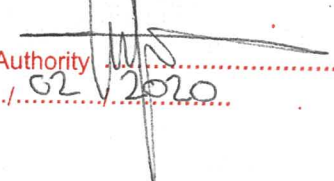




CORANGAMITE SHIRE PLANNING SCHEME
This Traffic Management Report/Plan
consisting of 208 pages referred to in
Permit No. 190008 granted under the provisions
of the Corangamite Planning Scheme.

Signature of 
Responsible Authority
Date: 26 02 2020

Acciona Energy Australia Global Pty Ltd

Mortlake South Wind Farm Transmission Line

Traffic Management Plan

Final Report Version 3

18 February 2020

Table of contents

1.	Introduction	4
1.1	Background	4
1.2	Scope and Limitations.....	4
1.3	Purpose of this Report	4
1.4	Report Structure	6
1.5	Referenced Materials	6
2.	Project Information.....	7
2.1	Site Location	7
2.2	Site Layout and Access.....	9
2.3	Construction Program.....	10
3.	Existing Conditions.....	11
3.1	Key Roads.....	11
3.2	Traffic Volumes.....	13
3.3	Pre-Haulage Pavement Condition Survey.....	13
4.	Access Routes.....	16
4.1	Quarry Haulage Route	16
4.2	Alternate Heavy Vehicle Transport Route	17
4.3	Workforce Vehicles.....	17
4.4	Work Zone Access Points.....	17
4.5	Spoil Transport Route	30
5.	Traffic Generation	31
5.1	Key Assumptions.....	31
5.2	Traffic Generation Estimates	31
5.3	Timing of Traffic Movements	32
6.	Traffic Management Measures.....	33
6.1	Relevant Guidelines	33
6.2	Quarry Haulage Routes.....	33
6.3	Ancillary Heavy Vehicle Transport Route	33
6.4	Spoil Removal Transport Routes	33
6.5	Local Access Routes	33
6.6	Mitigation Measures.....	34
6.7	Non Compliance to this TMP	38
6.8	Contractor Behaviour on Roads.....	38

6.9	Operational Phase	38
7.	Traffic Management Administration	40
7.1	Responsibilities	40
7.2	Management Reviews	40
8.	Summary of Traffic Management Commitments	41
8.1	Pre-Construction.....	41
8.2	Road Infrastructure Management.....	41
8.3	Transmission Line Construction.....	42
8.4	Post-Construction	43

Table index

Table 1	Planning Conditions Reference List	5
Table 2	Existing Traffic Volumes.....	13
Table 3	Summary of Pavement Condition Survey.....	13
Table 4	Trip Generation Estimates	31
Table 5	Local Roads – Inspection Frequency.....	37
Table 6	Traffic management plan primary stakeholders	40

Figure index

Figure 1	Proposed Transmission Line Alignment.....	8
Figure 2	Proposed Work Zones for Alignment	9
Figure 3	Quarry Haulage Routes.....	16
Figure 4	Work Zone 1 – Access Points.....	18
Figure 5	Access Point 1 Summary.....	19
Figure 6	Access Point 2 Summary.....	19
Figure 7	Access Point 3 Summary.....	20
Figure 8	Access Point 4 and 5 Summary	20
Figure 9	Work Zone 2 – Access Points	21
Figure 10	Access Point 6 Summary.....	22
Figure 11	Access Point 7 Summary.....	22
Figure 12	Access Point 8 Summary.....	23
Figure 13	Work Zone 3 – Access Points	24
Figure 14	Access Point 9 Summary.....	24

Figure 15 Work Zone 4 – Access Points25

Figure 16 Access Point 10 Summary26

Figure 17 Work Zone 5 – Access Points27

Figure 18 Access Point 11 Summary27

Figure 19 Access Point 12 Summary28

Figure 20 Work Zone 6 – Access Points29

Figure 21 Access Point 13 Summary29

Figure 22 Spoil Removal Transport Routes.....30

Appendices

- Appendix A – Pre-Haulage Pavement Condition Survey
- Appendix B – Haulage Code of Conduct
- Appendix C – Access and Route Alignment Plans

1. Introduction

1.1 Background

GHD Pty Ltd (GHD) has been engaged by ACCIONA Energy Australia Global Pty Ltd (ACCIONA) to prepare a Traffic Management Plan for the proposed Mortlake South Wind Farm Transmission Line, between Mortlake South Wind Farm and AusNet's Terang Terminal Station.

1.2 Scope and Limitations

This report has been prepared by GHD for ACCIONA Energy Australia Global Pty Ltd and may only be used and relied upon by ACCIONA Energy Australia Global Pty Ltd for the purpose agreed between GHD and ACCIONA Energy Australia Global Pty Ltd as set out in Section 1.3 of this report.

GHD otherwise disclaims responsibility to any other person other than ACCIONA Energy Australia Global Pty Ltd arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

GHD has prepared this report on the basis of information provided by ACCIONA Energy Australia Global Pty Ltd and others who provided information to GHD (including Government authorities), which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

1.3 Purpose of this Report

This Traffic Management Plan (TMP) report is intended to be the document that sets out the commitments ACCIONA will make to ensure that the construction of the wind farm transmission line does not adversely impact on either the condition or the operation of the surrounding road network.

1.3.1 Planning Permit Conditions

This TMP has been prepared in response to a condition of the permit that before the commencement of development a TMP must be developed in accordance with the relevant roads authority. The requirements of the TMP, which are addressed in this report are outlined in Table 1 below. This TMP is prepared in reference to Planning Permits PA1900603 & PA1900604.

Table 1 Planning Conditions Reference List

Planning Permit Condition		TMP Ref:
9.	Before development starts, a Traffic Management Plan must be prepared to the satisfaction of, and endorsed by, Moyne Shire Council, Corangamite Shire Council, and VicRoads. Once endorsed, the Plan will form part of the permit.	Noted
	The Traffic Management Plan must be prepared by a suitably qualified and experienced independent civil or traffic engineer, and must include:	This Report
a)	Detail potential traffic-related impacts (including on road users) as a result of the proposed use and development, and detail proposed mitigation measures.	Section 6.5
b)	Nominated access points for vehicles and plant to the transmission alignment, including areas for loading and unloading bulk quarry materials.	Section 4.4
c)	Nominated haulage routes for the movement of bulk quarry materials to the site, and for the removal of bulk spoil from the site.	Section 4.1, 4.2, 4.5 & Fig 2 & Fig 3
d)	Estimated start and end date for the use of each haulage route, and if these dates are altered, Moyne Shire Council, Corangamite Shire Council, and VicRoads must be notified of the alternative dates as soon as practicable.	Section 3.3
e)	Estimated heavy vehicle traffic volumes for each route, expressed as two-way trips.	Section 5.2
f)	Estimate light traffic and workforce vehicles and designated parking areas for such vehicles.	Section 5.2
g)	Delineation of areas of road reserve which are not to be disturbed and how this will be managed.	Section 6.6.6
h)	The frequency of inspection and reporting for the Road Quality Auditor to VicRoads, Moyne Shire Council and Corangamite Shire Council.	Section 6.6.8
i)	Timeframes for repair of any damage, to be in accordance with the VicRoads or relevant Council Roads Management Plan.	Section 6.6.4
j)	A pre-haulage pavement condition survey for nominated routes.	Section 2.4 & Appendix A
k)	A requirement for a post-haulage pavement condition survey for nominated routes.	Section 8.4

10.	All costs associated with traffic management and road maintenance works must be borne by the permit holder.	Section 6.5.4 & 6.5.8
11.	The monitoring and maintenance of roads identified in the traffic management plan must be completed to the satisfaction of a suitable road quality auditor and the relevant road authority. The auditor must be to the satisfaction of Moyne Shire Council, Corangamite Shire Council, and VicRoads.	Section 6.5.8
12.	A copy of the endorsed Traffic Management Plan must be provided to the Minister of Planning.	Noted
13.	The endorsed Traffic Management Plan must be implemented to the satisfaction of Moyne Shire Council, Corangamite Shire Council, and VicRoads. The endorsed Traffic Management Plan must not be altered or modified without the written consent of Moyne Shire Council, Corangamite Shire Council, and VicRoads.	Noted

1.4 Report Structure

This TMP Report is structured as follows:

- **Sections 2 and 3** provides a description of the existing conditions including key road dimensions and traffic volumes.
- **Section 4** describes the project including the site layout and access, and an outline of the construction program.
- **Section 5** details the traffic management measures required including the haul routes, site access and the mitigation measures and upgrades that will be required to facilitate construction.
- **Section 7** contains details of the TMP administration including contact details for the responsible road authorities.
- **Sections 6 and 8** is a summary of the traffic management measures required.

1.5 Referenced Materials

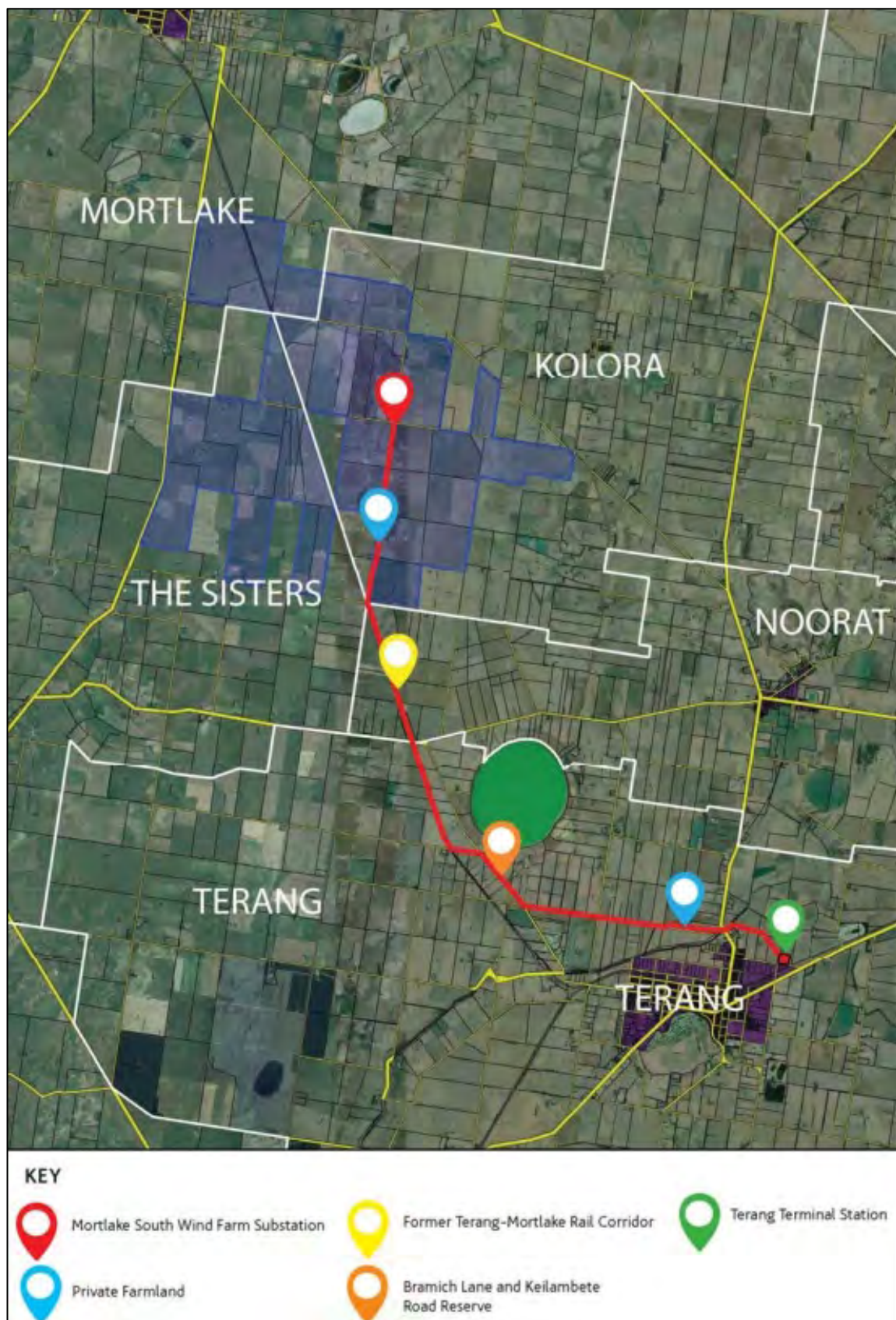
The following documents and materials were referred to during the preparation of this report:

- *Mortlake South Wind Farm Traffic Management Plan*, GHD, November 2018
- *Mortlake South Wind Farm Transmission Line Planning Application Report*, ACCIONA, June 2019
- *Mortlake South Wind Farm Transmission Line Plan Book*, ACCIONA, August 2019
- *Mortlake South Wind Farm Work Zones Traffic Management Plan*, John Beever, December 2019

2. Project Information

2.1 Site Location

Mortlake South Wind Farm Transmission Line is located in the Shire of Moyne and Shire of Corangamite in the south-west of Victoria. The proposed Transmission Line is to be constructed between the Mortlake South Wind Farm and AusNet's Terang Terminal Station. The transmission line will be approximately 15 kilometres in length, and will be located within various land uses, such as road reserves, VicTrack land and private farmland. The location of the proposed transmission line is shown in Figure 1.



Source: ACCIONA Planning Report, July 2019

Figure 1 Proposed Transmission Line Alignment

2.2 Site Layout and Access

The proposed transmission line alignment is to be divided into six separate work zones, which are as follows and shown below in Figure 2.:

- Zone 1: Private Land: Chamallak Lane to Londrigans Lane.
- Zone 2: VicTrack Rail Corridor: Londrigans Lane to Bramich Lane.
- Zone 3: Road side corridor: Bramich Lane to Keilambete Road.
- Zone 4: Road side corridor: Riley Road west of Racecourse Road.
- Zone 5: Road side corridor & private land: Riley Road east of Racecourse Road.
- Zone 6: Private Land: Terang-Mortlake Road to Terang Terminal Station.

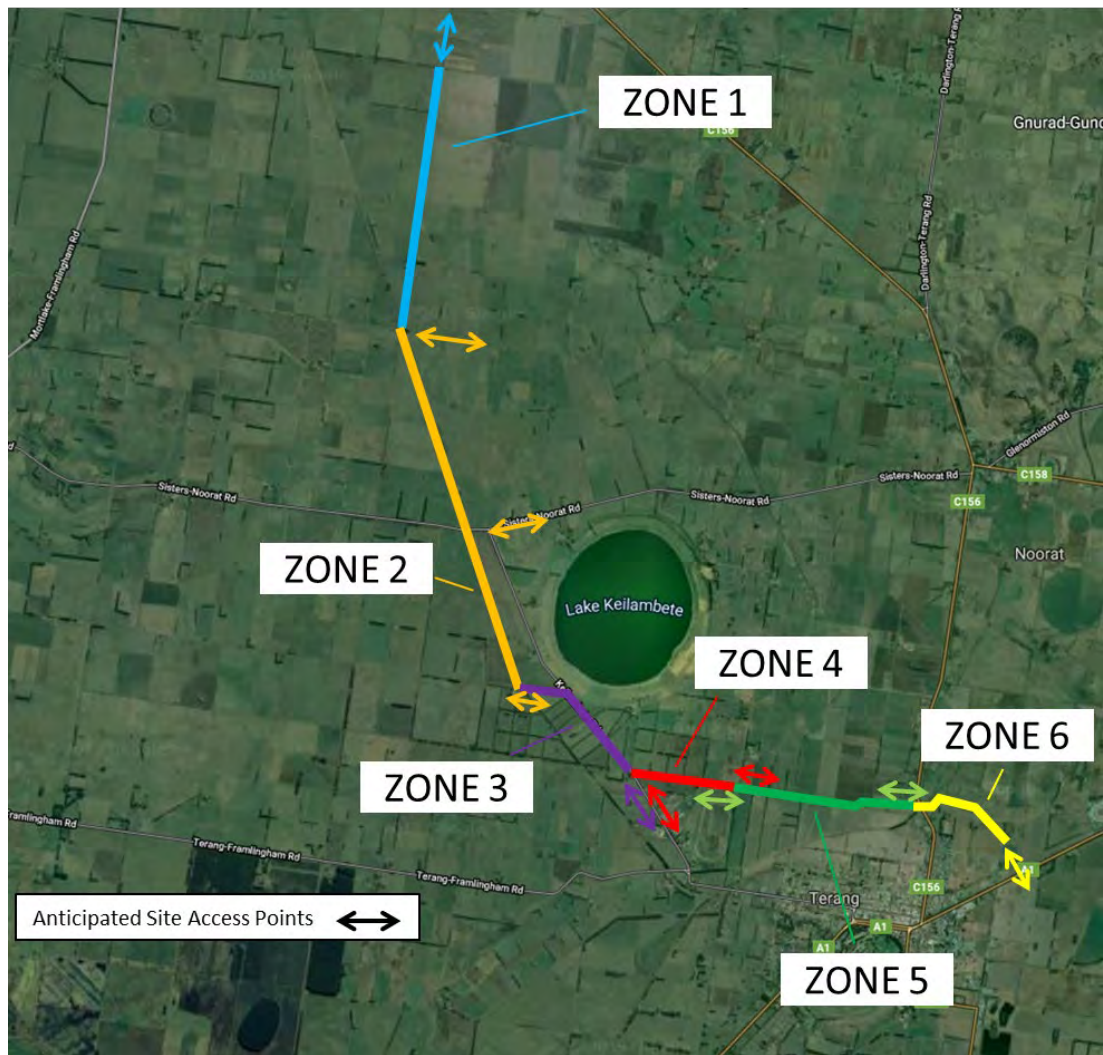


Figure 2 Proposed Work Zones for Alignment

Access to each of the work zones will differ as the construction process moves from the Wind Farm towards the Terang Terminal. Generally, Princes Highway and Terang-Mortlake Road will be utilised as the main arterial roads to provide vehicular access to the work zones and local roads, such as Riley Road, Keilambete Road and Tapps Lane, will be utilised for specified work zones when required. Each work zone will have sufficient area to provide light vehicle parking areas (for staff) and material storage, etc.

The largest truck type anticipated to transport materials to the work zones would be a truck and dog size with a nominal length of 19 metres. A semi-trailer vehicle (nominal length 19 metres) will be utilised to transport the conduit to the work zones from Albury.

2.3 Construction Program

It is proposed to install majority of the conduit via open trenching along the alignment. Some other methods such as under-boring may be employed at specific locations, where appropriate. It is noted that the boring works will require a works within road reserve permit on Terang-Mortlake Road, even though the works are unlikely to interrupt the road corridor. It is noted that the trench and surrounding construction zone is generally clear of roadways however where some road occupation is required to facilitate construction the requisite MOA's will be sought as well as Council's Works within Road Reserve permits prior to commencing works.

Construction is proposed to commence in February 2020, with completion expected by July 2020. The overall construction program will last for approximately 6 months. The construction program has been based on the assumption that 200 metres of transmission line can be constructed daily. The indicative construction stages are as follows:

- Zone 1: 17 Feb – 17 Aug
- Zone 2: 27 Feb – 7 Aug
- Zone 3: 20 Mar – 3 Jul
- Zone 4: 3 Apr – 3 Jul
- Zone 5: 14 Feb – 3 Jun
- Zone 6: 14 Feb – 26 Jun

The above indicative construction staging shows that it is expected that multiple work zones will be under construction simultaneously.

3. Existing Conditions

3.1 Key Roads

3.1.1 Tapps Lane

Tapps Lane runs north-south between Terang-Mortlake Road at its northern end and Terang-Framlingham Road at its southern end. The road is managed by Moyne Shire Council and is classified as a local road. The road has been upgraded as a part of the Mortlake South Wind Farm (MSWF) construction including the construction of a 6.2 metre sealed pavement between Terang-Mortlake Road and Chamallak Lane, and upgraded gravel pavement within the remainder of the MSWF project boundary.

There are no footpaths or street lighting and the default rural speed limit of 100 km/h applies. Surrounding land use is generally rural agricultural.

3.1.2 Bramich Lane

Bramich Lane runs east-west between Keilambete Road at its eastern end and Dairy Lane at its western end. The road is managed by Corangamite Shire Council, in the vicinity of the work zone, and is classified as a local road. It is an unsealed single-carriageway road of approximately 4.0 m width with table or swale drains on each side.

There are no footpaths or street lighting and the default rural speed limit of 100 km/h applies. Surrounding land use is generally rural agricultural.

3.1.3 Keilambete Road

Keilambete Road runs north-west to south-east between Terang-Framlingham Road at its southern end and Sisters-Noorat Road at its northern end. The road is managed by Corangamite Shire Council, in the vicinity of the work zone and is classified as a local road. It is a sealed single-carriageway road of approximately 3.5 m width, with trafficable shoulders to allow vehicles to pass as required.

There are no footpaths or street lighting and the default rural speed limit of 100 km/h applies, and surrounding land use is generally rural agricultural.

3.1.4 Riley Road

Riley Road runs east-west between Terang-Mortlake Road at its eastern end and Keilambete Road at its western end. The road is managed by Corangamite Shire Council and is classified as a local road. It is an unsealed single-carriageway of approximately 4 m width, with table or swale drains on each side.

There are no footpaths or street lighting and the default rural speed limit of 100 km/h applies. Surrounding land use is generally rural agricultural.

3.1.5 Terang – Mortlake Road

Terang-Mortlake Road runs north-west to south-east and connects the towns of Mortlake and Terang. The road is managed by VicRoads and is classified as Arterial – Other. It is generally a two-lane two-way single-carriageway road with a posted speed limit of 100 km/h. The carriageway is generally 7.5 m wide; there are no footpaths and no street lighting. Surrounding land use is generally rural agricultural.

