pass
360	Golden Highway	80613 8059	30612 8059	>7	>7	Pass
361	Golden Highway	10893 8059	30611 8059	>7	>7	Pass
362	Golden Highway	60264 8044	60263 8044	>7	>7	Pass
363	Golden Highway	69599 8029	69598 8029	>7	>7	Pass
364	Golden Highway	35756 8029	35757 8029	>7	>7	Pass
365	Golden Highway	35741 8029	35740 8029	>7	>7	Pass
366	Golden Highway	35725 8029	35727 8029	>7	>7	Pass
367	Golden Highway	24663 8030	24664 8030	>7	>7	Pass
368	Golden Highway	24661 8030	24660 8030	>7	>7	Pass
369	Golden Highway	24651 8030	24652 8030	>7	>7	Pass
370	Golden Highway	24622 8030	24621 8030	>7	>7	Pass
371	Golden Highway	24609 8030	24610 8030	>7	>7	Pass

Crossing	Road Name	1st Pole	2nd Pole	Attachment 1	Attachment 2	Pass / Fail
372	Golden Highway	24604 8030	24603 8030	>7	>7	Pass
373	Golden Highway	60040 8030	60039 8030	>7	>7	Pass
374	Golden Highway	60053 8030	60052 8030	>7	>7	Pass
375	Golden Highway	24533 8030	24534 8030	>7	>7	Pass
376	Golden Highway	60235 8086	60236 8086	>7	>7	Pass
377	Golden Highway	68585 8097	68586 8097	>7	>7	Pass
378	Golden Highway	68577 8097	68578 8097	>7	>7	Pass
379	Golden Highway	68574 8079	68573 8097	>7	>7	Pass
380	Golden Highway	55210 8097	23557 8097	>7	>7	Pass
381	Golden Highway	NP404985	NP404984	>7	>7	Pass
382	Golden Highway	12829 8002	NP404973	>7	>7	Pass
383	Golden Highway	23331 8002	23332 8002	>7	>7	Pass
384	Golden Highway	23331 8002	37056 8002	>7	>7	Pass
385	Golden Highway	NP412587	12901 8002	>7	>7	Pass
386	Golden Highway	NP412580	12906 8002	>7	>7	Pass
387	Golden Highway	NP412575	12907 8002	>7	>7	Pass
388	Golden Highway	NP412569	NP412589	>7	>7	Pass
389	Golden Highway	NP412565	NP412588	>7	>7	Pass
390	Golden Highway	167308 852	267309 852	>7	>7	Pass
391	Golden Highway	NP345150	NP345191	>7	>7	Pass
392	Castlereagh Hwy	16350 8002	16349 8002	>7	>7	Pass
393	Castlereagh Hwy	16348 8002	16349 8002	>7	>7	Pass
394	Golden Highway	39045 7084	39044 7084	>7	>7	Pass
395	Golden Highway	39049 7084	39048 7084	7.3	8.2	Pass
396	Golden Highway	39053 7084	39052 7084	>7	>7	Pass
397	Golden Highway	39056 7084	39055 7084	7.8	7.6	Pass
398	Golden Highway	39057 7084	39055 7084	>7	>7	Pass
399	Golden Highway	39064 7084	39063 7084	>7	>7	Pass
400	Golden Highway	39066 7084	39065 7084	>7	>7	Pass
401	Golden Highway	39072 7084	39070 7084	>7	>7	Pass
402	Golden Highway	39077 7084	39075 7084	>7	>7	Pass
403	Golden Highway	39466 7084	39468 7084	>7	>7	Pass
404	Golden Highway	39466 7084	39467 7084	>7	>7	Pass
405	Golden Highway	39463 7084	PP39464 7084	>7	>7	Pass
406	Golden Highway	39461 7084	39462 7084	>7	>7	Pass
407	Golden Highway	39443 7084	39445 7084	>7	>7	Pass
408	Golden Highway	39442 7084	39444 7084	>7	>7	Pass