Terang-Mortlake Road is sealed and constructed to a relatively high standard. It is an approved VicRoads B-Double and higher mass limit route. It is considered that Terang-Mortlake Road is suitable for use by traffic associated with the construction of the wind farm transmission line. It is noted that ACCIONA completed turn lanes upgrades at the Tapps Lane / Terang-Mortlake Road intersection recently as part of the MSWF.

3.1.6 Sisters-Noorat Road

Sisters-Noorat Road runs east-west between Terang-Mortlake Road at its eastern end and Mortlake-Framingham Road at its western end. The road is managed by Moyne Shire Council, in the vicinity of the work zone, and managed by Corangamite Shire Council to the east of Tapps Lane in close proximity of the work zone, and is classified as a local road. It is generally a one-lane each way single-carriageway road with a posted speed limit of 100 km/h.

The carriageway is generally 7.5 m wide; there are no footpaths and no street lighting. Surrounding land use is generally rural agricultural.

3.1.7 Terang-Framingham Road

Terang-Framingham Road runs east-west between Cameron Street at its eastern end and Mortlake-Framingham Road at its western end. Terang-Framingham Road is managed by Corangamite Shire Council, in the vicinity of the work zone, and is classified as a local road. It is generally a one-lane each way single-carriageway road with a posted speed limit of 100 km/h.

The carriageway is generally 7.5 m wide; there are no footpaths and no street lighting. Surrounding land use is generally rural agricultural.

3.1.8 Noogee Road

Noogee Road runs north-south between Princes Highway at its southern end and Terang-Framingham Road at its northern end. The road is managed by Corangamite Shire Council and is classified as a local road. It is a sealed single-carriageway road of approximately 3.5 m width, with trafficable shoulders to allow vehicles to pass as required.

There are no footpaths or street lighting and the default rural speed limit of 100 km/h applies, and surrounding land use is generally rural agricultural.

3.1.9 Littles Lane

Littles Lane runs north-south between Princes Highway at its southern end and terminates approximately 300 metres north of its intersection with Macrae Street at its northern end. The road is managed by Corangamite Shire Council and is classified as a local road. It is an unsealed single-carriageway of approximately 4 m width, with table or swale drains on each side.

There are no footpaths or street lighting and the default rural speed limit of 100 km/h applies. Surrounding land use is generally rural agricultural.

3.2 Traffic Volumes

Traffic data obtained from VicRoads demonstrates that Terang-Mortlake Road, near Tapps Lane, has an average daily traffic volumes of 1,000 vehicles. Data has been also been obtained from Corangamite Shire Council for the local roads in close proximity to the work zone, and estimated daily traffic volumes and the proportion of Heavy Vehicles is summarised below in Table 2.

Table 2 Existing Traffic Volumes

Road Name	Estimated AADT	Heavy Vehicle %
Tapps Lane	32	13
Bramich Lane	42	7
Keilambete Road	92	6
Riley Road	58	7
Sisters Noorat Road	646	9
Terang-Framlingham Rd	348	8
Noogee Road	477	9
Little's Lane	308	6

It is noted that the Mortlake South Wind Farm is currently under construction, with traffic utilising Tapps Lane for construction access. Therefore, it is expected that higher traffic volumes will be experienced along Tapps Lane until the construction period of the wind farm is complete.

3.3 Pre-Haulage Pavement Condition Survey

A survey has been undertaken by CSE Group to review the existing pavement condition of local roads, anticipated to be utilised as a part of the haulage route to/ from the work site.

It is noted that the proposed construction period is from February 2020 and August 2020 (6 month construction period).

The pre-haulage pavement condition survey has been attached to this TMP as Appendix A. A summary of the pavement condition survey is provided below in Table 3.

Table 3 Summary of Pavement Condition Survey

Segment	Summary of Road Condition (Refer to Appendix for the full report)
TAPPS LANE (SOUTH) CH 5260 – CH 7780 2.52 km	The road formation was generally in good condition throughout, except for the turning movement wheel paths at the Cliffords Lane (Londrigans Lane) intersection. The edge of the road formation at this intersection is very soft and has deep wheel ruts on the verge of bogging.
ALLANSFORD SEGMENT Buckleys Rd: CH 0.000 – 1.204km Burkes Rd: CH 1.204 – 1.793km Tooram Rd: CH 1.793 – 5.137km	The Allansford segment commences at CH 0km at the Lake Gilleard Quarry entrance on Buckleys Rd and ends at the Princes Highway intersection with Garibaldi Lane at CH 5.500km. Buckleys Road is initially a limestone gravel pavement for the first 0.59km before a 6.6m wide two lane sealed pavement completes the road through to Burkes Rd. The sealed part of

<p>Ziegler Pde: CH 5.137 – 5.346km Garibaldi Ln: CH 5.346 – 5.500km</p>	<p>the road is moderately flush and has faded centre line marking only. Several guide posts are damaged or missing. The road is generally in Good to Very Good condition. Burkes Road consists of a 7.2m wide two lane sealed pavement with centre line marking only. Some guide posts are damaged in the curve. The road is in Very Good condition.</p>
<p>TERANG WEST SEGMENT Noogee Rd: CH 0.000 – 2.348km Terang-Framlingham Rd: CH 2.348 – 2.930 km Keilambete Rd: CH 2.930 – 5.555km Bramich Ln: CH 5.555 – 6.130km</p>	<p>The Terang West segment commences at the intersection of the Princes Highway and Noogee Road at CH 0km and ends at CH 6.13km on Bramich Lane. Noogee Road consists of a single lane sealed pavement measuring 3.8m wide, with gravel shoulders and no line marking. The seal has had some recent patching performed though is suffering from crocodile cracking in general. There is a marked lack of guide posts and the road is considered in Good condition at present. Terang-Framlingham Road has a 7.3m wide, two lane seal and has moderate flushing, extensive crocodile cracking and minor rutting. There were no guide posts observed and the road has a condition rating of Fair to Good. Keilambete Road commences as a 5.6m wide sealed pavement before narrowing to 3.9m, with grass shoulders and no line marking. There is a marked lack of guide posts along the road. The general condition rating of the road is Good. Bramich Lane is a gravel road with a marked lack of guide posts. The road appears very lightly trafficked and has a condition rating of Good.</p>
<p>TERANG EAST SEGMENT Cosgrove and Little St: CH 0.000 – 0.954km</p>	<p>The Terang East segment runs north along Cosgrove and Little Street between the Princes Highway and the existing power sub-station. The road starts off as a two lane, 5.3m wide seal until the McRae St intersection, where it becomes a gravel pavement with grass shoulders. There are no guide posts on the road segment and the road is considered in Good condition.</p>
<p>TERANG TO NOORAT SEGMENT Terang-Mortlake Rd: CH 0.000 – 5.638km</p>	<p>The audited segment commences at CH 0km at the Princes Highway in Terang and heads north to end at CH 5.638 at the Sisters-Noorat Rd intersection in Noorat. The road ranges in condition from Very Good through to Poor depending on location. Through the poor sections, the road is suffering extensively from rutting, shoving, crocodile cracking, flushing and seal break outs. In many locations, the pavement is at the end of its life and full reconstruction is required to effectively upgrade the road in these areas. The road is a continuous two lane sealed pavement with line marking generally faded. There was some guide post damage along the segment</p>
<p>TAPPS LANE CH 0.00 – 5.26KM GRINTERS LANE CH 1.22 – 3.98KM CHAMALLAK LANE CH 0.28 – 1.95KM</p>	<p>As the local roads have been recently upgraded the condition of the road pavement is generally very good. Tapps Lane has some minor defects relating to faded line marking and gravel left on the asphalt including guide posts damaged and a shoulder shove. Grinters Lane has minor potholing and rutting at the tower entry roads. Chamallak Lane has localised minor shoulder rutting.</p>
<p>RILEY ROAD CH 0 – CH 1.317</p>	<p>Riley Road is a gravel road with a marked lack of guide posts. The road appears very lightly trafficked and has a condition rating of Good. The pavement is well formed with adequate superelevation and roadside drainage is appropriate, though there are no</p>

	<p>driveway culverts in place. A head wall at the Racecourse Rd intersection is damaged.</p> <p>Signage is minimal and considered not required on this road due to the low traffic volumes and straight alignment which has good forward visibility.</p>
<p>SISTERS NOORAT ROAD</p> <p>CH 3.35 – 13.13km</p>	<p>The Sisters-Noorat Road is a local road and has a 6.2m seal with 1.5m unsealed gravel shoulder on each side. The existing pavement has been deteriorating as heavy vehicle traffic increases.</p> <p>There are still many areas of pavement failure, potholing, seal stripping, shoving and crocodile cracking. Some defects have resurfaced in recently asphalted patches indicating that the base and/or subgrade material has failed. New areas of the pavement are also deteriorating and breaking up.</p>
<p>TERANG MORTLAKE ROAD</p> <p>CH 5.56 – 15.19km</p>	<p>The Terang-Mortlake Road is a declared main road and has a 6.8m seal with 1.5m unsealed gravel shoulder on each side. In general, the road has continued to deteriorate since the last inspection though there has been some pothole patching. Extensive areas of the seal are breaking out, shoving and rutting.</p>

4. Access Routes

4.1 Quarry Haulage Route

A significant portion of the total trips travelling to and from the site would be the import of raw material of thermal sand from a nearby quarry. ACCIONA has identified the following quarry haulage routes for use by wind farm contractors. The TMP will need to be amended should any other route be required in accordance with the Planning Permit Condition. The quarry that would be utilised for the thermal sand is proposed to be Gilleear Lime & Sandstone Quarry, located at 120 Buckleys Road Allansford. The routes are presented in Figure 3.

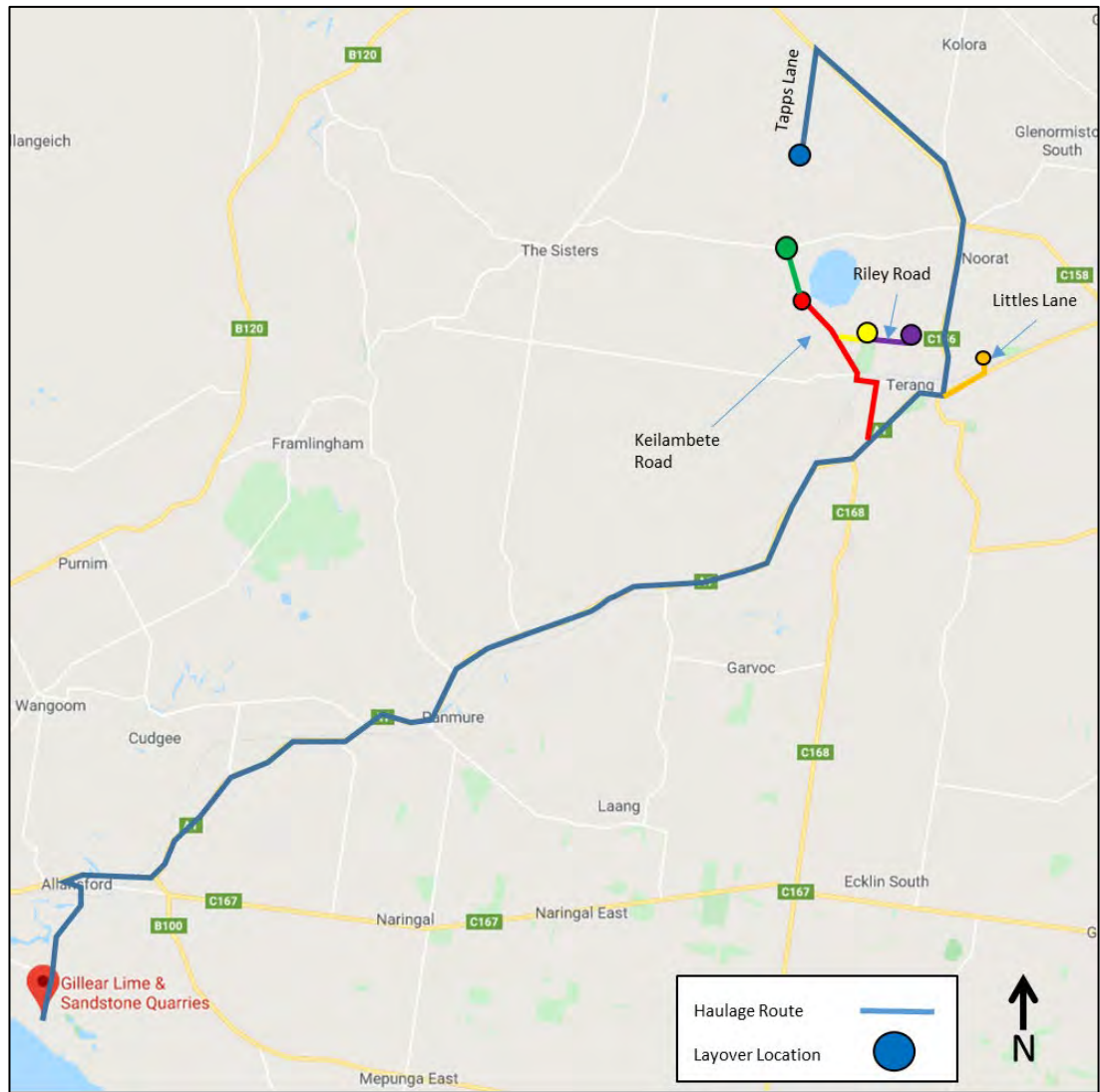


Figure 3 Quarry Haulage Routes

Figure 3 demonstrates that generally the quarry haulage route will travel to and from the work zones via Princes Highway and Terang-Mortlake Road. The routes nominated above are all accessed via the roads contained on Victoria's list of gazetted roads for Higher Mass Limit (HML) trucks, with the exception of Riley Road, Keilambete Road, Tapps Lane and Bramich Lane. It is noted that Little's Lane is classified as 'Restricted' and will allow a local council 8 tonne load limit. Drivers are to be aware of sight line distances when accessing the Princes Highway. It is anticipated that the sight distance is sufficient to gain access to Princes Highway, but drivers should still be aware of this when travelling to the site.

Prior to the use of these routes for quarry haulage, a pavement condition survey has been undertaken by the Road Quality Auditor (refer to Section 6.6) and submitted to VicRoads, Moyne Shire Council and Corangamite Shire Council (as relevant).

4.2 Alternate Heavy Vehicle Transport Route

There is anticipated to be a small number of heavy vehicle movements to and from the site for the delivery of conduit, mobilisation of plant and other ancillary uses during the construction period. These heavy vehicle movements will access the site via the approved heavy vehicle access points and associated nominated local roads, as discussed in Section 4, to reduce the impact on the surrounding community.

4.3 Workforce Vehicles

The workforce required for construction will vary based on the activities being undertaken. ACCIONA have provided an indicative estimate of workforce required for each project phase and this has been incorporated into the traffic generation estimates provided in Section 5 of this report.

The construction workforce will travel to the site by private car. There will be monthly variations in traffic generation to reflect work activities. Workers will access the work zones via the access points and associated nominated local roads to reduce impact on the community. The likely volumes of traffic are detailed in Section 5.2.

4.4 Work Zone Access Points

All work zones will be accessed at defined Access Points only. Access Points will be clearly signed and identified.

It is noted that no material storage, laydown or loading-unloading areas will be provided within Moyne Shire Council Road Reserves.

It is also noted that the figures in this section are high level access figures. Detailed access points will be prepared by ACCIONA/ John Beever as part of site specific traffic management plans.

Ancillary Heavy Vehicles are required to gain access from either the Hamilton Hwy or Princess Hwy to all work zones via the nominated haulage routes shown in Figure 3 and Figure 22.

4.4.1 Work Zone 1

It is anticipated that vehicles will access Work Zone 1 via the five wind turbine access roads already constructed for ingress and egress movements along Tapps Lane, as show below in Figure 4 to Figure 8. All vehicle access to Work Zone 1 will be from Tapps Lane via the Terang-Mortlake Road only.



Figure 4 Work Zone 1 – Access Points



Figure 5 Access Point 1 Summary

Refer Appendix C for Access and Route Alignment Plans

Estimated traffic movements (two-way): 522 light vehicles, 167 heavy vehicles



Figure 6 Access Point 2 Summary

Refer Appendix C for Access and Route Alignment Plans

Estimated traffic movements (two-way): 522 light vehicles, 167 heavy vehicles

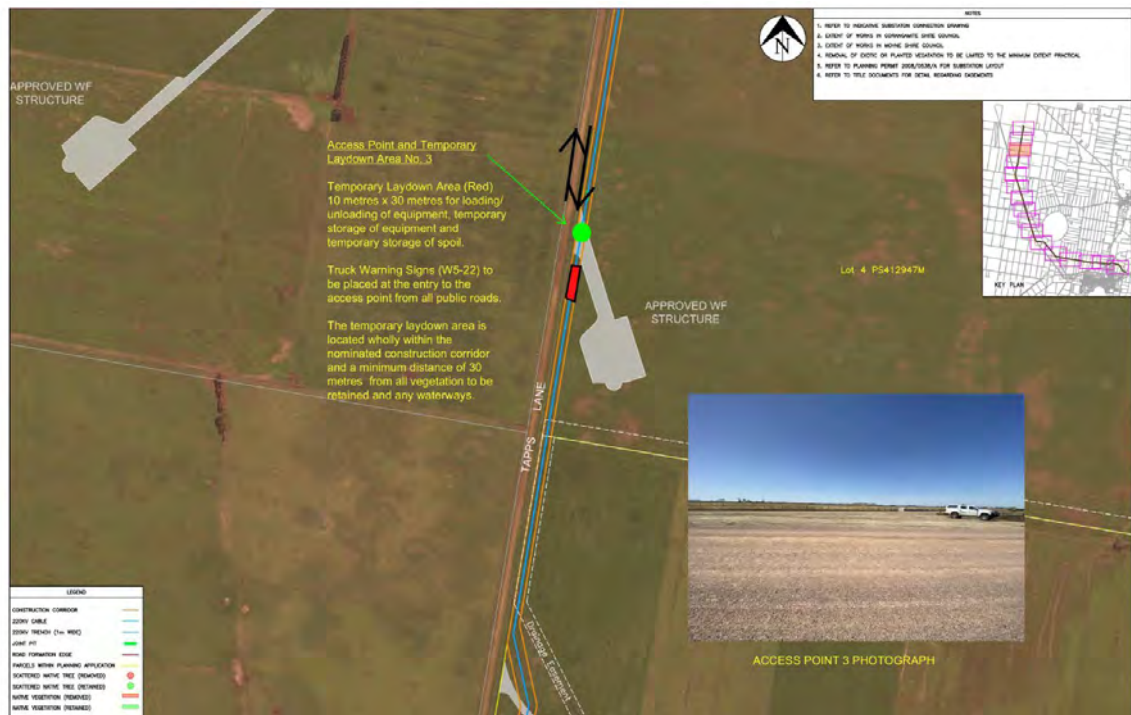


Figure 7 Access Point 3 Summary

Refer Appendix C for Access and Route Alignment Plans

Estimated traffic movements (two-way): 522 light vehicles, 167 heavy vehicles

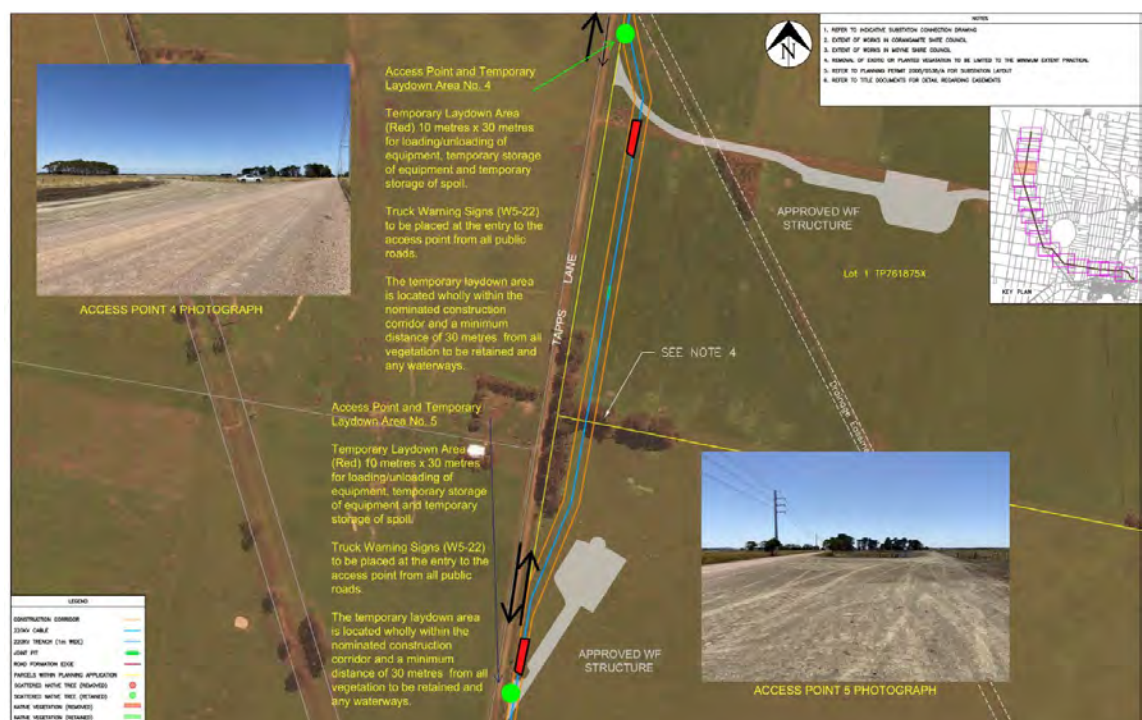


Figure 8 Access Point 4 and 5 Summary

Refer Appendix C for Access and Route Alignment Plans

Estimated traffic movements (two-way): 522 light vehicles, 167 heavy vehicles

4.4.2 Work Zone 2

Vehicular access to Work Zone 2 will be provided via three access points, corner of Tapps Lane & Cliffords Lane, Sisters Noorat Road and Bramich Lane, as shown below in Figure 9 to Figure 12.



Figure 9 Work Zone 2 – Access Points



Figure 10 Access Point 6 Summary

Refer Appendix C for Access and Route Alignment Plans

Estimated traffic movements (two-way): 900 light vehicles, 288 heavy vehicles

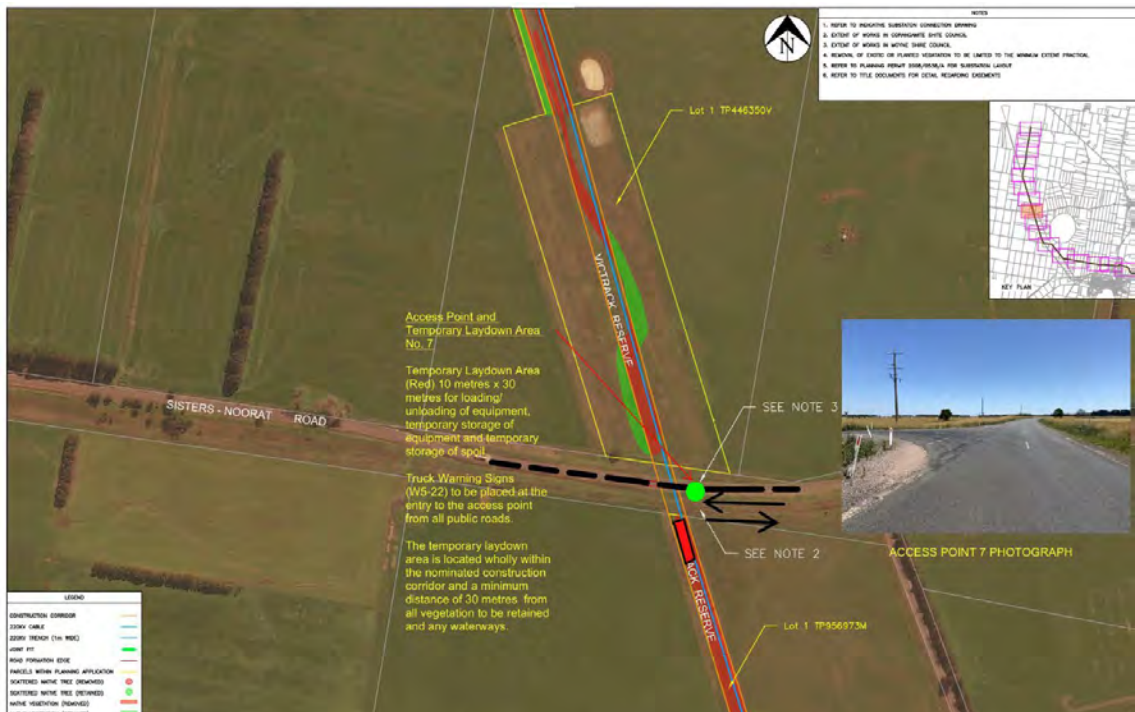


Figure 11 Access Point 7 Summary

Refer Appendix C for Access and Route Alignment Plans

Estimated traffic movements (two-way): 900 light vehicles, 288 heavy vehicles

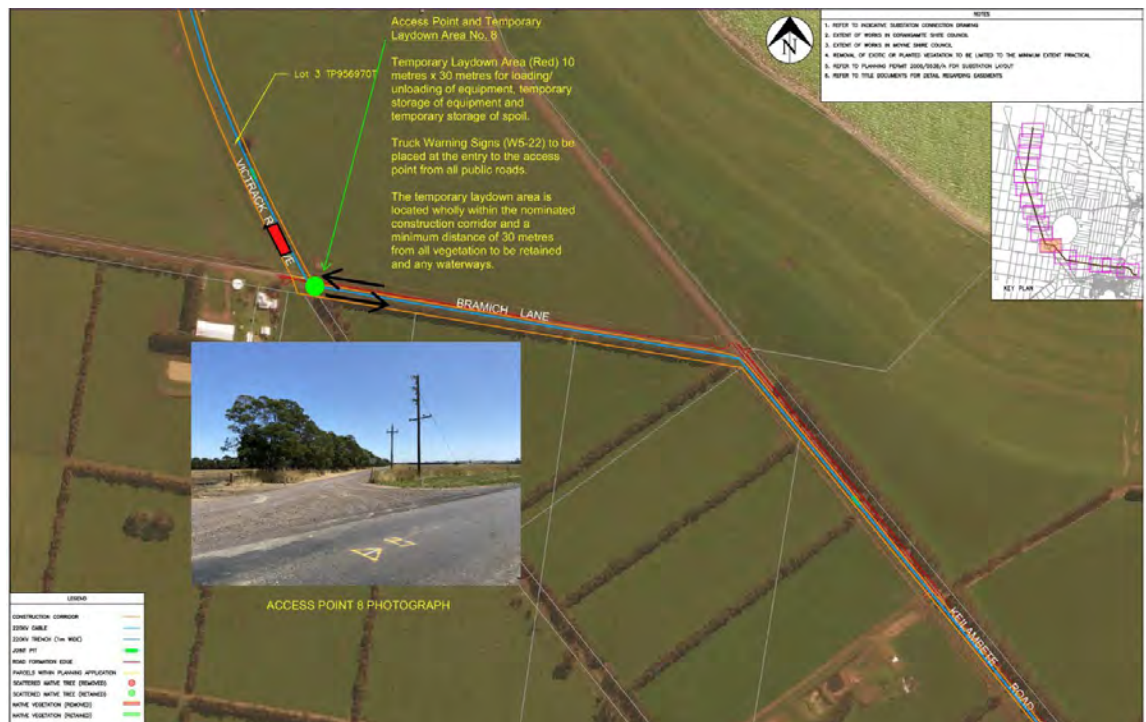


Figure 12 Access Point 8 Summary

Refer Appendix C for Access and Route Alignment Plans

Estimated traffic movements (two-way): 900 light vehicles, 288 heavy vehicles

4.4.3 Work Zone 3

Vehicular access to Work Zone 3 will be provided via Keilambete Road and Riley Road, as shown below in Figure 13 and Figure 14.



Figure 13 Work Zone 3 – Access Points



Figure 14 Access Point 9 Summary

Refer Appendix C for Access and Route Alignment Plans

Estimated traffic movements (two-way): 1305 light vehicles, 418 heavy vehicles

4.4.4 Work Zone 4

Vehicular access to Work Zone 4 will be via Riley Road (at the eastern end of the work zone) and Keilambete Road (at the western end of the work zone), as shown in Figure 15Figure 14 to Figure 16.



Figure 15Work Zone 4 – Access Points



Figure 16 Access Point 10 Summary

Refer Appendix C for Access and Route Alignment Plans

Estimated traffic movements (two-way): 675 light vehicles, 215 heavy vehicles

4.4.5 Work Zone 5

Vehicular access to Work Zone 5 will be via Riley Road (at the western end of the work zone) and Terang-Mortlake Road (at the eastern end of the work zone), as shown below in Figure 17 to Figure 19.

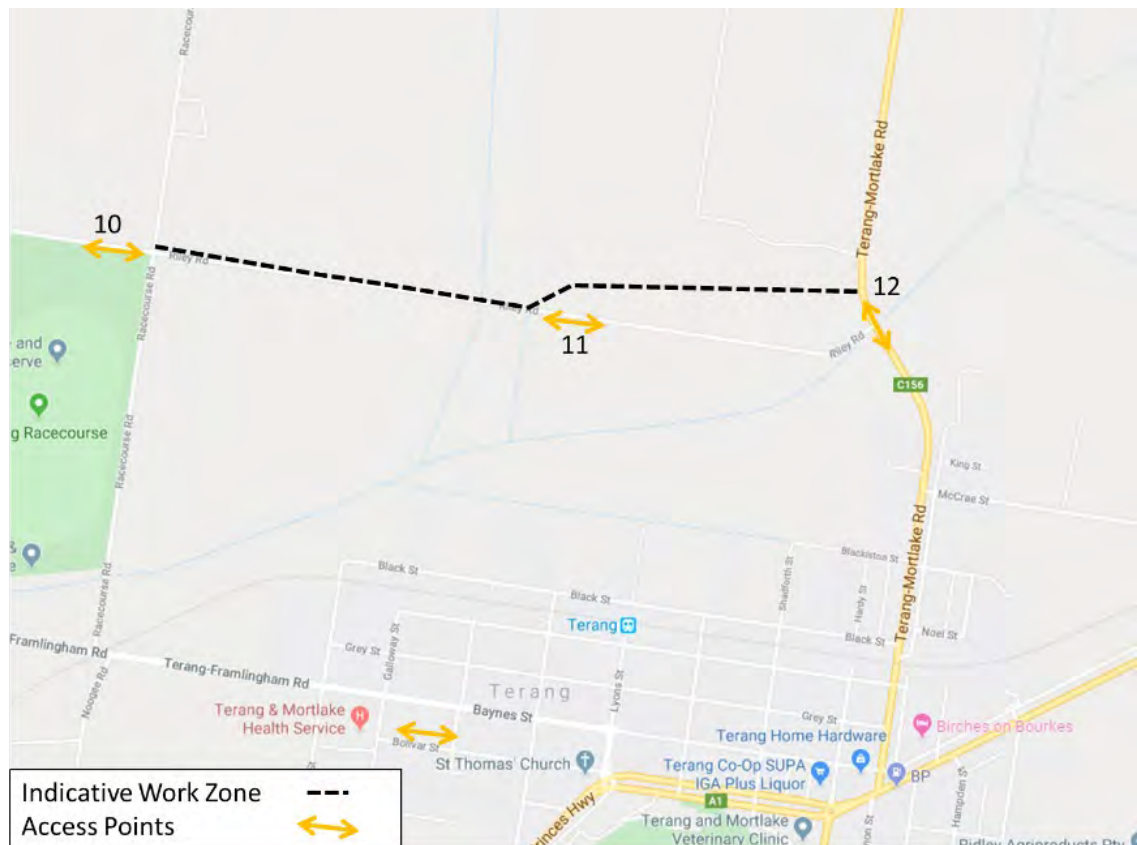


Figure 17 Work Zone 5 – Access Points

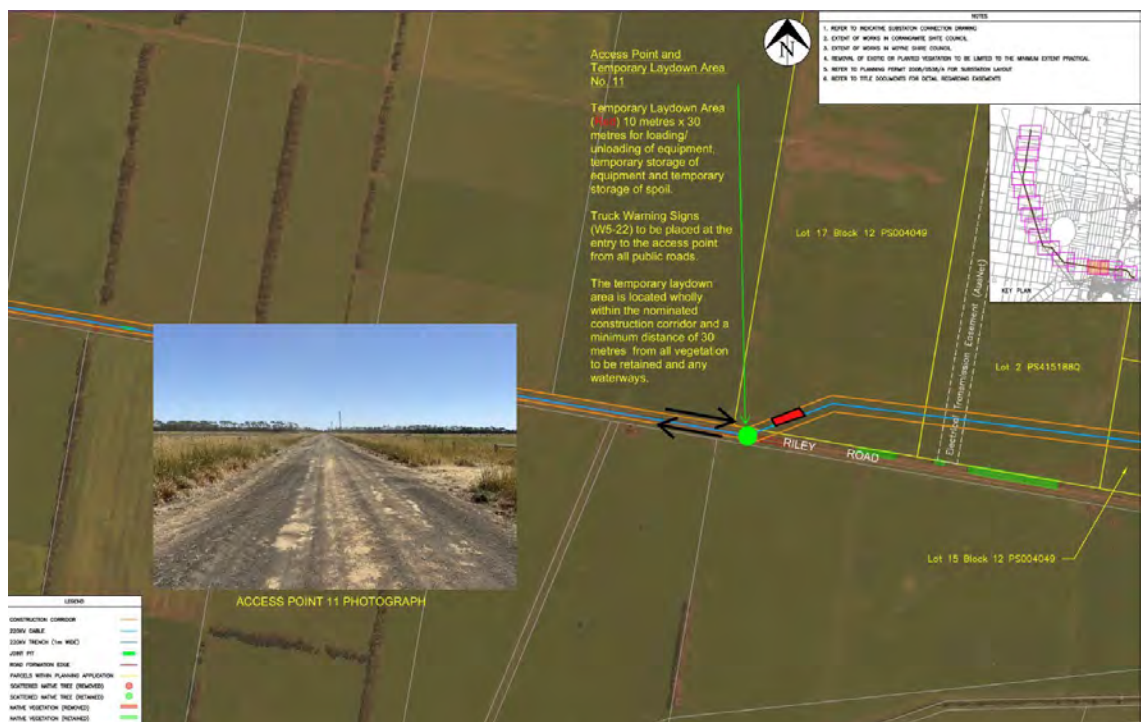


Figure 18 Access Point 11 Summary

Refer Appendix C for Access and Route Alignment Plans

Estimated traffic movements (two-way): 360 light vehicles, 115 heavy vehicles

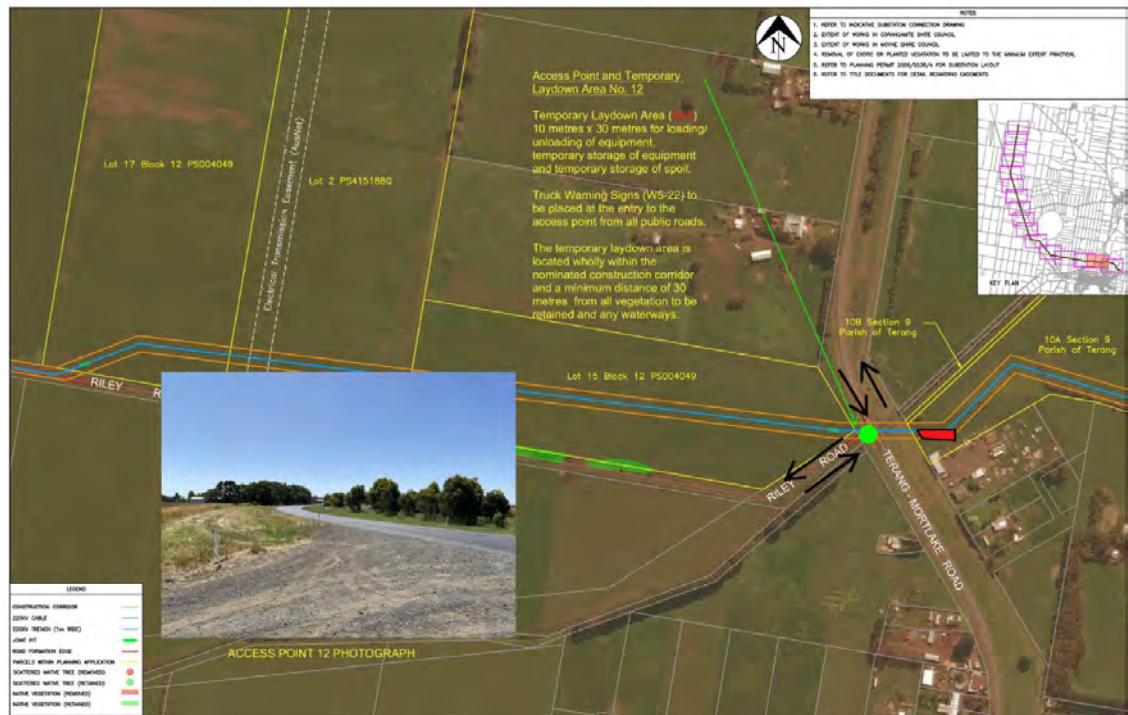


Figure 19 Access Point 12 Summary

Refer Appendix C for Access and Route Alignment Plans

Estimated traffic movements (two-way): 360 light vehicles, 115 heavy vehicles

4.4.6 Work Zone 6

Vehicular access to Work Zone 6 will be via Terang-Mortlake Road, at the western end of the work zone, and Littles Lane, at the eastern end of the work zone, as shown below in Figure 20 and 21.

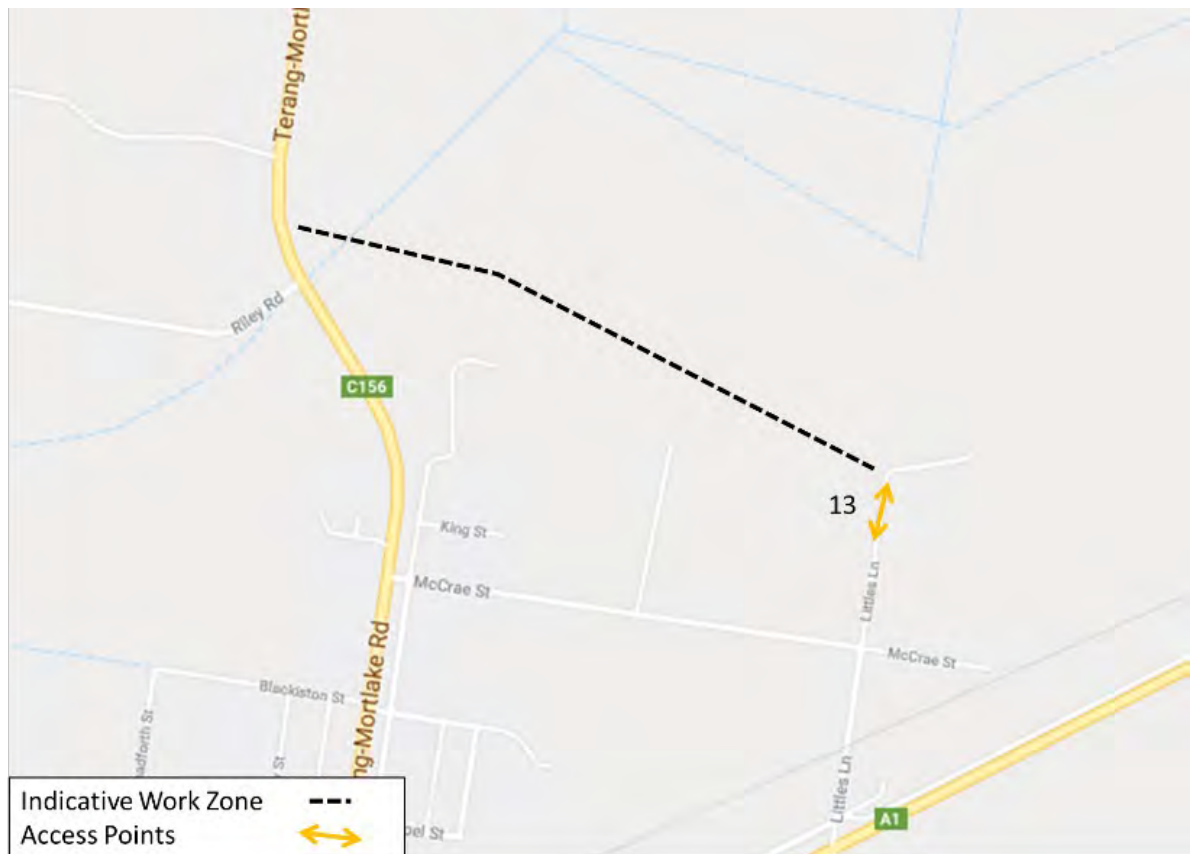


Figure 20 Work Zone 6 – Access Points

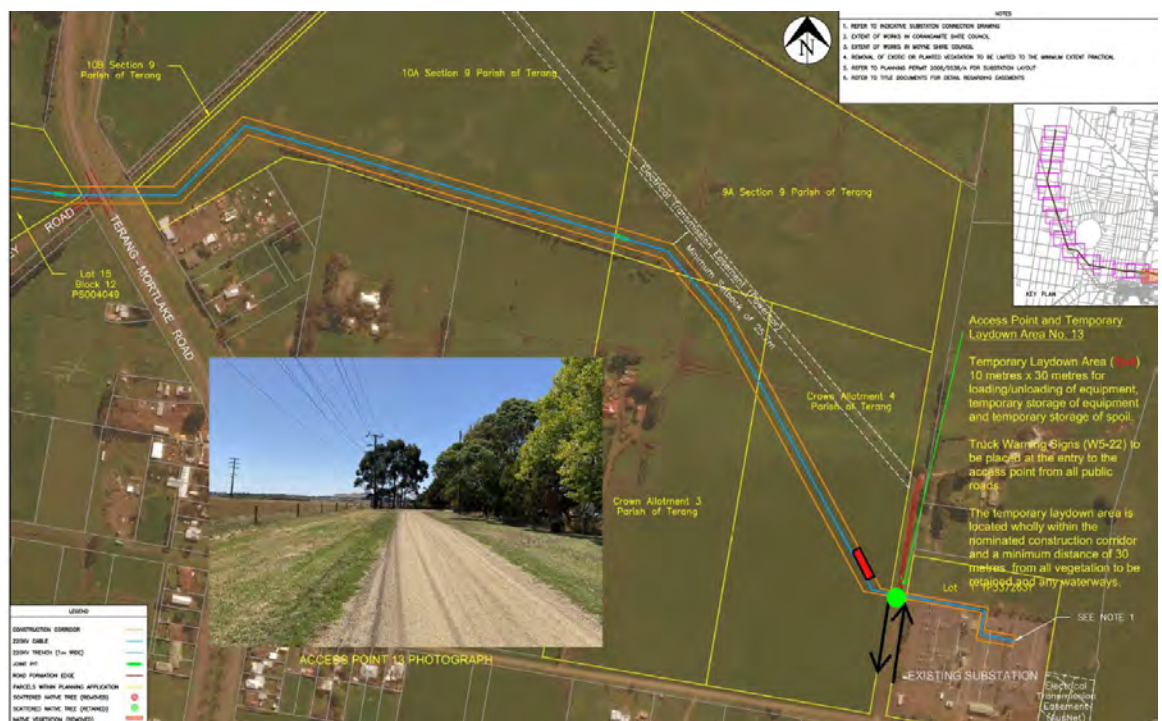


Figure 21 Access Point 13 Summary

Refer Appendix C for Access and Route Alignment Plans

Estimated traffic movements (two-way): 990 light vehicles, 318 heavy vehicles

4.5 Spoil Transport Route

There will be daily trips travelling to and from the site with the removal of the spoil from the work zones, as required. ACCIONA has identified the following quarry haulage routes for use by wind farm contractors. The TMP will need to be amended should any other route be required in accordance with the Planning Permit Condition. The quarry that would be utilised for the spoil removal is proposed to be Mount Shadwell Quarry, located at 104 Mortlake-Ararat Road, Mortlake. The routes are presented in Figure 22.