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Crossing	Road Name	1st Pole	2nd Pole	Attachment 1	Attachment 2	Pass / Fail
409	Golden Highway	39441 7084	NP406521	>7	>7	Pass
410	Golden Highway	39422 7084	39423 7084	>7	>7	Pass
411	Golden Highway	39417 7084	39418 7084	>7	>7	Pass
412	Golden Highway	39416 7084	39480 7084	>7	>7	Pass
413	Golden Highway	39414 7084	39415 7084	>7	>7	Pass
414	Golden Highway	39410 7084	39411 7084	>7	>7	Pass
415	Golden Highway	39395 7084	39396 7084	>7	>7	Pass
416	Golden Highway	39397 7084	39398 7084	>7	>7	Pass
417	Golden Highway	112269 8015	112267 8015	>7	>7	Pass
418	Golden Highway	60705 8015	35057 8015	>7	>7	Pass
419	Golden Highway	28834 8015	PPCE15142	>7	>7	Pass
420	Golden Highway	60717 8015	28840 8015	>7	>7	Pass
421	Golden Highway	28865 8015	28866 8015	>7	>7	Pass
422	Golden Highway	28872 8015	28873 8015	>7	>7	Pass
423	Golden Highway	28874 8015	28873 8015	>7	>7	Pass
424	Golden Highway	28910 8015	28911 8015	>7	>7	Pass
425	Golden Highway	60781 8015	28930 8015	>7	>7	Pass
426	Golden Highway	60781 8015	60782 8015	>7	>7	Pass
427	Golden Highway	35029 8015	60782 8015	>7	>7	Pass
428	Golden Highway	60805 8015	60804 8015	>7	>7	Pass
429	Golden Highway	720 311	721 311	>7	>7	Pass
430	Golden Highway	704 311	705 311	>7	>7	Pass
431	Golden Highway	808 311	812 311	>7	>7	Pass
432	Golden Highway	808 311	809 311	>7	>7	Pass
433	Golden Highway	787 311	788 311	>7	>7	Pass
434	Saxa Rd	766 311	765 311	>7	>7	Pass
435	Saxa Rd	740 311	739 311	>7	>7	Pass
436	Saxa Rd	490 311	726 311	>7	>7	Pass
437	Saxa Rd	470 311	116026 311	>7	>7	Pass
438	Saxa Rd	324 311	325 311	>7	>7	Pass
439	Saxa Rd	317 311	318 311	>7	>7	Pass
440	Saxa Rd	302 311	303 311	>7	>7	Pass
441	Saxa Rd	289 311	290 311	>7	>7	Pass
442	Saxa Rd	251 311	250 311	>7	>7	Pass
443	Saxa Rd	169 311	168 311	>7	>7	Pass
444	Saxa Rd	1083 902	195 311	>7	>7	Pass
445	Saxa Rd	1025 902	1026 902	>7	>7	Pass

Crossing	Road Name	1st Pole	2nd Pole	Attachment 1	Attachment 2	Pass / Fail
446	Saxa Rd	563 901	562 901	>7	>7	Pass
447	Saxa Rd	306 901	310 901	>7	>7	Pass
448	Saxa Rd	294 901	295 901	>7	>7	Pass
449	Saxa Rd	209 901	210 901	>7	>7	Pass
450	Saxa Rd	169 901	168 901	>7	>7	Pass
451	Saxa Rd	167 901	166 901	>7	>7	Pass
452	Saxa Rd	160 901	159 901	>7	>7	Pass
453	Saxa Rd	148 901	147 901	>7	>7	Pass
454	Saxa Rd	133 901	132 901	>7	>7	Pass
455	Saxa Rd	356 94J	354 94J	>7	>7	Pass
456	Saxa Rd	41 912	42 912	>7	>7	Pass
457	Saxa Rd	38 912	PP39 912	>7	>7	Pass
458	Saxa Rd	29 912	30 912	>7	>7	Pass
459	Saxa Rd	340 94F	338 94F	>7	>7	Pass
460	Saxa Rd	23 912	24 912	>7	>7	Pass
461	Saxa Rd	22 912	54 912	>7	>7	Pass
462	Saxa Rd	51 813	52 813	>7	>7	Pass
463	Saxa Rd	59 912	58 912	>7	>7	Pass
464	Mitchell Hwy	66 912	67 912	>7	>7	Pass
465	Mitchell Hwy	2062 930	2058 930	>7	>7	Pass
466	Goolma Rd	51 903	59 903	>7	>7	Pass
467	Goolma Rd	67 903	68 903	>7	>7	Pass
468	Goolma Rd	1 912	68 903	>7	>7	Pass
469	Goolma Rd	GE156449	73 903	>7	>7	Pass
470	Goolma Rd	359 94F	360 94F	>7	>7	Pass
471	Goolma Rd	74 903	892 903	>7	>7	Pass
472	Twelve Mile Rd	392 94J	395 94J	>7	>7	Pass
473	Twelve Mile Rd	NP411318	NP411317	>7	>7	Pass
474	Twelve Mile Rd	85 903	84 903	>7	>7	Pass
475	Twelve Mile Rd	88 903	90 903	>7	>7	Pass
476	Twelve Mile Rd	1039 903	92 903	>7	>7	Pass
477	Twelve Mile Rd	95 903	94 903	>7	>7	Pass
478	Twelve Mile Rd	101 903	100 903	>7	>7	Pass
479	Twelve Mile Rd	103 903	102 903	>7	>7	Pass
480	Twelve Mile Rd	105603 903	104 903	>7	>7	Pass
481	Twelve Mile Rd	106 903	105 903	>7	>7	Pass
482	Twelve Mile Rd	792 903	449 903	>7	>7	Pass

Crossing	Road Name	1st Pole	2nd Pole	Attachment 1	Attachment 2	Pass / Fail
483	Twelve Mile Rd	152 903	151 903	>7	>7	Pass
484	Twelve Mile Rd	158 903	157 903	>7	>7	Pass
485	Twelve Mile Rd	1005644	179 903	>7	>7	Pass
486	Twelve Mile Rd	100055 903	391 903	>7	>7	Pass

APPENDIX B: SITE PHOTOS


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