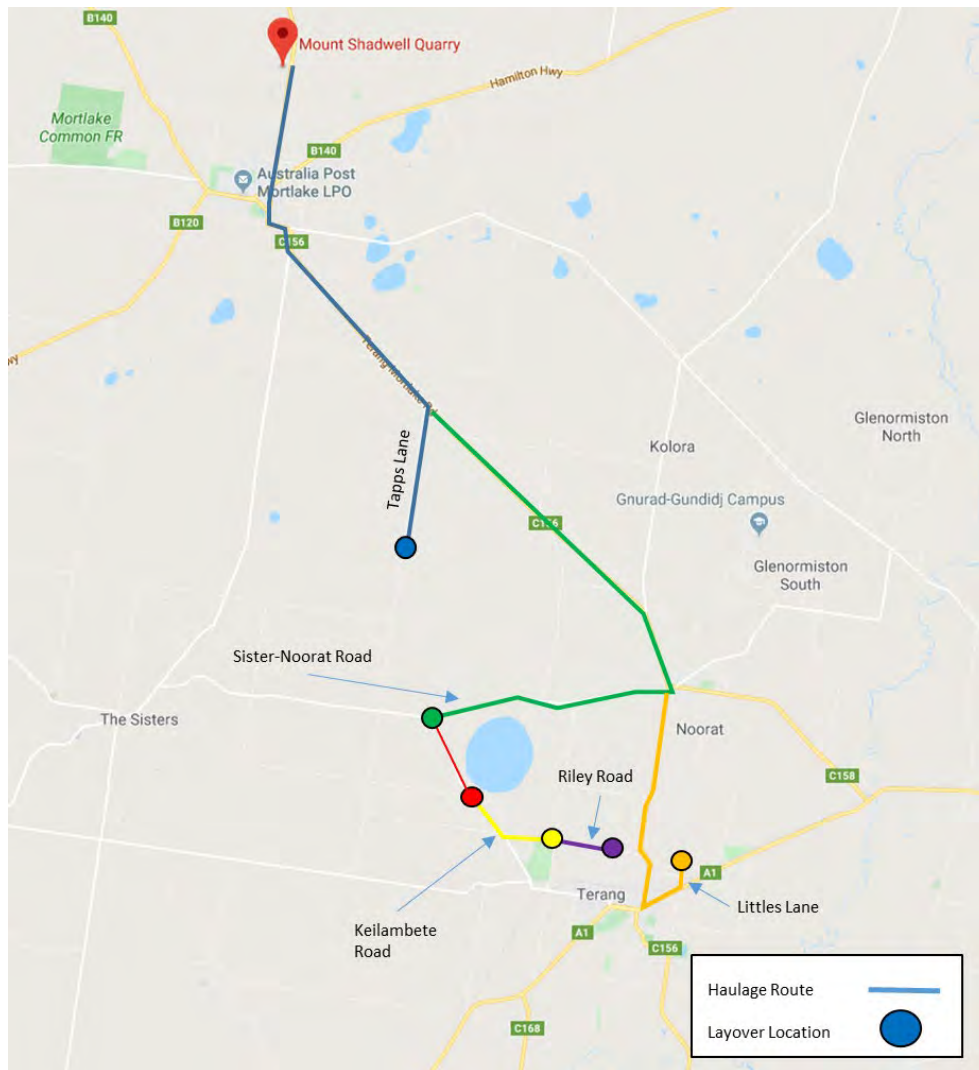


Figure 22 Spoil Removal Transport Routes

Figure 22 demonstrates that generally the spoil removal route will travel to and from the work zones via Mortlake-Ararat Road and Terang-Mortlake Road. The routes nominated above are all accessed via the roads contained on Victoria's list of gazetted roads for Higher Mass Limit (HML) trucks, with the exception of Sisters-Noorat Road, Riley Road, Keilambete Road, Tapps Lane and Bramich Lane. It is noted that Little's Lane is classified as 'Restricted' and will allow a local council 8 tonne load limit. Based on estimated prepared by John Beever Australia, it is anticipated that 9,797 m³ of Spoil is to be removed from the work zone. It is estimated that there will be six (two-way) movements associated with the Spoil removal daily.

Prior to the use of these routes for spoil removal, a pavement condition survey has been undertaken by the Road Quality Auditor (refer to Section 6.6) and submitted to VicRoads, Moyne Shire Council and Corangamite Shire Council (as relevant).

5. Traffic Generation

5.1 Key Assumptions

The trip generation estimates and traffic distribution is based on a number of assumptions that have been made for the purposes of this assessment. This is in regard to the extent of construction activities, construction program, sources of materials and construction methodology. These assumptions include, but are not limited to:

- The transmission line construction including all access and egress movements will remain within the permitted construction corridor accessed off the existing public road network, it is not envisaged that any new access tracks will need to be constructed to facilitate access.
- It is assumed that an average of 200 metres of trenching/ works will be completed each day.
- 16 heavy vehicles are assumed to be utilised within each work zone each day (inclusive of quarry haulage vehicles, spoil removal vehicles and ancillary heavy vehicle movements). This equates to six quarry haulage vehicle movements (each way), six spoil removal movements (each way) and four vehicle movement for ancillary vehicles (each way).
- Average workforce of 50 people over the 6 month construction period based on a 6-day work week with 1.0 person per vehicle.
- General deliveries and waste disposal estimated on a daily basis over the construction period.

5.2 Traffic Generation Estimates

Based on the assumptions outlined above, the project is estimated to generate a total of **23,760** vehicle movements (one-way) over a 6 month total construction period. Of these, there are estimated to be around **5,760** heavy vehicle (truck) movements and around **18,000** light vehicle movements (typically worker movements), and are summarised below in Table 4

Table 4 Trip Generation Estimates

Item	TMP Estimates (One way)
Workforce (light vehicles)	18,000 trips
Quarry Deliveries	2,160 trips
Spoil Removal	2,160 trips
Ancillary heavy vehicles (Conduit delivery, plant mobilisation, etc)	1,440 trips
Total	23,760 trips

The abovementioned total vehicle movements equates to a peak daily volume of 100 (one-way) light vehicle movements and 32 (one-way) heavy vehicle movements each day.

In most cases, trips will be distributed around the site depending on the location of the work zone, noting that multiple work zones may be in operation at any given time. Generally, vehicle trips will be distributed from the local road network near the work zones to Terang-Mortlake Road and Princes Highway.

The traffic generation described in this report is an informed estimate only and based on information provided by ACCIONA and a range of assumptions made by GHD. The actual traffic volumes generated by the transmission line contractors will be monitored over the construction period.

5.3 Timing of Traffic Movements

Construction will occur 6 days per week over the approximate 6 month construction period. Construction is estimated to commence in February 2020 and be completed by August 2020. Heavy vehicle movements will typically be spread throughout the day.

Truck movements will be timed so as to avoid school bus times (refer Section 6.6.9 of this report).

Light vehicle movements will typically be concentrated around the start and finish of shift times in the morning and evening.

6. Traffic Management Measures

6.1 Relevant Guidelines

VicRoads is developing guidelines for the assessment of major energy projects. The working title of the document is *Guidelines for assessing wind farms, major energy projects and associated traffic management plans* (referred to in this report as “the VicRoads wind farm guidelines 2017”).

While these guidelines are still in draft form and have not yet been ratified, ACCIONA is committed to the general intent and spirit of the guidelines and has attempted to meet or exceed their recommendations wherever possible.

6.2 Quarry Haulage Routes

Raw materials will be transported in standard heavy vehicles (typical truck and dog vehicles), which do not require permits to travel on public roads.

Quarry haulage routes have been identified in Section 4.1. Where possible, these haulage routes have been established on arterial roads where increased traffic would not introduce new safety risks. Prior to the use of a quarry route, a pavement condition survey will be undertaken by the Road Quality Auditor (refer Section 6.6.8 of this report) and submitted to VicRoads, Moyne Shire Council and Corangamite Shire Council.

6.3 Ancillary Heavy Vehicle Transport Route

The ancillary heavy vehicle movements, such as conduit delivery & mobilisation of plant, required for the construction of the transmission line will be transported in standard heavy vehicles (semi-trailer vehicles), which do not require permits to travel on public roads.

Ancillary Heavy Vehicle transport routes have been identified in Section 4.2. Where possible, these haulage routes have been established on arterial roads where increased traffic would not introduce new safety risks.

6.4 Spoil Removal Transport Routes

Spoil from the work zones will be transported by standard heavy vehicles, which do not require permits to travel on public roads.

Spoil Removal haulage routes have been identified in Section 4.5. Where possible, these haulage routes have been established on arterial roads where increased traffic would not introduce new safety risks. Prior to the use of a spoil removal route, a pavement condition survey will be undertaken by the Road Quality Auditor (refer Section 6.6.8 of this report) and submitted to VicRoads, Moyne Shire Council and Corangamite Shire Council.

6.5 Local Access Routes

Traffic associated with the construction of the transmission line will utilise local roads to access the specific work zones, as required. With the construction of the Mortlake South Wind Farm, it is noted that Tapps Lane has been upgraded to be sealed and therefore acceptable for construction vehicle access for other activities such as this project.

Riley Road and Bramich Lane are both unsealed roads but due to the low existing traffic volumes (58 vpd and 42 vpd respectively) and with the anticipated construction traffic

(anticipated 132 vehicle movements daily), the anticipated total daily traffic volume is less than 200 vpd on both roads. This level of traffic is deemed appropriate for the unsealed roads and it is expected the existing pavement will be sufficient for construction vehicle access.

It is noted that while the work zone will be located in close proximity to the roadway on Riley Road, Bramich Lane and Keilambete Road, the construction zone will allow vehicle movements to continue with appropriate traffic control and safety measures in place and determined as part of MOA and Works within Road Reserve permits.

6.6 Mitigation Measures

In order to minimise the impacts of construction vehicles on the local road network, the following mitigation measures will be implemented:

- Having clearly defined access points to each of the Work Zones and these access points being signed appropriately. Each access points will be assigned a number (as per Section 4.4) and will be clearly shown at each access location.
- Regular traffic monitoring and road quality auditing to assess impact. Frequency should comply with relevant road authority Road Management Plan assessment framework.
- Truck warning signage installed by a suitably qualified traffic management contractor on all approaches to the work zone.
- Heavy vehicles will be restricted to the approved haulage routes, which are confined to the arterial road network only with the exemption of Tapps Lane, Riley Road, Keilambete Road, Sisters-Noorat Road, Terang-Framlingham Road, Noogie Road, Littles Lane and Bramich Lane (as required during the construction process).
- The Mortlake South Wind Farm has been engaging directly with all landowners along the 220kV underground transmission line route. This will continue throughout construction to ensure they are informed as works progress and receive adequate advance notice, where required. We also will communicate directly to the landowners near the work zone access points.
- For works within Work Zone 1, all vehicles associated with the transmission line construction are required to enter and exit the site via Terang-Mortlake Road in order to gain access to Tapps Lane.
- All vehicles entering and exiting work zones shall be free of mud and debris. If vehicles are carrying mud or debris they shall be cleaned immediately. A shaker pad shall be positioned at each work zone entry to mitigate dirtying of public roads. Any mud or debris identified on public roads in the vicinity of the work zone shall be removed within 24 hours of being identified.

6.6.1 Overhead Obstructions

There are no overhead obstructions such as power cables on Tapps Lane, Riley Road, Keilambete Road or Bramich Lane. The haulage contractor will undertake a detailed assessment of the transport route to identify any locations where clearance to overhead cables will be an issue. ACCIONA will then liaise with the utility provider to have the cables raised or relocated temporarily should this be required.

6.6.2 Loading Areas

Loading and unloading of materials brought to the site will be limited to within the construction zone and defined laydown areas, as the work site moves along the alignment.

All laydown and/ or stockpile areas within any road reserve need to be left clean, level with the surrounding area and free of weeds.

6.6.3 Roadside Vegetation

ACCIONA is required to secure native vegetation offsets prior to the removal of native vegetation in accordance with its planning permits.

If the haulage contractor, in their pre-transport route assessment, identifies the removal of any vegetation that might potentially cause an obstruction. ACCIONA will liaise with the relevant Responsible Authority regarding its removal and will obtain the necessary approval before the commencement of any vegetation clearance works.

6.6.4 Local Roads and Arterial Roads Remediation

Based on the expected construction traffic volumes, the existing roads will be sufficient for construction vehicle access and therefore the local roads utilised for access will be sufficient in their current state.

Given that many arterial roads were originally designed, constructed and maintained to cater for a relatively low number of heavy vehicle movements (20-50 trucks per day), a spike in heavy vehicle movements may create additional road damage.

Throughout the construction period, regular condition inspections will be undertaken fortnightly by the Road Quality Auditor (refer Section 6.6.8).

Prior to commencing works, ACCIONA will prepare and submit a specification of the works (i.e. area of responsibility, repair and maintenance schedules and so on) to VicRoads for approval, apply for relevant permits and meet all costs associated with detailed design assessment and the surveillance of works.

6.6.5 Truck Warning Signage

During construction, there will be a minor increased volume of truck activity in the area, including trucks turning into Tapps Lane, Riley Road and Keilambete Road where ordinarily there would be few such movements, except for on Tapps Lane which is currently utilised for construction access for the Mortlake South Wind Farm. In order to increase awareness of the possibility of trucks turning into or out of side roads, truck warning signs (W5-22) will be installed on both approaches to the local road network (as required) by a traffic management contractor. It is noted that the truck movements will change, as the transmission line construction moves along the alignment, therefore the warning signage should move with the construction. These will be in addition to any other traffic control signage that might be installed by the contractor to manage traffic around or through its worksite.

ACCIONA will also install information signage (in ACCIONA branding) on approaches to the site access advising of the activity, identifying that there will be additional truck activity during construction and providing contact details for any enquiries or concerns.

'NO WIND FARM TRANSMISSION LINE CONSTRUCTION TRAFFIC ACCESS' will be erected at locations during construction at Council's discretion, to deter construction vehicles from utilising the local road network, other than the roads mentioned above, for construction access.

6.6.6 Traffic Control at Site Access Points

It is noted that the construction zone along Riley Road and Bramich Lane are in close proximity to the roadway, it is recommended to provide traffic control in these locations to ensure that

any movements not associated with the construction are safely guided past the construction zone, to minimise any impacts on vehicle movements not associated with the construction of the Transmission Line.

Any works that are undertaken within locals roads will require traffic management schemes and conditions, including in the vicinity of the works zones and/ or access points.

6.6.7 Mud and Dust Control

Vehicle mud, dust and seed control measures will be implemented as per the endorsed EMP, which states as follows:

- Ensure that all vehicles and plant machinery stay on approved access tracks where available to minimise the risk of pest plant spread.
- All ground-breaking plant/ machinery will be inspected on arrival & exit and a weed hygiene declaration completed by the plant operator. Any vehicles/ plant/ machinery which is determined to contain soil, plant material or compounds which may contain any seed or plant parts capable of growing must be clean and free from debris, before entering the surrounding road network.
- All materials and products including soil, sand, gravel, rock, water, fertiliser, mulch, seed, plants and packaging are to be sourced from appropriately licenced quarries and suppliers and free of pest plant material before entering the site.
- Ground breaking equipment will be washed down on site by a mobile trailer before moving out the transmission line project site or onto another property.
- Spoil is to be managed in accordance with a spoil management protocol developed for the project. This document will provide practical guidance on due diligence procedures relating to the identification and management of any unnatural or contaminated soils as described in the relevant EPA guidelines including the *Industrial Waste Resource Guidelines* (IWRG621).

Various techniques will be used to mitigate the production of dust, including the spraying of water (potentially with wetting or binding agents added) onto road surfaces, including internal access tracks. This is likely to be especially important during summer.

ACCIONA will monitor all roads utilised for vehicle access daily for mud or debris generated by the construction of the wind farm transmission line. If it is determined that mud is impacting on the operation or safety of the road, ACCIONA will arrange for the road to be washed down at its expense. Furthermore, a shaker pad shall be positioned at each work zone entry to mitigate dirtying of public roads.

6.6.8 Road Quality Auditor

An independent Road Quality Auditor will be engaged for the duration of the project by, and at the cost of, ACCIONA to fulfil the roles and responsibilities of the Road Quality Auditor as set out in this TMP. The auditor will be a suitably qualified engineer, whose identity will be approved by Corangamite Shire Council and Moyne Shire Council prior to the endorsement of this TMP.

The role of the Road Quality Auditor will be to:

- Undertake regular inspections of the roads and at the frequencies identified in Table 5 below.
- Undertake pre-construction pavement condition surveys of any roads used by the wind farm transmission line, prior to that road being used by construction vehicles.

- Report the results of all condition surveys and inspections to Moyne Shire Council, Corangamite Shire Council or VicRoads (as relevant).
- a) If a Road Quality Auditor (RQA) report identifies defects or maintenance that requires repair, corrective action must be undertaken within 2 weeks of the RQA report being received, or in accordance with Council's or DoT's Road Management Plan, whichever is lesser.
- b) All repairs are to be completed to a standard acceptable to Council. The road must be left in a condition that is equal to or is better than its original condition.
- c) Once a road has deteriorated to a point that ongoing maintenance is no longer satisfactory as determined by MSC or the RQA, then more substantive renewal works must be undertaken. Any areas exhibiting extensive potholing and other pavement/surface failures in close proximity must be combined together and repaired as single areas. The scope of works may include full reconstruction depending on the extent of damage to the road.

Table 5 Local Roads – Inspection Frequency

Construction Activity	Minimum inspection and reporting frequency
During site works being undertaken along the proposed alignment	Fortnightly

In the event any haulage routes utilise other local roads, these roads will be inspected and reported on at a frequency nominated in a secondary TMP which will form an addendum to this report.

Arterial roads managed by VicRoads will be inspected and reported on in accordance with the relevant Road Maintenance Category (RMC) for each road (either RMC3 or RMC4). The RMC will be defined by the existing volume on the road and the volume of traffic generated by the wind farm transmission line over the road during specific periods of construction.

In the case of specific complaints or weather events, Moyne Shire Council or Corangamite Shire Council may request the Road Quality Auditor to inspect and report on specific roads.

The frequency of inspections and reporting can be varied either at the instruction of, or with the prior written agreement from, Corangamite Shire Council, Moyne Shire Council or VicRoads.

6.6.9 School Bus Curfews

Sections of the haulage route along Terang-Mortlake Road are used by school buses.

Coles Coaches are the only identified bus operator that utilises Mortlake-Terang Road that may be impacted by construction traffic, between 8:30 and 9:15 am and between 2:30 and 3:15 pm along Terang-Mortlake Road. ACCIONA will implement a curfew on heavy vehicles using Terang-Mortlake Road between these hours.

At the start of each school term, ACCIONA will consult with public and private schools and bus operators in the area to determine if any changes to bus routes or route times have occurred and seek the consent of Corangamite Shire Council, Moyne Shire Council and VicRoads to alter the curfew times if required or advise that no change is required.

Curfew times will only apply on school days (i.e. not on Saturdays or during school holiday periods) and may be modified with the agreement of Corangamite Shire Council, Moyne Shire Council and VicRoads.

The curfew will apply to all nominated roads irrespective of whether they are managed by Council or VicRoads.

Any light construction traffic on the road during curfew times will be required to adhere to all relevant road rules and regulations, including speed limits, in line with the Haulage Code of Conduct.

6.6.10 Community Engagement/ Newsletter

The Mortlake South Wind Farm has been engaging directly with all landowners along the 220kV underground transmission line route. This will continue throughout construction to ensure they are informed as works progress and receive adequate advance notice, where required. We also will communicate directly to the landowners near the work zone access points.

We are distributing a newsletter in February to approximately 2,500 households across the broader community. This will alert the public to the commencement of construction and highlights the use of traffic control along the route. Notices will be placed on the Terang noticeboard, The Shed in Noorat and Mortlake noticeboard with an overview of expected traffic impacts. In addition, we will continue to publish fortnightly construction updates in the Terang Express and Mortlake Dispatch newspapers, which will include updates about the 220kV construction

6.7 Non Compliance to this TMP

Where it is observed or reported that workers associated with the construction of the transmission line do not act in accordance with the approved actions within this TMP, the relevant Responsible Authority may issue a written notice of breach and associated \$1,000 levy payable by the permit holder.

Potential non-compliant actions could be but not limited to, utilising non-approved roads, non-compliance with school bus curfew times, any and each repair identified by Road Quality Audit report not carried out in accordance with standard and timing to comply with Road Management Plan or 2 weeks or mud on road not addressed within 24 hours etc. The responsible Authority (Moyne Council, Corangamite Council or VicRoads) for that section of road where non-compliance occurs reserves the right to provide a written notice of breach and levy to the permit holder.

6.8 Contractor Behaviour on Roads

ACCIONA has in place a safety management plan, to which all staff and contractors are required to adhere to, which sets standards for safe behaviour and practices including when travelling to and from the site, or working near roads. The safety management plan applies in addition to other legislative and regulatory requirements that may also be in force.

In addition, ACCIONA will implement a Haulage Code of Conduct for the project, which is included in Appendix B.

All construction traffic will display a sticker identifying them as being associated with the project, with the exception of 'one off' vehicles that are not inducted into the site.

6.9 Operational Phase

The wind farm transmission line is expected to generate significantly less traffic once operational than during construction. It is anticipated that there will be no more than two to four light vehicle trips on a weekly basis, to undertaken maintenance activities associated with the transmission line.

7. Traffic Management Administration

7.1 Responsibilities

The implementation of this traffic management plan will ultimately be the responsibility of ACCIONA and its contractors. However day-to-day traffic management will involve a number of different stakeholders, as outlined in Table 6.

Table 6 Traffic management plan primary stakeholders

Role	Organisation	Contact
Client	ACCIONA Energy	Andrew Tshaikiwshy Project Director
Road Authority	VicRoads	Peter Gstrien Senior Statutory Planning Officer
	Moyne Shire Council	Leah Johnston Manager, Works and Engineering
	Corangamite Shire Council	John Kelly Manager Assets Planning

ACCIONA will induct all contractors into the TMP to ensure compliance with all requirements.

7.2 Management Reviews

The success of the traffic management plan will depend on its continued relevance and usefulness under the various conditions that will be encountered during the construction period.

A review of the TMP will be undertaken one month following commencement of construction, unless inspections raise a significant issue that requires early attention. A stakeholder meeting will be undertaken for the review with all relevant stakeholders in attendance (ACCIONA, Moyne Council, Corangamite Council, VicRoads, etc) to ensure the review is meaningful during the early construction period. The review will involve ACCIONA, the main construction and haulage contractors, with VicRoads, Council and other stakeholders as considered appropriate. In the event of significant traffic management issues being identified, ACCIONA will liaise with the relevant stakeholder to resolve. Supplementary documentation, or an update to this TMP, may be appropriate.

Further TMP reviews may be appropriate throughout the construction period as the situation warrants.

8. Summary of Traffic Management Commitments

The following list summarises the measures that will be in place prior to commencement of, and during the execution of, each stage of the construction period.

8.1 Pre-Construction

- The access and egress to the work zones will be in accordance with the roads outlined within Section 4.4 above. No other roads will be used as alternate access routes without the prior approval of Moyne Shire Council, Corangamite Shire Council or VicRoads (as appropriate) and then only in the event that the established routes are temporarily unavailable.
- A pavement condition audit of roads to be used for quarry haulage routes has been undertaken prior to the commencement of the construction period and is attached to this TMP within Appendix A. Repairs will occur either by, or faster than, the timeframes specified in the VicRoads or Council Roads Management Plan.
- The movement of heavy construction vehicles to and from the site will be restricted to times outside the agreed curfew times to eliminate interaction between heavy construction traffic and school buses.
- ACCIONA will liaise with DELWP, VicRoads and relevant councils regarding the source of additional quarry materials and will develop a secondary Traffic Management Plan as an addendum to this report for any additional haulage routes not identified in this TMP.
- ACCIONA will implement a Haulage Code of Conduct which will set standards for safe behaviour and practices including when travelling to and from the site, or working near roads. The code of conduct will apply in addition to other legislative and regulatory requirements that may also be in force.
- ACCIONA will install branded information signage on approaches to the site advising of the activity, identifying that there will be additional truck activity during construction, and providing contact details for any enquiries or concerns prior to the commencement of works.
- All construction vehicles will display a sticker identifying them as being associated with the project.
- Any actions identified as non-compliant with the approved actions within this TMP may attract a levy as outlined in Section 6.7.

8.2 Road Infrastructure Management

- Heavy vehicle volumes on key roads are anticipated to be low and therefore no road upgrades are required. Vehicle volumes will be monitored for the duration of the project to ensure that they do not substantially differ from the approved volumes. In the event traffic volumes exceed estimates, a revision to this traffic management plan and traffic management arrangements may be required by VicRoads, Moyne Shire Council or Corangamite Shire Council.
- The road quality auditor will undertake regular road condition inspections throughout the construction period.

- Truck warning signs (W5-22) will be installed by the construction contractor on the approach to the work zones, as required. These signs will be displayed only during periods of frequent truck activity.
- Traffic control around the worksites where the site accesses will be constructed will be undertaken in accordance with Moyne Shire Council and/ or Corangamite Shire Council requirements.
- The movement of heavy construction vehicles to and from the site will be restricted to times outside the agreed curfew times to eliminate interaction between heavy construction traffic and school buses.
- A review of this traffic management plan will be undertaken by ACCIONA, the main construction and haulage contractors, VicRoads, Council and other stakeholders as appropriate. Updates will be made as needed.
- A material tracker is to be provided to Council and VicRoads (if required) weekly (tonnage in/ out) and showing the origin and destination of all materials.
- Any actions identified as non-compliant with the approved actions within this TMP may attract a levy as outlined in Section 6.7.

8.3 Transmission Line Construction

- The access and egress to the work zones will be in accordance with the roads outlined within Section 4.4 above. No other roads will be used as alternate access routes without the approval of Moyne Shire Council, Corangamite Shire Council or VicRoads (as appropriate) and then only in the event that the established routes are temporarily unavailable.
- Heavy vehicle volumes on key roads will be monitored for the duration of the project to ensure that they do not substantially differ from the approved volumes. In the event traffic volumes exceed estimates, a revision to this traffic management plan and traffic management arrangements may be required by VicRoads or Moyne Shire Council.
- The road quality auditor will undertake regular road condition inspections throughout the construction period.
- Truck warning signs (W5-22) will be installed by the construction contractor on the approach to the work zone, as required. These signs will be displayed only during periods of frequent truck activity.
- The movement of heavy construction vehicles to and from the site will be restricted to times outside the agreed curfew times to eliminate interaction between heavy construction traffic and school buses.
- A further review of this traffic management plan will be undertaken by ACCIONA, the main construction and haulage contractors, VicRoads, Council and other stakeholders as appropriate. Supplementary documentation will be provided as needed.
- The haulage contractor will undertake a detailed route assessment prior to any vehicle movement, to ascertain any potential obstructions or impediments including overhead wires, vegetation, narrow carriageways, signage or median islands.
- Where necessary ACCIONA and its contractors will liaise with utility providers to raise or relocate any low-hanging wires.
- ACCIONA and its contractors will liaise with the relevant Responsible Authority regarding the procurement of any necessary permits and offset management plans required for the

removal or pruning (as appropriate) of any vegetation that would obstruct vehicle movements related to the site.

- Any actions identified as non-compliant with the approved actions within this TMP may attract a levy as outlined in Section 6.7.

8.4 Post-Construction

- A final pavement condition survey and audit, with repairs (as needed) will be undertaken on local and VicRoads roads used for materials haulage once those roads are no longer required for material haulage.
- All required repairs identified in the audit shall be addressed to the satisfaction of the Road Quality Auditor and the Relevant Authority in accordance with the Road Management Plan.

Appendices

Appendix A – Pre-Haulage Pavement Condition Survey



**DILAPIDATION SURVEY
TAPPS LANE (SOUTH)
CH 5260 – CH 7780
2.52 km**

Road Authority:
Moyne Shire Council

Inspection Date
06/11/2019

Report Date
08/11/2019

Version: A

For:
Acciona Energy Oceania Construction Pty Ltd

Document History

Rev. No.	Description of Revision	Prepared By	Checked By	Date
A	First Report	Brett Johnston	Scott Trotter	08 Nov 2019

Disclaimer:

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Table of Contents

Report

1.0	INTRODUCTION	4
2.0	CONDITION SUMMARY	5
3.0	CONCLUSION	5
4.0	RECOMMENDATIONS	6

Appendix 1: DILAPIDATION INSPECTION DETAILS

Appendix 2: ROAD CONDITION PHOTOS

[illegible]

1.0 INTRODUCTION

Acciona Energy Oceania Construction Pty Ltd requested a dilapidation survey of Tapps Lane (South) from chainage 5260 through to chainage 7780 at the Sisters-Noorat Road intersection. It is proposed that for the Mortlake South Wind Farm, quarry material sourced from the Sisters Quarry on the Sisters-Noorat Rd will use Tapps Lane (South) in lieu of the eastern end of the Sisters-Noorat Rd due to ongoing failures of the pavement in the current route. It is understood that empty trucks will return from the wind farm site via Tapps Lane (North), Terang-Mortlake Rd and the Sisters-Noorat Rd.

The total length of the surveyed road segment measures 2.52km and the road approximately follows a north-south alignment. A video survey was conducted on Wednesday 6 November 2019 along with a base visual and photographic survey, with the purpose of providing a snapshot of the road condition prior to haulage commencing on the route.

No geotechnical testing of the actual pavement was performed for this report.

Tapps Lane (South) consists of an unsealed scoria gravel pavement of unknown pavement thickness. The road is a Moyne Shire Council asset.



Satellite image of road location (Google Maps)

2.0 CONDITION SUMMARY

For the purposes of this report condition descriptions are as follows:-

Very Good - No pavement intervention required;
Good - Localised pavement intervention required;
Fair - Moderate pavement intervention required;
Poor - Extensive pavement intervention required.

Chainage measurements given are representative of the distance along the road in metres travelling south with the start point being denoted CH 5260 just north of Cliffords Lane (Named Londrigans Lane on Google Maps) and the end point CH 7780 at the Sisters-Noorat Road intersection.

The road segment is unsealed throughout with a scoria gravel surface pavement. There are no guide posts along the road section other than at the intersecting roads. Beyond the edges of the formation the verge and table drains are covered with grass.

The existing pavement material was not determined or assessed as the inspection performed was visual only.

The road formation was generally in good condition throughout, except for the turning movement wheel paths at the Cliffords Lane (Londrigans Lane) intersection. The edge of the road formation at this intersection is very soft and has deep wheel ruts on the verge of bogging.

The road is assumed subject to very low daily traffic volumes of less than 100 vehicles per day.

Generally, the road conditions are as follows:-

Road Segment	Original Condition	Prior Report	This Report	Comments
CH 5260 - 5475:	Good	N/A		Well maintained gravel surface.
CH 5475 - 5505:	Fair	N/A		Intersection at Cliffords Lane with deep ruts at turn paths.
CH 5500 - 7770:	Good	N/A		Well maintained gravel surface. Broken guide post at CH 7762.
CH 7770 - 7780:	Good	N/A		Well maintained gravel surface leading onto seal at the Sisters-Noorat Rd intersection.

3.0 CONCLUSION

This is the first dilapidation inspection on this proposed haulage route for the Mortlake South Wind Farm from the Sisters Quarry. In general, road conditions good and appear well maintained for the gravel pavement.

There is a marked lack of guide posts along the entire segment, though the alignment is straight and relatively flat.

Consideration should be given to repairing the Cliffords Lane (Londrigans Lane) intersection due to wheel ruts on the corners that have occurred due to u-turn movements.

The intersection at the Sisters-Noorat Rd should be reviewed for proposed swept vehicle paths as the proximity of culvert headwalls to the road may be a possible obstruction through the left hand turn movement. The culvert under Tapps Lane (north side of intersection) may need to be relocated further north, and the culvert under the Sisters-Noorat Road (west side) may need to be extended to enable the intersection to be flared through the turn movement for trucks. There is a Telstra pit in close proximity that may be impacted by any widening works.

Liaison between Acciona Energy and Moyne Shire Council shall determine maintenance and upgrade items required and who is responsible for those works. This report does not appoint responsibility to any party.

Full dilapidation details are presented in Appendix 1 and dilapidation photos of areas requiring attention are presented in Appendix 2. A video log of the entire segment has been recorded and is held on file.

4.0 RECOMMENDATIONS

It is recommended that the works presented in the following table are undertaken:

Location	Item	Finding	Recommendation	Priority
Cliffords Lane (Londrigans Lane) Intersection	Pavement	Pavement through turning paths soft and rutted.	Reconstruct swept turning paths through intersection, install guide posts to delineate edge of road.	Moderate
Tapps Lane	Guide Posts	Lack of guide posts along entire segment.	Consider installing guide posts to delineate edge of road formation.	Low
The Sisters-Noorat Rd Intersection	Pavement	Left turn path for trucks appears tight and culvert headwalls close to roadway	Check design swept path for truck turning movements and widen pavement if necessary. Widening will require north culvert to be relocated and west culvert to be extended. Telstra pit in close proximity may be impacted by works.	High

Priority in the table above is intended as follows:

- Urgent** - Indicates a defect presenting imminent danger to road users requiring immediate attention;
- High** - Indicates a defect presenting a potential danger requiring immediate attention or a potential for ongoing severe damage to infrastructure;
- Moderate** - Indicates a defect presenting a concern requiring attention to improve safety or a potential for ongoing moderate damage to infrastructure;
- Low** - Indicates a defect presenting a low risk of danger to road users or low ongoing damage concerns to infrastructure.

APPENDIX 1 – DILAPIDATION INSPECTION DETAILS

Full details and records of this inspection compared to other recent inspections are outlined below.

Key: NC = No Change N/A = Not Applicable Nil = No defects to report

	Date:	06/11/2019			
Chainage	Location	Original Inspection Notes	Prior Inspection Notes	Current Inspection Notes	Photo
5260 - 5475	Pavement	Well maintained scoria gravel pavement with very slight corrugations. Lack of guide posts.	N/A		
5475 - 5505	Cliffords Lane Intersection	Through lanes well maintained scoria gravel pavement. Turning paths very soft and rutted.	N/A		1
5505 - 7770	Pavement	Well maintained scoria gravel pavement with very slight corrugations. Lack of guide posts. Broken guide post at CH 7762.	N/A		
7770 - 7780	The Sisters-Noorat Rd Intersection	Culvert headwalls close to road and may impinge on truck turning movements.	N/A		

APPENDIX 2 - ROAD CONDITION PHOTOS



TAPPS LANE - CH 5302

Facing South

General view of pavement

GOOD

Photo 1 (GOPR6057.JPG) - E661926, N5773203



TAPPS LANE - CH 5482

Facing South

Wheel rutting on north-east corner of Cliffords Lane (Londrigans Lane) intersection due to U-turn movements. Soft edges.

FAIR

Photo 2 (GOPR6058.JPG) - E661910, N5773022



TAPPS LANE - CH 5477

Facing South

Wheel rutting on north-west corner of Cliffords Lane (Londrigans Lane) intersection due to U-turn movements. Soft edges.

FAIR

Photo 3 (GOPR6059.JPG) - E661894, N5773030



Photo 4 (GOPR6060.JPG) - E661898, N5773007

TAPPS LANE - CH 5499

Facing South

Wheel rutting on south-east corner of Cliffords Lane (Londrigans Lane) intersection due to U-turn movements. Soft edges.

FAIR



Photo 5 (GOPR6061.JPG) - E661874, N5772884

TAPPS LANE - CH 5625

Facing South

General view of pavement

GOOD



Photo 6 (GOPR6062.JPG) - E661826, N5772604

TAPPS LANE - CH 5908

Facing South

General view of pavement

GOOD



TAPPS LANE - CH 6229

Facing South

General view of pavement

GOOD

Photo 7 (GOPR6063.JPG) - E661774, N5772288



TAPPS LANE - CH 6534

Facing South

General view of pavement

GOOD

Photo 8 (GOPR6064.JPG) - E661723, N5771987



TAPPS LANE - CH 6825

Facing South

General view of pavement

GOOD

Photo 9 (GOPR6065.JPG) - E661674, N5771700



TAPPS LANE - CH 7123

Facing South

General view of pavement

GOOD

Photo 10 (GOPR6066.JPG) - E661624, N5771407



TAPPS LANE - CH 7426

Facing South

General view of pavement

GOOD

Photo 11 (GOPR6067.JPG) - E661573, N5771108



TAPPS LANE - CH 7773

Facing South

General view of the Sisters-Noorat Rd intersection
at north-east side.

GOOD

Photo 12 (GOPR6068.JPG) - E661517, N5770765



Photo 13 (GOPR6069.JPG) - E661519, N5770755

TAPPS LANE - CH 7783

Facing West

General view of the Sisters-Noorat Rd intersection at south-east side.

GOOD



Photo 14 (GOPR6070.JPG) - E661506, N5770750

TAPPS LANE - CH 7790

Facing North

General view of the Sisters-Noorat Rd intersection at south-west side.

GOOD



Photo 15 (GOPR6071.JPG) - E661506, N5770771

TAPPS LANE - CH 7770

Facing North-East

General view of the Sisters-Noorat Rd intersection at north-west side.

GOOD



TAPPS LANE - CH 7761

Facing South

Broken guide post near the Sisters-Noorat Rd intersection

Photo 16 (GOPR6072.JPG) - E661510, N5770779

- **END OF REPORT** -

INITIAL DILAPIDATION REPORT

LAKE GILLEAR QUARRY HAULAGE ROUTE

ALLANSFORD SEGMENT

Buckleys Rd:	CH 0.000 – 1.204km
Burkes Rd:	CH 1.204 – 1.793km
Tooram Rd:	CH 1.793 – 5.137km
Ziegler Pde:	CH 5.137 – 5.346km
Garibaldi Ln:	CH 5.346 – 5.500km

Inspection Date
17 December 2019

Report Issue Date
19 December 2019

Version: A

For:
Acciona Energy Oceania Construction Pty Ltd

INSPECTION REGISTER – LAKE GILLEAR - ALLANSFORD

[illegible]

Document History

Rev. No.	Description of Revision	Prepared By	Checked By	Date
A	First Report	Brett Johnston	Scott Trotter	19/12/2019

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Table of Contents

Report

1.0	INTRODUCTION	4
2.0	ROAD LOCATIONS AND BASE INFORMATION	4
3.0	DEFINITIONS	5
4.0	DILAPIDATION SUMMARY	5
5.0	CONCLUSION	6

Appendix

- Road Condition Photos**
- Route Map and Photo Locations**

1.0 INTRODUCTION

As part of their Traffic Management Plan and planning conditions, Acciona Energy Oceania Construction Pty Ltd (Acciona) have engaged The CSE Group Consulting Engineers Pty Ltd (CSE) to perform regular condition assessment and road quality auditing of the haulage road network for materials being sourced from the Lake Gilliear Quarry at Allansford, for construction of the Mortlake South Wind Farm.

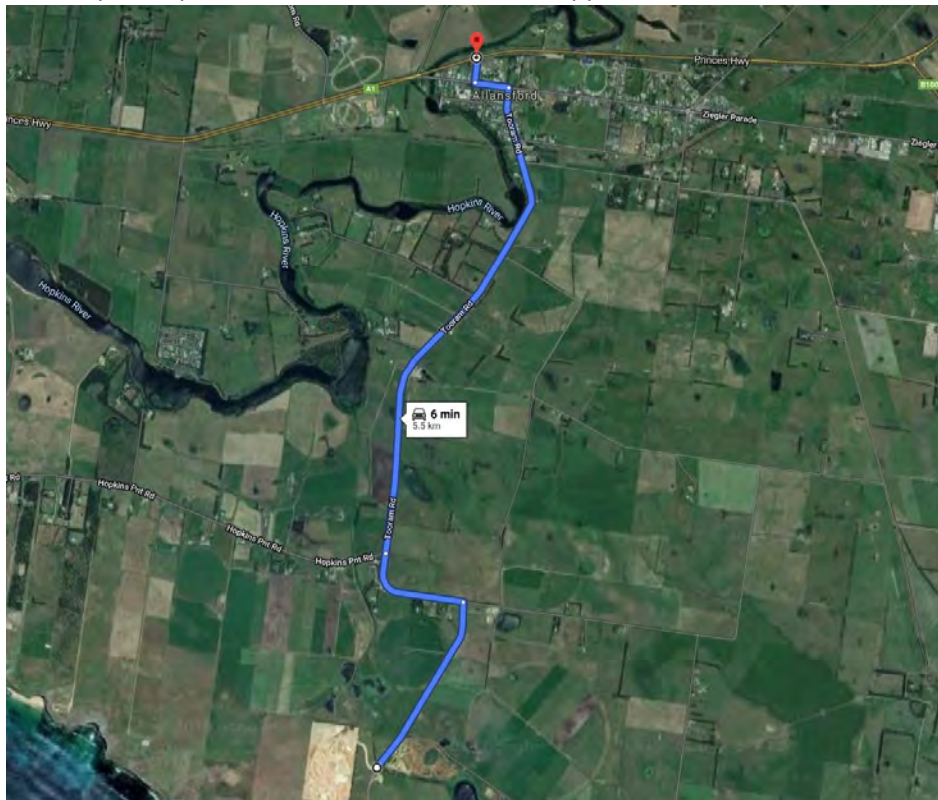
The initial dilapidation survey was conducted on 17 December 2019 to form a basis of the road conditions prior to haulage commencing from the quarry. This audit report provides detailed information of the road pavement, roadside furniture, drainage and other items pertaining to the road between table drains for all roads on the Allansford segment from the quarry through to the Princes Hwy at Allansford. A centre line video run through of the roads was also captured as evidence of the condition of the roads for the entire length.

Regular inspections are scheduled following this initial audit to monitor and report on road conditions. All inspections and audits are visual only and no geotechnical testing is undertaken.

This report is intended to be a summary of road conditions at the time of inspection. Liaison between Acciona and the responsible authority shall determine required maintenance or works required. CSE are not responsible for apportioning responsibility for maintenance to any party.

2.0 ROAD LOCATIONS AND BASE INFORMATION

The haulage route from the Lake Gilliear Quarry follows several local roads and highways to the construction sites at the wind farm. The Allansford segment of the haulage route is shown in the map below. A detail map with photo locations is shown in the appendix.



MAP: Allansford Segment (Google Maps)

The Allansford segment commences at the Lake Gilliear Quarry entrance on Buckleys Rd at CH 0.0km. It continues north along Buckleys Rd, turns west on Burkes Rd, follows Tooram Road in a northerly direction, turns west onto Ziegler Pde and finally turns north onto Garibaldi Ln before terminating at CH 5.50km at the A1 Princes Hwy intersection. The haulage roads in this segment are all assets managed by Warrnambool City Council.

Allansford Segment (Warrnambool City Council)

Buckleys Rd:	CH 0.000 – 1.204km
Burkes Rd:	CH 1.204 – 1.793km
Tooram Rd:	CH 1.793 – 5.137km
Ziegler Pde:	CH 5.137 – 5.346km
Garibaldi Ln:	CH 5.346 – 5.500km

3.0 DEFINITIONS

The initial dilapidation survey has divided the road into segments of varying lengths based on the condition of each segment. The initial condition descriptions for each audited item are defined as follows:-

Very Good	- Some minor localised defects to up to 10% of the item;
Good	- Defects observed involving between 10 and 20% of the item;
Fair	- Defects observed involving between 20 and 50% of the item;
Poor	- Defects observed involving more than 50% of the item;

Regular road quality audits will assess road conditions with comparison made to the conditions at the initial dilapidation survey and the previous regular road quality audit. Conditions will be referred to as follows:

Much Improved	- Conditions have improved considerably with defects repaired to a high standard;
Slightly Improved	- Conditions have improved slightly with some defects repaired, or repairs have been made to a lower quality standard;
No Change	- Conditions have not changed or repairs have been made but new/similar defects have presented;
Slightly deteriorated	- Conditions have deteriorated with some increase in defects;
Significantly deteriorated	- Conditions have deteriorated with significant increase in defects.

4.0 DILAPIDATION SUMMARY

The Allansford segment commences at CH 0km at the Lake Gilliear Quarry entrance on Buckleys Rd and ends at the Princes Highway intersection with Garibaldi Lane at CH 5.500km.

Buckleys Road is initially a limestone gravel pavement for the first 0.59km before a 6.6m wide two lane sealed pavement completes the road through to Burkes Rd. The sealed part of the road is moderately flush and has faded centre line marking only. Several guide posts are damaged or missing. The road is generally in Good to Very Good condition.

Burkes Road consists of a 7.2m wide two lane sealed pavement with centre line marking only. Some guide posts are damaged in the curve. The road is in Very Good condition.

The pavement for Tooram Road has a 7.2m wide two lane seal with centre line marking only. The road is suffering from minor crocodile cracking, guide post damage and faded signs. The section beyond the railway line has been recently resealed and has kerb and channel to both sides. The road is in Very Good condition.

Ziegler Parade is the main thoroughfare through the Allansford township and has a 2 lane seal with centre and edge line marking, and kerb and channel to both sides of the pavement. The seal is moderately flush and the road is considered in Good condition.

Garibaldi Lane connects Zeigler Parade with the A1 Princes Highway and is a two lane sealed road with centre line marking at Ziegler Parade only. There is kerb and channel on both sides of the road and the road is considered in Very Good condition.

Photographs with notes of conditions observed are provided in the Appendix to this report. The appendices also include a map of photo locations. In this initial dilapidation and condition assessment general condition photos have been captured every 250-500m.

A summary of the conditions observed are as follows:-

ROAD SEGMENT	PAVEMENT	LINE MARKING	DRAINAGE & VERGE	SIGNS & GUARD RAIL	GUIDE POSTS	COMMENTS
Buckleys Rd CH 0 – 0.59km	Good	N/A	Good	Very Good	Good	Gravel section of road
Buckleys Rd CH 0.59 – 0.793km	Very Good	Fair	Good	Very Good	Good	Sealed section of road. Some flushing.
Buckleys Rd CH 0.793 – 1.204km	Good	Fair	Good	Very Good	Good	Line marking faded and guide post damage. Surface very flush.
Burkes Rd CH 1.204 – 1.793km	Very Good	Very Good	Good	Very Good	Fair	Guide posts damaged through curve.
Tooram Rd CH 1.793 – 3.687km	Very Good	Good	Good	Very Good	Good	Crocodile cracking and shoving at Hopkins Point Rd intersection. Guide post damage. Some depressions at cattle underpass.
Tooram Rd CH 3.687 – 4.672km	Very Good	Good	Good	Good	Good	Crocodile cracking at Morgans Rd intersection. Some guide posts damaged. Faded signs.
Tooram Rd CH 4.672 – 4.797km	Good	Good	Very Good	Good	Good	Seal moderately flush. Cracking and shove at rail line.
Tooram Rd CH 4.797 – 5.137km	Very Good	Very Good	Very Good	Very Good	N/A	Recent resealed section of pavement.
Ziegler Pde CH 5.137 – 5.346km	Good	Very Good	Very Good	Very Good	N/A	Seal moderately flush.
Garibaldi Ln CH 5.346 – 5.500km	Very Good	Poor	Very Good	Very Good	N/A	Crocodile cracking in intersections at Ziegler Pde and Princes Hwy.

5.0 CONCLUSION

The haulage route along the Allansford segment has a range of conditions from Good to Very Good depending on the location.

Drainage along the roads is generally good with adequate table drains, though grass growth is getting long in some areas and will need slashing soon so as not to obscure the roadsides. Through the Allansford township, kerb and channel is along both sides of the road.

APPENDIX – ROAD AUDIT INSPECTION PHOTOGRAPHS



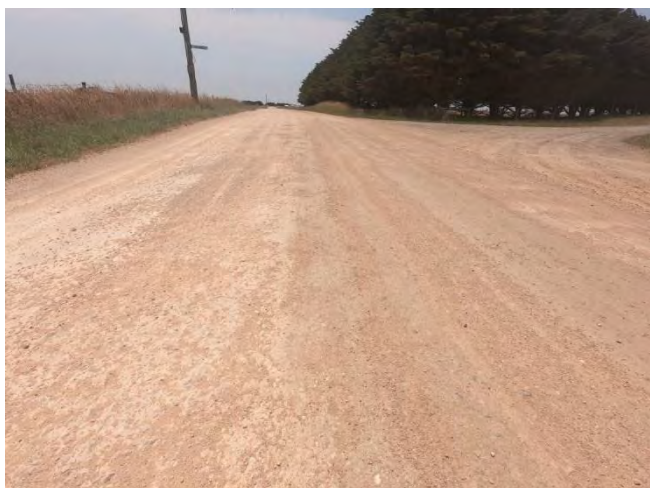
Buckleys Rd - CH 0

Facing NE

-

Intersection at quarry entrance

Photo 1 'GOPR7018.JPG' - (-38.4240513, 142.58381)



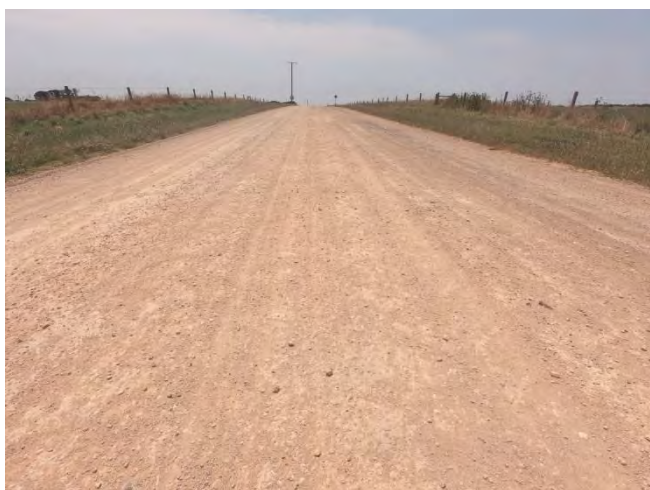
Buckleys Rd - CH 0.245

Facing NE

-

Dallimores Road intersection

Photo 2 'GOPR7019.JPG' - (-38.4223609, 142.585503)



Buckleys Rd - CH 0.5

Facing NE

-

General view of pavement

Photo 3 'GOPR7020.JPG' - (-38.4203667, 142.5870279)



Burkes Rd - CH 1.5

Facing W

-
General view of pavement

Photo 10 'GOPR7027.JPG' - (-38.4143466, 142.5866428)



Burkes Rd - CH 1.705

Facing N

-
Guide posts damaged through curve

Photo 11 'GOPR7028.JPG' - (-38.4138525, 142.5845074)



Burkes Rd - CH 1.75

Facing N

-
General view of pavement

Photo 12 'GOPR7029.JPG' - (-38.4133869, 142.5842975)



Burkes Rd - CH 1.895

Facing N

-
Intersection with Hopkins Point Road. Crocodile
Cracking through intersection

Photo 13 'GOPR7030.JPG' - (-38.4121419, 142.5844301)



Tooram Rd - CH 1.92

Facing N

-
Crocodile Cracking and shoving through left turn at
intersection.

Photo 14 'GOPR7031.JPG' - (-38.4118801, 142.584468)

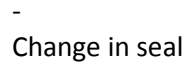


Tooram Rd - CH 2

Facing N

-
General view of pavement

Photo 15 'GOPR7032.JPG' - (-38.4111624, 142.584612)



- Guide post missing

- General view of pavement



Tooram Rd - CH 2.75

Facing N

-
General view of pavement

Photo 19 'GOPR7036.JPG' - (-38.4043902, 142.5853968)

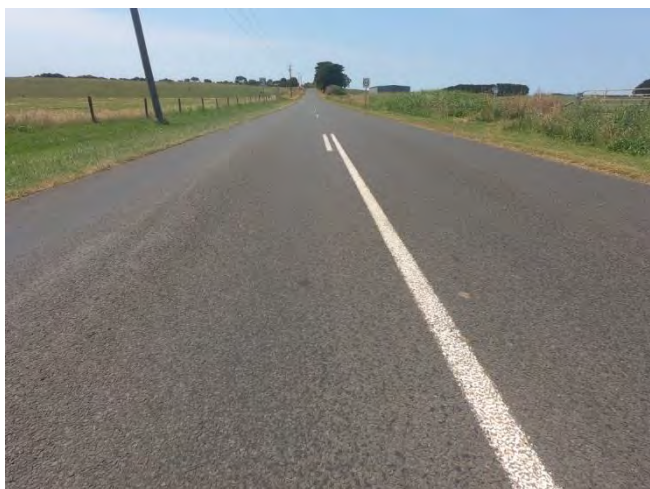


Tooram Rd - CH 3

Facing N

-
General view of pavement

Photo 20 'GOPR7037.JPG' - (-38.4021677, 142.5857083)

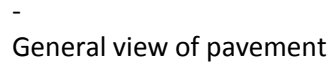


Tooram Rd - CH 3.25

Facing N

-
General view of pavement

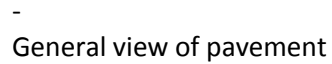
Photo 21 'GOPR7038.JPG' - (-38.4003737, 142.5873607)



View of pavement at cattle underpass with some minor depressions across full width of pavement

- Change in seal and general view of intersection at hermitage drive.

Page 15 of 22



General view of pavement at Morgan's road intersection, Crocodile cracking through seal on Morgan's road

Guidepost missing

Page 16 of 22



Tooram Rd - CH 4.436

Facing N

-
Guidepost missing

Photo 31 'GOPR7048.JPG' - (-38.3918391, 142.5950064)



Tooram Rd - CH 4.65

Facing N

-
General view of intersection with Carrolls Road

Photo 32 'GOPR7049.JPG' - (-38.3899851, 142.5943601)



Tooram Rd - CH 4.672

Facing N

-
Change in seal

Photo 33 'GOPR7050.JPG' - (-38.3897474, 142.5942749)



Photo 34 'GOPR7051.JPG' - (-38.3892779, 142.5941121)

Tooram Rd - CH 4.725

Facing N

-

General view at approach to railway line, Seal moderately flush and lateral crack across pavement 1 meter before railway line.



Photo 35 'GOPR7052.JPG' - (-38.3891927, 142.5940665)

Tooram Rd - CH 4.733

Facing N

-

General view at departure from railway line with shove in centre of northbound lane and crocodile cracking in southbound lane



Photo 36 'GOPR7053.JPG' - (-38.3886429, 142.5938653)

Tooram Rd - CH 4.797

Facing N

-

Change in seal



Tooram Rd - CH 5.111

Facing N

-

End of resealed section

Photo 37 'GOPR7054.JPG' - (-38.3858703, 142.5933206)



Ziegler Pd - CH 5.13

Facing W

-

General view of intersection at Ziegler Parade

Photo 38 'GOPR7055.JPG' - (-38.3856719, 142.5933371)



Ziegler Pd - CH 5.149

Facing W

-

Change in seal

Photo 39 'GOPR7056.JPG' - (-38.3856572, 142.5931131)



Ziegler Pd - CH 5.19

Facing W

-
Change in seal, Seal moderately flush

Photo 40 'GOPR7057.JPG' - (-38.3856095, 142.5926311)



Ziegler Pd - CH 5.25

Facing W

-
General view of pavement seal moderately flush

Photo 41 'GOPR7058.JPG' - (-38.3855301, 142.5919016)



Ziegler Pd - CH 5.333

Facing W

-
Change in seal just prior to Garibaldi Lane and general view of intersection

Photo 42 'GOPR7059.JPG' - (-38.3854403, 142.5910246)



Ziegler Pd - CH 5.346

Facing N

-

General view of pavement at intersection Ziegler Parade with minor crocodile cracking throughout.

Photo 43 'GOPR7060.JPG' - (-38.3853909, 142.5908809)



Garabaldi Ln - CH 5.455

Facing N

-

General view of pavement at Hopetoun Street intersection

Photo 44 'GOPR7061.JPG' - (-38.3843703, 142.5910249)



Garabaldi Ln - CH 5.5

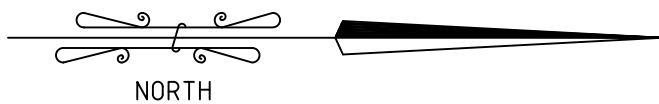
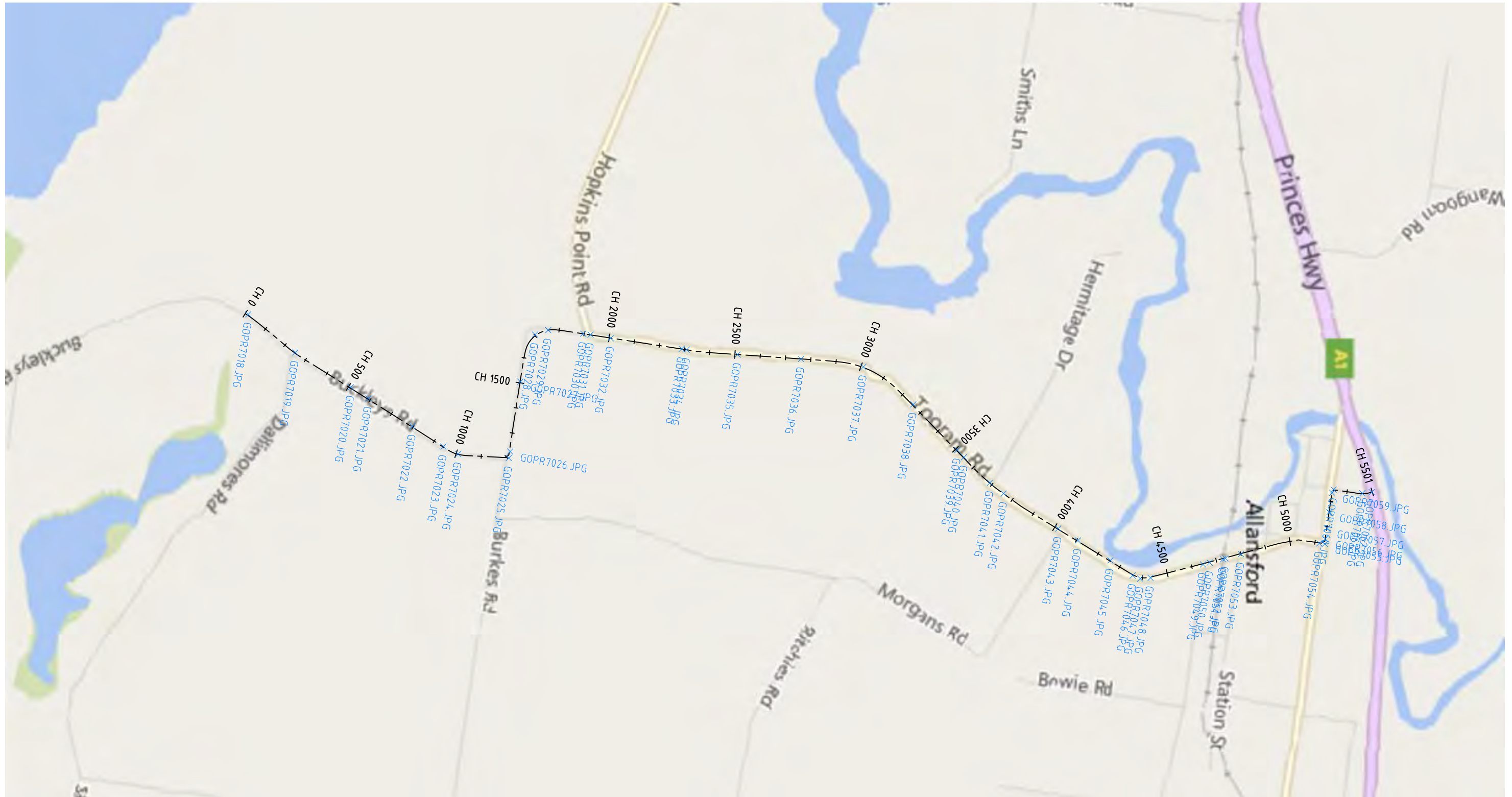
Facing N

-

General view of pavement at Princes Highway intersection, some lateral cracking through eastbound lane.

Photo 45 'GOPR7062.JPG' - (-38.3840377, 142.5909662)

----- END OF REPORT -----



ACCIONA ENERGY - MSWF
LAKE GILLEAR QUARRY HAULAGE ROUTE
ALLANSFORD SEGMENT



INITIAL DILAPIDATION REPORT

LAKE GILLEAR QUARRY HAULAGE ROUTE

TERANG WEST AND EAST SEGMENTS

Terang West Segment

Noogee Rd: CH 0.000 – 2.348km
Terang-Framlingham Rd: CH 2.348 – 2.930 km
Keilambete Rd: CH 2.930 – 5.555km
Bramich Ln: CH 5.555 – 6.130km

Terang East Segment

Cosgrove and Little St: CH 0.000 – 0.954km

Inspection Date
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For:
Acciona Energy Oceania Construction Pty Ltd

[illegible]

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Table of Contents

Report

1.0	INTRODUCTION	4
2.0	ROAD LOCATIONS AND BASE INFORMATION	4
3.0	DEFINITIONS	6
4.0	DILAPIDATION SUMMARY	6
4.1	Terang West Segment	6
4.2	Terang East Segment	7
5.0	CONCLUSION	8

Appendix

- Road Condition Photos**
- Route Map and Photo Locations**

1.0 INTRODUCTION

As part of their Traffic Management Plan and planning conditions, Acciona Energy Oceania Construction Pty Ltd (Acciona) have engaged The CSE Group Consulting Engineers Pty Ltd (CSE) to perform regular condition assessment and road quality auditing of the haulage road network for materials being sourced from the Lake Gilliear Quarry at Allansford, for construction of the Mortlake South Wind Farm.

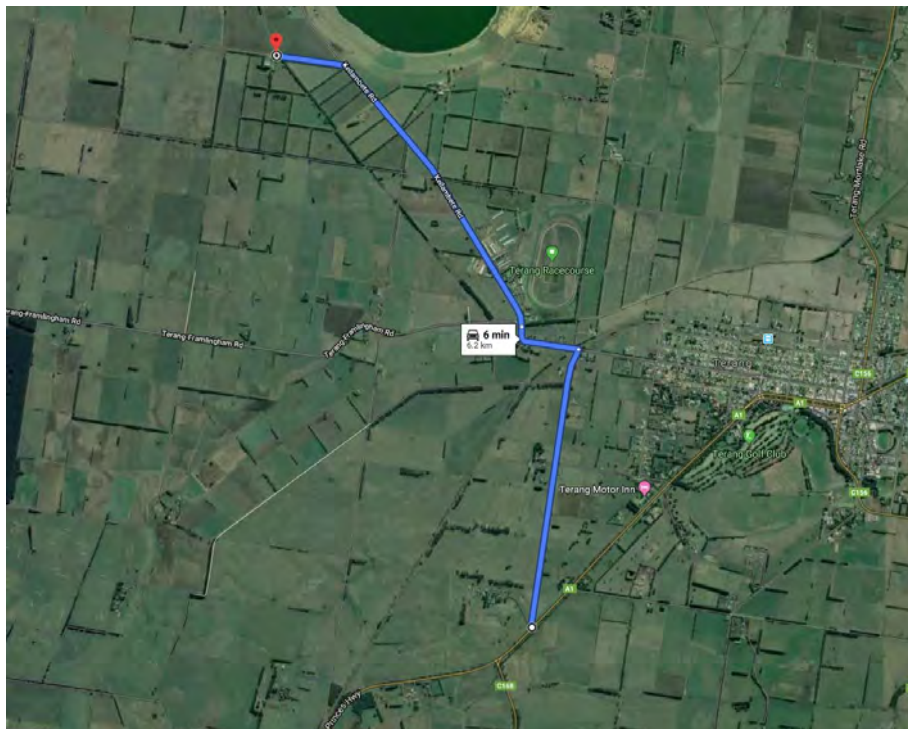
The initial dilapidation survey was conducted on 17 December 2019 to form a basis of the road conditions prior to haulage commencing from the quarry. This audit report provides detailed information of the road pavement, roadside furniture, drainage and other items pertaining to the road between table drains for all roads on the Terang West and Terang East segments at Terang. A centre line video run through of the roads was also captured as evidence of the condition of the roads for the entire length.

Regular inspections are scheduled following this initial audit to monitor and report on road conditions. All inspections and audits are visual only and no geotechnical testing is undertaken.

This report is intended to be a summary of road conditions at the time of inspection. Liaison between Acciona and the responsible authority shall determine required maintenance or works required. CSE accept no responsibility for delegating maintenance and/or repair works.

2.0 ROAD LOCATIONS AND BASE INFORMATION

The haulage route from the Lake Gilliear Quarry follows several local roads and highways to the construction sites at the wind farm. The Terang West and Terang East segments of the haulage route are shown in the maps below. A detail map with photo locations is shown in the appendix.



MAP 1: Terang West Segment (Courtesy Google Maps)



The Terang East segment is a short road running from the Princes Highway at CH 0km to just beyond the existing power sub-station along Cosgrove and Little Street at CH 0.954km (also known as Little St or Littles Lane).

Noogee Rd:	CH 0.000 – 2.348km
Terang-Framlingham Rd:	CH 2.348 – 2.930 km
Keilambete Rd:	CH 2.930 – 5.555km
Bramich Ln:	CH 5.555 – 6.130km

Cosgrove and Little St: CH 0.000 – 0.954km

Document Set Initial Disposition Report - Lake Gilliear Terang East and West.docx
Version: 1, Version Date: 27/02/2020

3.0 DEFINITIONS

The initial dilapidation survey has divided the road into segments of varying lengths based on the condition of each segment. The initial condition descriptions for each audited item are defined as follows:-

Very Good	- Some minor localised defects to up to 10% of the item;
Good	- Defects observed involving between 10 and 20% of the item;
Fair	- Defects observed involving between 20 and 50% of the item;
Poor	- Defects observed involving more than 50% of the item;

Regular road quality audits will assess road conditions with comparison made to the conditions at the initial dilapidation survey and the previous regular road quality audit. Conditions will be referred to as follows:

Much Improved	- Conditions have improved considerably with defects repaired to a high standard;
Slightly Improved	- Conditions have improved slightly with some defects repaired, or repairs have been made to a lower quality standard;
No Change	- Conditions have not changed or repairs have been made but new/similar defects have presented;
Slightly deteriorated	- Conditions have deteriorated with some increase in defects
Significantly deteriorated	- Conditions have deteriorated with significant increase in defects

4.0 DILAPIDATION SUMMARY

4.1 *Terang West Segment*

The Terang West segment commences at the intersection of the Princes Highway and Noogee Road at CH 0km and ends at CH 6.13km on Bramich Lane.

Noogee Road consists of a single lane sealed pavement measuring 3.8m wide, with gravel shoulders and no line marking. The seal has had some recent patching performed though is suffering from crocodile cracking in general. There is a marked lack of guide posts and the road is considered in Good condition at present.

Terang-Framlingham Road has a 7.3m wide, two lane seal and has moderate flushing, extensive crocodile cracking and minor rutting. There were no guide posts observed and the road has a condition rating of Fair to Good.

Keilambete Road commences as a 5.6m wide sealed pavement before narrowing to 3.9m, with grass shoulders and no line marking. There is a marked lack of guide posts along the road. The general condition rating of the road is Good.

Bramich Lane is a gravel road with a marked lack of guide posts. The road appears very lightly trafficked and has a condition rating of Good.

Photographs with notes of conditions observed are provided in the Appendix to this report. The appendices also include a map of photo locations. In this initial dilapidation and condition assessment general condition photos have been captured every 250-500m.

A summary of the conditions observed are as follows:-

ROAD SEGMENT	PAVEMENT	LINE MARKING	DRAINAGE & VERGE	SIGNS & GUARD RAIL	GUIDE POSTS	COMMENTS
Noogee Rd CH 0 – 1.363km	Good	N/A	Good	N/A	Poor	Single lane seal, moderately flush, only one set of guide posts, minor potholes in shoulders. Recent patching. Some crocodile cracking.
Noogee Rd CH 1.363 – 2.348km	Good	N/A	Good	Very Good	Poor	Single lane seal, moderately flush, lack of guide posts, minor potholes in shoulders. Crocodile cracking.
Terang-Fram'm Rd CH 2.348 – 2.778km	Good	Fair	Good	Very Good	Poor	Moderate flushing, crocodile cracking and minor rutting. No guide posts. Line marking faded.
Terang-Fram'm Rd CH 2.778 – 2.930km	Fair	Fair	Good	Very Good	Fair	Moderate flushing, extensive crocodile cracking, minor rutting. Faded line marking.
Keilambete Rd CH 2.930 – 3.585km	Good	N/A	Good	Very Good	Poor	No line marking after early chainages. Lack of guide posts.
Keilambete Rd CH 3.585 – 5.555km	Good	N/A	Good	Very Good	Poor	No line marking, lack of guide posts.
Bramich Ln CH 5.555 – 6.130km	Good	N/A	Very Good	Very Good	Poor	Gravel road. Lack of guide posts.

4.2 Terang East Segment

The Terang East segment runs north along Cosgrove and Little Street between the Princes Highway and the existing power sub-station.

The road starts off as a two lane, 5.3m wide seal until the McRae St intersection, where it becomes a gravel pavement with grass shoulders. There are no guide posts on the road segment and the road is considered in Good condition.

Photographs with notes of conditions observed are provided in the Appendix to this report. The appendices also include a map of photo locations. In this initial dilapidation and condition assessment general condition photos have been captured every 250-500m.

A summary of the conditions observed are as follows:-

ROAD SEGMENT	PAVEMENT	LINE MARKING	DRAINAGE & VERGE	SIGNS & GUARD RAIL	GUIDE POSTS	COMMENTS
Cosgrove and Little Street CH 0 – 0.359km	Good	Fair	Good	Very Good	Fair	Two lane sealed pavement. Crocodile cracking at Princes Hwy intersection. Faded centre line marking. Lack of guide posts.
Cosgrove and Little Street CH 0.359 – 0.954km	Good	N/A	Good	Very Good	Poor	Gravel pavement, no guide posts.

APPENDIX – ROAD AUDIT INSPECTION PHOTOGRAPHS



Noogee Rd - CH 0

Facing N

General view at intersection with Princes Hwy. VERY GOOD

Photo 46 'GOPR7064.JPG' - (-38.2578627, 142.8890244)



Noogee Rd - CH 0.043

Facing N

Change in seal

Photo 47 'GOPR7065.JPG' - (-38.2575114, 142.8889179)



Noogee Rd - CH 0.198

Facing N

Recent patch east side, crocodile cracking west side.

Photo 48 'GOPR7066.JPG' - (-38.2561076, 142.8891671)

Photo 49 'GOPR7067.JPG' - (-38.2554471, 142.8892851)

General view of pavement

Recent patch east side



Noogee Rd - CH 0.852

Facing N

-

Recent patch west side, crocodile cracking east side, over culvert.

Photo 52 'GOPR7070.JPG' - (-38.2502719, 142.890274)



Noogee Rd - CH 1

Facing N

-

General view of pavement

Photo 53 'GOPR7071.JPG' - (-38.2489269, 142.8905203)



Noogee Rd - CH 1.25

Facing N

-

General view of pavement, some crocodile cracking

Photo 54 'GOPR7072.JPG' - (-38.2467047, 142.8909494)



Noogee Rd - CH 1.363

Facing N

-
Change in seal

Photo 55 'GOPR7073.JPG' - (-38.2457288, 142.8911365)



Noogee Rd - CH 1.5

Facing N

-
General view of pavement.

Photo 56 'GOPR7074.JPG' - (-38.2444694, 142.891361)



Noogee Rd - CH 1.75

Facing N

-
General view of pavement, moderate crocodile cracking throughout.

Photo 57 'GOPR7075.JPG' - (-38.2422493, 142.8917869)



Noogee Rd - CH 2

Facing N

-
General view of pavement.

Photo 58 'GOPR7076.JPG' - (-38.2400307, 142.892228)



Noogee Rd - CH 2.067

Facing N

-
Pekins Lane intersection.

Photo 59 'GOPR7077.JPG' - (-38.2394458, 142.8923609)

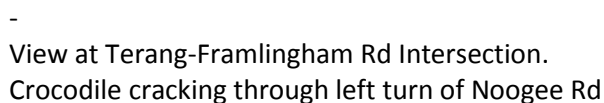


Noogee Rd - CH 2.25

Facing N

-
General view of pavement, seal widened.

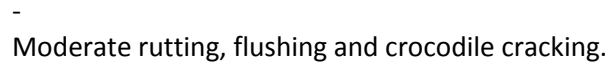
Photo 60 'GOPR7078.JPG' - (-38.2378349, 142.8929347)



General view at rail crossing and Racecourse Rd intersection beyond.

Change in seal, moderate flushing all wheel paths.

Page 14 of 24



Wheel ruts profiled and filled to CH 2.778

Change in seal.

Page 15 of 24



Terang – Framlingham Rd - CH 2.81

Facing W

-

Extensive crocodile cracking in curve.

Photo 67 'GOPR7085.JPG' - (-38.2364172, 142.888113)



Terang – Framlingham Rd - CH 2.93

Facing N

-

Change in seal at Keilambete Rd intersection

Photo 68 'GOPR7086.JPG' - (-38.2353165, 142.8879601)



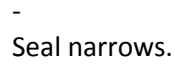
Keilambete Rd - CH 2.965

Facing N

-

Terang-Framlingham Rd intersection with crocodile cracking on west side. Guide post knocked over on east side.

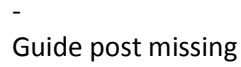
Photo 69 'GOPR7087.JPG' - (-38.2349929, 142.8879319)



- General view of pavement

- General view of pavement.

Page 18 of 24



View at Slaughteryard Rd/Riley Rd Intersection.

- Seal widens at curve.

Page 19 of 24



Keilambete Rd - CH 4.52

Facing NW

-

Seal narrows at end of curve

Photo 79 'GOPR7097.JPG' - (-38.2230519, 142.8788924)



Keilambete Rd - CH 4.75

Facing NW

-

General view of pavement

Photo 80 'GOPR7098.JPG' - (-38.2214024, 142.8771132)



Keilambete Rd - CH 5

Facing NW

-

General view of pavement

Photo 81 'GOPR7099.JPG' - (-38.2196868, 142.8752877)



Keilambete Rd - CH 5.25

Facing NW

-
General view of pavement

Photo 82 'GOPR7100.JPG' - (-38.2179713, 142.8734435)



Keilambete Rd - CH 5.555

Facing NW

-
General view at Bramich Lane intersection.

Photo 83 'GOPR7101.JPG' - (-38.2160224, 142.8713478)

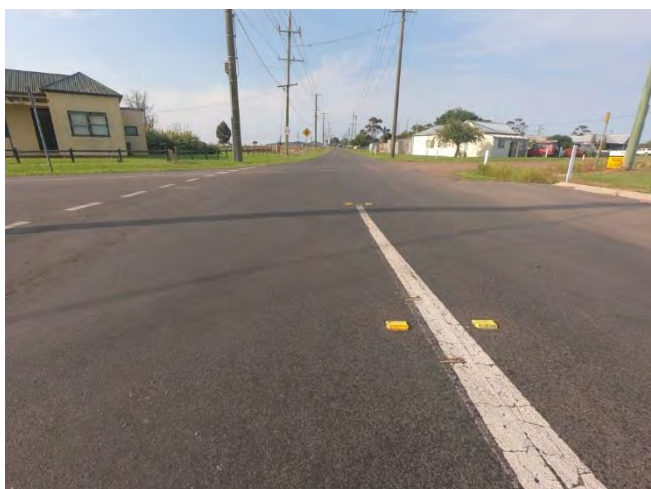


Bramich Ln - CH 5.75

Facing W

-
General view of pavement.

Photo 84 'GOPR7102.JPG' - (-38.2156751, 142.8689749)



Cosgrove and Little Street - CH 0.049

Facing N

-

View at Bourkes Rd Intersection.

Photo 88 'GOPR7108.JPG' - (-38.2364342, 142.9304477)



Cosgrove and Little Street - CH 0.162

Facing N

-

View at rail crossing.

Photo 89 'GOPR7109.JPG' - (-38.2353174, 142.9306524)



Cosgrove and Little Street - CH 0.348

Facing N

-

View at McRae St intersection to end of seal

Photo 90 'GOPR7110.JPG' - (-38.233778, 142.9309394)



Cosgrove and Little Street - CH 0.5

Facing N

-
General view of pavement.

Photo 91 'GOPR7111.JPG' - (-38.2322818, 142.9312397)



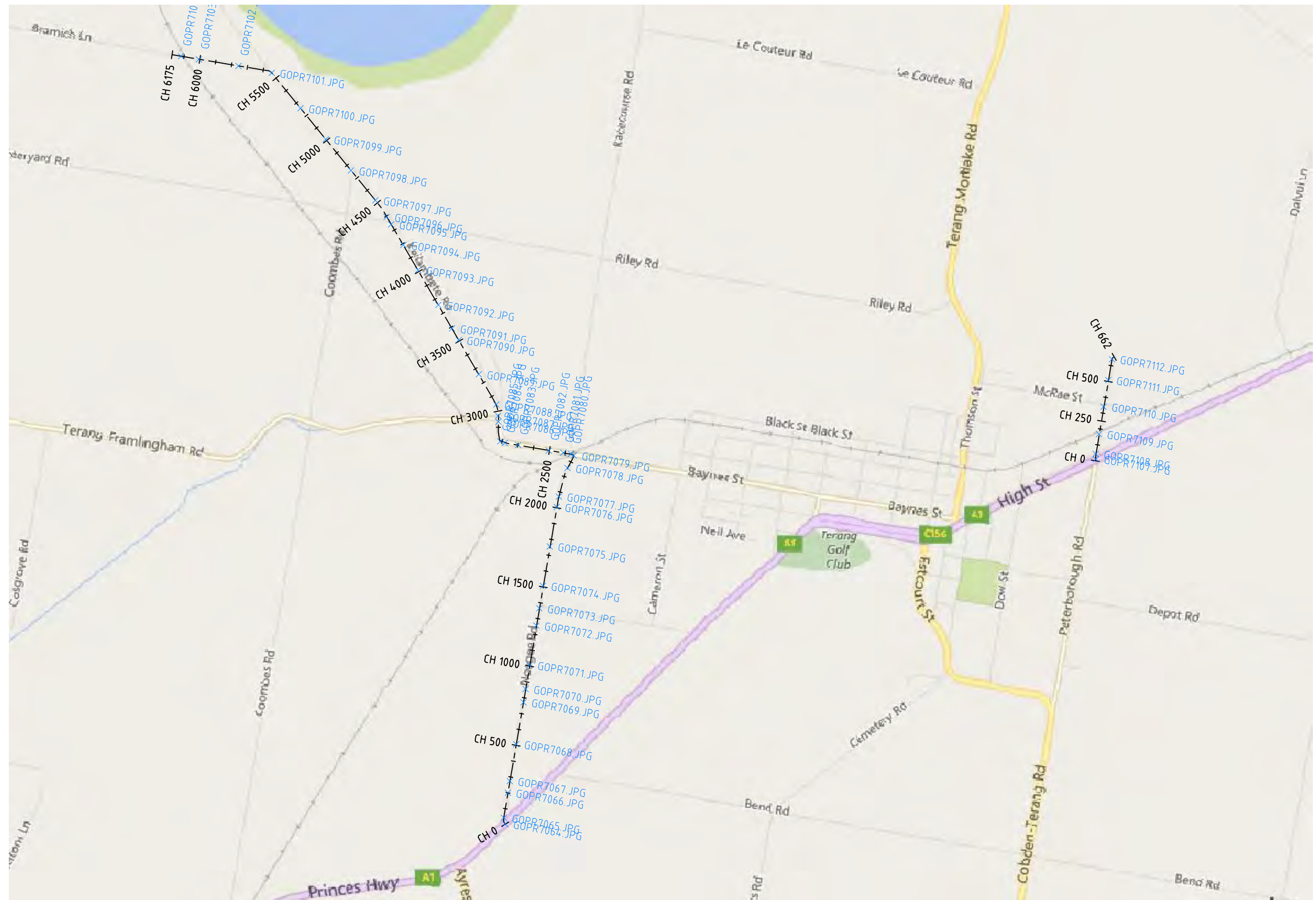
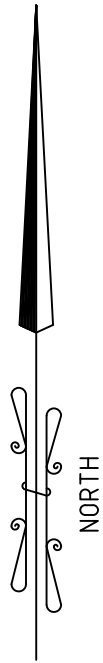
Cosgrove and Little Street - CH 0.93

Facing N

-
General view of pavement near end of segment.

Photo 92 'GOPR7112.JPG' - (-38.2311066, 142.9314645)

----- END OF REPORT -----



ACCIONA ENERGY - MSWF
LAKE GILLEAR QUARRY HAULAGE ROUTE
TERANG EAST AND WEST SEGMENT



INITIAL DILAPIDATION REPORT

LAKE GILLEAR QUARRY HAULAGE ROUTE

TERANG TO NOORAT SEGMENT

Terang-Mortlake Rd: CH 0.000 – 5.638km

Inspection Date
17 December 2019

Report Issue Date
20 December 2019

Version: A

For:
Acciona Energy Oceania Construction Pty Ltd

[illegible]

Document History

Rev. No.	Description of Revision	Prepared By	Checked By	Date
A	First Report	Brett Johnston	Scott Trotter	19/12/2019

Disclaimer:

This report and the results shown and recommendations made herein are based upon the information, drawings, samples, tests and measurements referred to. The CSE Group, its consultants and agents accepts no liability for any damages, charges, costs or expenses in respect of or in relation to injury or death of any person or damage to any property or of other loss whatsoever arising either directly or indirectly from the use of this report, the carrying out of recommendations contained herein or the use of any goods or materials referred to.

Table of Contents

Report

1.0	INTRODUCTION	4
2.0	ROAD LOCATIONS AND BASE INFORMATION	4
3.0	DEFINITIONS	5
4.0	DILAPIDATION SUMMARY	5
5.0	CONCLUSION	7

Appendix

- Road Condition Photos**
- Route Map and Photo Locations**

1.0 INTRODUCTION

As part of their Traffic Management Plan and planning conditions, Acciona Energy Oceania Construction Pty Ltd (Acciona) have engaged The CSE Group Consulting Engineers Pty Ltd (CSE) to perform regular condition assessment and road quality auditing of the haulage road network for materials being sourced from the Lake Gilliear Quarry at Allansford, for construction of the Mortlake South Wind Farm.

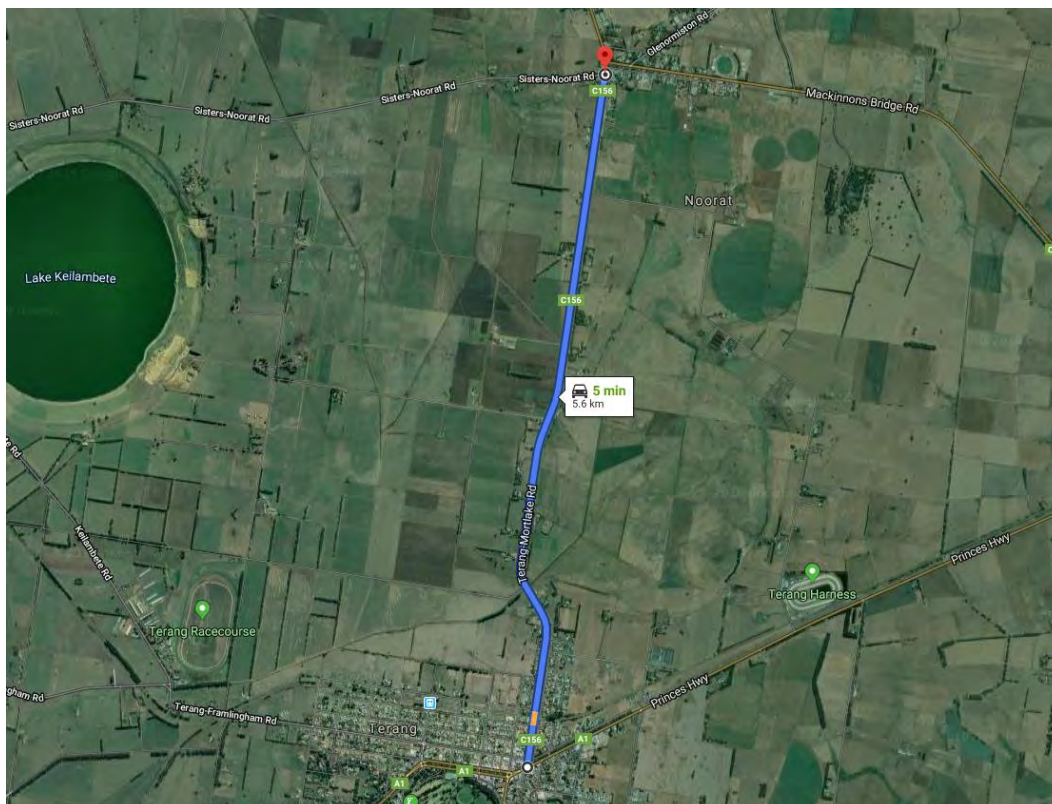
The initial dilapidation survey was conducted on 17 December 2019 to form a basis of the road conditions prior to haulage commencing from the quarry. This audit report provides detailed information of the road pavement, roadside furniture, drainage and other items pertaining to the road between table drains for all roads on the Terang to Noorat segment along the Terang-Mortlake Rd. A centre line video run through of the road was also captured as evidence of the condition of the road for the entire length.

Regular inspections are scheduled following this initial audit to monitor and report on road conditions. All inspections and audits are visual only and no geotechnical testing is undertaken.

This report is intended to be a summary of road conditions at the time of inspection. Liaison between Acciona and the responsible authority shall determine required maintenance or works required. CSE accept no responsibility for delegating maintenance and/or repair works.

2.0 ROAD LOCATIONS AND BASE INFORMATION

The haulage route from the Lake Gilliear Quarry follows several local roads and highways to the construction sites at the wind farm. The Terang to Noorat segment of the haulage route is shown in the map below. A detail map with photo locations is shown in the appendix.



MAP: Terang to Noorat Segment (Google Maps)

The Terang to Noorat segment of the haulage route commences at the Princes Hwy intersection with the Terang-Mortlake Rd in the Terang Township at CH 0.0km. The segment terminates in the Noorat Township at CH 5.638km being at the intersection of the Sisters-Noorat Rd with the Terang-Mortlake Rd. The haulage road is a VicRoads asset.

Terang-Noorat Segment (VicRoads)
Terang-Mortlake Rd: CH 0.000 – 5.638km

3.0 DEFINITIONS

The initial dilapidation survey has divided the road into segments of varying lengths based on the condition of each segment. The initial condition descriptions for each audited item are defined as follows:-

Very Good	- Some minor localised defects to up to 10% of the item;
Good	- Defects observed involving between 10 and 20% of the item;
Fair	- Defects observed involving between 20 and 50% of the item;
Poor	- Defects observed involving more than 50% of the item;

Regular road quality audits will assess road conditions with comparison made to the conditions at the initial dilapidation survey and the previous regular road quality audit. Conditions will be referred to as follows:

Much Improved	- Conditions have improved considerably with defects repaired to a high standard;
Slightly Improved	- Conditions have improved slightly with some defects repaired, or repairs have been made to a lower quality standard;
No Change	- Conditions have not changed or repairs have been made but new/similar defects have presented;
Slightly deteriorated	- Conditions have deteriorated with some increase in defects;
Significantly deteriorated	- Conditions have deteriorated with significant increase in defects.

4.0 DILAPIDATION SUMMARY

The audited segment commences at CH 0km at the Princes Highway in Terang and heads north to end at CH 5.638 at the Sisters-Noorat Rd intersection in Noorat.

The road ranges in condition from Very Good through to Poor depending on location. Through the poor sections, the road is suffering extensively from rutting, shoving, crocodile cracking, flushing and seal break outs. In many locations, the pavement is at the end of its life and full reconstruction is required to effectively upgrade the road in these areas.

The road is a continuous two lane sealed pavement with line marking generally faded. There was some guide post damage along the segment.

At the time of the audit, the road appeared heavily trafficked by passenger vehicles for the rural location. Traffic may have been using the road to bypass the road works underway on the Princes Highway east of Terang.

Photographs with notes of conditions observed are provided in the Appendix to this report. The appendices also include a map of photo locations. In this initial dilapidation and condition assessment general condition photos have been captured every 250-500m.

A summary of the conditions observed are as follows:-

ROAD SEGMENT	PAVEMENT	LINE MARKING	DRAINAGE & VERGE	SIGNS & GUARD RAIL	GUIDE POSTS	COMMENTS
Terang-Mortlake Rd CH 0 – 0.093km	Very Good	Poor	Very Good	Very Good	N/A	Recently asphalted, two lane road with kerb and channel. Line marking yet to be reinstated. Crocodile cracking at Princes Hwy.
Terang-Mortlake Rd CH 0.093 – 0.967km	Very Good	Fair	Very Good	Very Good	N/A	Asphalted pavement with kerb and channel. Line marking faded, surface moderately flush.
Terang-Mortlake Rd CH 0.967 – 1.730km	Fair	Fair	Good	Very Good	Fair	Asphalted pavement. Line marking faded. Surface moderately flush. Filled potholes, shoving and rutting. Extensive crocodile cracking for entire length.
Terang-Mortlake Rd CH 1.730 – 2.184km	Fair	Fair	Good	Very Good	Good	Sealed two lane road with centre line and edge lines. Line marking faded. Grass shoulder. Surface moderately flush both lanes. Filled potholes, shoving and rutting.
Terang-Mortlake Rd CH 2.184 – 2.351km	Poor	Fair	Good	Very Good	Good	Sealed two lane road with centre line and edge lines. Line marking faded. Grass shoulder. Surface moderately flush both lanes. Filled potholes, crocodile cracking, shoving and rutting.
Terang-Mortlake Rd CH 2.351 – 2.896km	Fair	Fair	Good	Very Good	Good	Sealed two lane road with centre line and edge lines. Line marking faded. Grass shoulder. Surface moderately flush both lanes. Some filled potholes, crocodile cracking and minor rutting.
Terang-Mortlake Rd CH 2.896 – 3.280km	Poor	Fair	Good	Very Good	Good	Sealed two lane road with centre line and edge lines. Line marking faded. Grass shoulder. Surface moderately flush both lanes. Filled potholes, crocodile cracking and extensive rutting.
Terang-Mortlake Rd CH 3.280 – 3.474km	Poor	Fair	Good	Very Good	Good	Sealed two lane road with centre line and edge lines. Line marking faded. Grass shoulder. Surface moderately flush both lanes. Filled potholes, crocodile cracking and some rutting.
Terang-Mortlake Rd CH 3.474 – 3.884km	Fair	Fair	Good	Very Good	Good	Sealed two lane road with centre line and edge lines. Line marking faded. Grass shoulder. Surface moderately flush both lanes. Filled potholes, crocodile cracking and some rutting.
Terang-Mortlake Rd CH 3.884 – 4.246km	Fair	Fair	Good	Very Good	Good	Sealed two lane road with centre line and edge lines. Line marking faded. Grass shoulder. Surface moderately flush both lanes. Filled potholes, crocodile cracking and some rutting.

ROAD SEGMENT	PAVEMENT	LINE MARKING	DRAINAGE & VERGE	SIGNS & GUARD RAIL	GUIDE POSTS	COMMENTS
Terang-Mortlake Rd CH 4.246 – 5.470km	Good	Good	Good	Very Good	Good	Sealed two lane road with centre line and edge lines. Grass shoulder. Surface moderately flush both lanes. Some lateral cracking.
Terang-Mortlake Rd CH 5.470 – 5.638km	Very Good	Fair	Very Good	Very Good	Good	Sealed two lane road with parking lane and kerb and channel. Line marking faded. Surface moderately flush both lanes and minor rutting.

5.0 CONCLUSION

The haulage route along the Terang Mortlake Road has a range of conditions from Very Good through to Poor depending on the location.

The 5.638km long segment is suffering from significant pavement failures in many locations and has shoving, rutting, crocodile cracking, flushing and seal break-outs in the poor sections.

It is expected that the poor sections of road will deteriorate rapidly under increased heavy traffic and regular maintenance will be necessary to repair the pavement.

Roadside infrastructure is generally good with guideposts, signs and guard rails in serviceable condition. Line marking has faded to a level requiring reapplication in the near future.

Drainage along the road is generally good with adequate table drains, though grass growth is getting long in some areas and will need slashing soon so as not to obscure the roadsides.

APPENDIX – ROAD AUDIT INSPECTION PHOTOGRAPHS



Terang – Mortlake Rd - CH 0
Facing N

- Crocodile cracking through intersection particularly east bound lane with seal breaking out

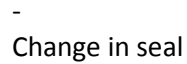
Photo 93 'GOPR7114.JPG' - (-38.2408116, 142.9202256)



Terang – Mortlake Rd - CH 0.062
Facing N

-
General view of intersection at Baynes street

Photo 94 '*GOPR7115.JPG*' - (-38.2403083, 142.9202885)



General view of intersection with Grey Street

- General view of intersection with Swanston Street

Page 9 of 30



Photo 98 'GOPR7119.JPG' - (-38.237378, 142.9208824)

Terang – Mortlake Rd - CH 0.393

Facing N

-

General view of railway crossing, crocodile cracking both sides



Photo 99 'GOPR7120.JPG' - (-38.2368247, 142.9210009)

Terang – Mortlake Rd - CH 0.453

Facing N

-

General view at intersection by Black Street



Photo 100 'GOPR7121.JPG' - (-38.2345834, 142.9214374)

Terang – Mortlake Rd - CH 0.708

Facing N

-

General view of intersection with Blackiston Street



Terang – Mortlake Rd - CH 1.017

Facing N

-

Rutting, shoving and filled potholes breaking out in south bound lane

Photo 104 'GOPR7125.JPG' - (-38.2316866, 142.9219846)



Terang – Mortlake Rd - CH 1.059

Facing N

-

Shoving, seal breaking out, and edge line tracking southbound lane

Photo 105 'GOPR7126.JPG' - (-38.2313587, 142.9220494)



Terang – Mortlake Rd - CH 1.071

Facing N

-

Shoving, seal breaking out, and edge line tracking southbound lane.

Photo 106 'GOPR7127.JPG' - (-38.2312287, 142.9220577)



Terang – Mortlake Rd - CH 1.255

Facing N

-
Crocodile cracking, rutting and flushing to north bound lane

Photo 110 'GOPR7131.JPG' - (-38.2297163, 142.9213487)



Terang – Mortlake Rd - CH 1.442

Facing N

-
Crocodile cracking, rutting, flushing and seal breaking out, north bound lane.

Photo 111 'GOPR7132.JPG' - (-38.2282552, 142.9202398)



Terang – Mortlake Rd - CH 1.469

Facing N

-
General view at intersection by Riley Road with crocodile cracking, rutting, flushing and filled potholes in south bound lane

Photo 112 'GOPR7133.JPG' - (-38.2280671, 142.9200999)



Photo 113 'GOPR7134.JPG' - (-38.2276103, 142.9198035)

Terang – Mortlake Rd - CH 1.525

Facing N

-

Crocodile cracking, rutting, shoving, flushing, filled potholes and seal breaking out to north bound lane.



Photo 114 'GOPR7135.JPG' - (-38.2261695, 142.9196328)

Terang – Mortlake Rd - CH 1.688

Facing N

-

Crocodile cracking, rutting, shoving, flushing, filled potholes and seal breaking out to north bound lane.



Photo 115 'GOPR7136.JPG' - (-38.225783, 142.9197237)

Terang – Mortlake Rd - CH 1.73

Facing N

-

Change in seal just after 100km/h sign



Photo 119 'GOPR7140.JPG' - (-38.22418, 142.9200648)

Terang – Mortlake Rd - CH 1.911

Facing N

-

Shoving, rutting, filled potholes and seal breaking out in both lanes.



Photo 120 'GOPR7141.JPG' - (-38.2239607, 142.920038)

Terang – Mortlake Rd - CH 1.935

Facing N

-

General view of pavement with flushing, crocodile cracking, rutting, filled potholes and seal breaking out.



Photo 121 'GOPR7142.JPG' - (-38.2222766, 142.920404)

Terang – Mortlake Rd - CH 2.184

Facing N

-

Change in seal

Photo 122 '*GOPR7143.JPG*' - (-38.2221655, 142.9204097)

Photo 123 '*GOPR7144.JPG*' - (-38.2217881, 142.9205325)

Photo 124 'GOPR7145.JPG' - (-38.2215787, 142.9205022)



Terang – Mortlake Rd - CH 2.378

Facing N

-

Edge of seal breaking out, crocodile cracking and flushing to south bound lane

Photo 128 'GOPR7149.JPG' - (-38.2205747, 142.9207469)



Terang – Mortlake Rd - CH 2.406

Facing N

-

Patched pothole with crocodile cracking and minor rutting, south bound lane

Photo 129 'GOPR7150.JPG' - (-38.220292, 142.9207783)



Terang – Mortlake Rd - CH 2.57 - 2.632

Facing N

-

Rutting, flushing, shoving, crocodile cracking, filled potholes and seal breaking out to both lanes.

Photo 130 'GOPR7151.JPG' - (-38.218824, 142.9210262)

Photo 134 'GOPR7155.JPG' - (-38.2162258, 142.9220587)

Photo 135 '*GOPR7156.JPG*' - (-38.2160052, 142.9221702)

Photo 136 '*GOPR7157.JPG*' - (-38.2158459, 142.9222563)



Terang – Mortlake Rd - CH 2.945

Facing N

-

Rutting, flushing, shoving, crocodile cracking filled potholes and seal breaking out both lanes.

Photo 137 'GOPR7158.JPG' - (-38.2156517, 142.9223327)



Terang – Mortlake Rd - CH 3.051

Facing N

-

Rutting, flushing, shoving, crocodile cracking filled potholes and seal breaking out north bound lane.

Photo 138 'GOPR7159.JPG' - (-38.2147389, 142.9227576)



Terang – Mortlake Rd - CH 3.107 - 3.231

Facing N

-

Filled potholes, flushing and seal breaking out north bound lane.

Photo 139 'GOPR7160.JPG' - (-38.2142717, 142.9229174)



Terang – Mortlake Rd - CH 4.402

Facing N

-
- Pumping of fines through small cracks in seal

Photo 152 'GOPR7173.JPG' - (-38.2026985, 142.925103)



Terang – Mortlake Rd - CH 4.495

Facing N

-
- Missing guide post west side

Photo 153 'GOPR7174.JPG' - (-38.2019071, 142.9252692)



Terang – Mortlake Rd - CH 4.676

Facing N

-
- General view at intersection by Dalvui Lane

Photo 154 'GOPR7175.JPG' - (-38.2003074, 142.9255877)



Terang – Mortlake Rd - CH 4.83

Facing N

-
Crocodile cracking and pumping of fines prominent in north bound lane but some in south bound lane

Photo 155 'GOPR7176.JPG' - (-38.1988605, 142.9258488)



Terang – Mortlake Rd - CH 5.47

Facing N

-
General view of pavement

Photo 156 'GOPR7177.JPG' - (-38.193211, 142.9269141)



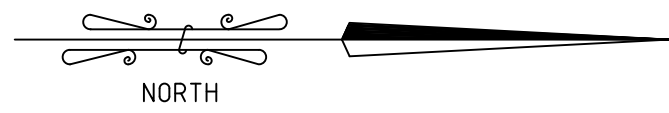
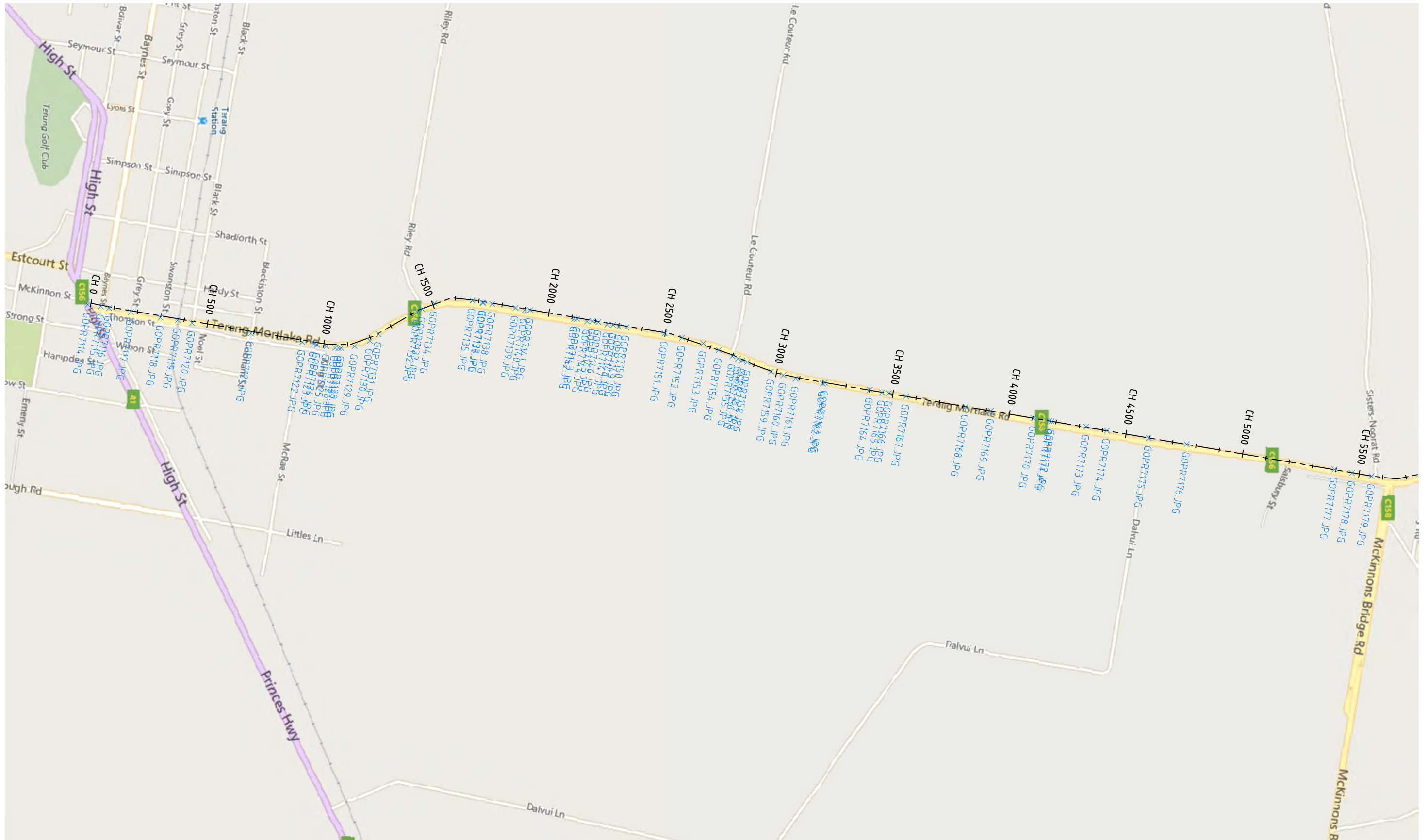
Terang – Mortlake Rd - CH 5.47

Facing N

-
General view of pavement at service lane entry

Photo 157 'GOPR7178.JPG' - (-38.1925498, 142.9270735)





ACCIONA ENERGY - MSWF
LAKE GILLEAR QUARRY HAULAGE ROUTE
TERANG - NOORAT SEGMENT

MORTLAKE SOUTH WIND FARM LOCAL UPGRADED ROADS ORIGINAL CONDITION DILAPIDATION REPORT

**SURVEY FOR:-
TAPPS LANE CH 0.00 – 5.26KM
GRINTERS LANE CH 1.22 – 3.98KM
CHAMALLAK LANE CH 0.28 – 1.95KM**

Inspection Date
16/12/2019

Report Date
23/12/2019

Version: A

For:
Acciona Energy Oceania Construction Pty Ltd

INSPECTION REGISTER – UPGRADED COUNCIL ROADS

[illegible]

Document History

Rev. No.	Description of Revision	Prepared By	Checked By	Date Issued
A	First Report	Brett Johnston	Scott Trotter	23/12/2019

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Table of Contents

Report

1.0	INTRODUCTION	4
2.0	CONDITION SUMMARY	4
2.1	Traffic Counts on Tapps Lane	5
2.2	Tapps Lane	6
2.3	Grinters Lane	7
2.4	Chamallak Lane	7
3.0	CONCLUSIONS	7
4.0	RECOMMENDATIONS	8

Appendices

Appendix 1 – Road Condition Photographs

1.0 INTRODUCTION

Acciona have requested an initial dilapidation inspection of the road pavement for the recently upgraded local roads accessed by the Mortlake South Wind Farm for the construction of 35 wind turbines. Acciona have advised us that current construction traffic is utilising all upgraded sections of road including Tapps Lane, Chamallak Lane and Grinters Lane.

The following report is a visual inspection only and no geotechnical testing of the actual pavement was performed. Sections of road covered by this report are shown in the figure below.



2.0 CONDITION SUMMARY

For the purposes of this report, pavement condition descriptions are as follows:-

Very Good	- No pavement intervention required
Good	- Localised pavement intervention required
Fair	- Moderate pavement intervention required
Poor	- Extensive pavement intervention required

A general summary of each of the roads and key segments is outlined in tables below and details are summarised in Appendix 1.

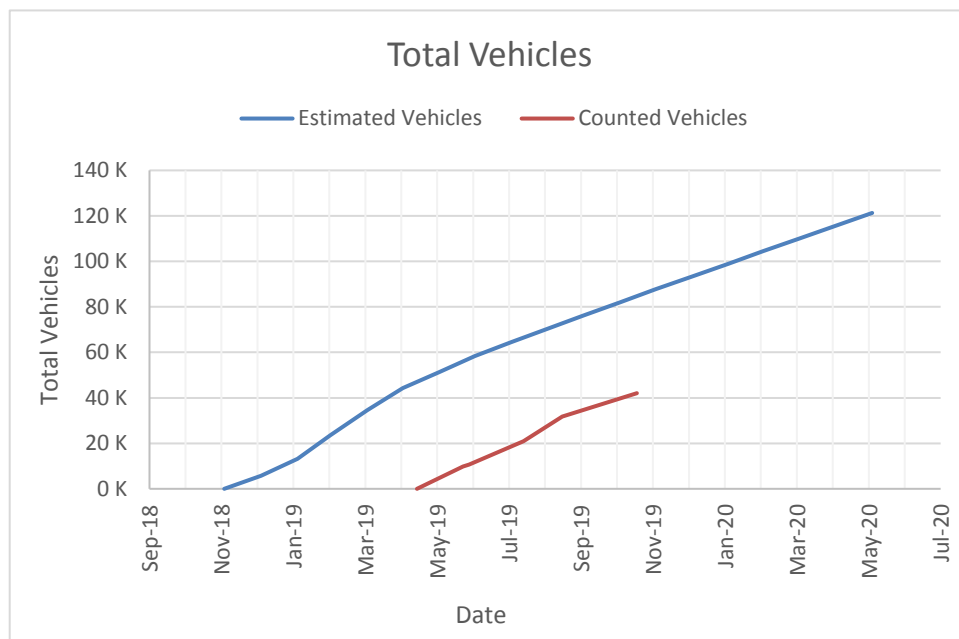
2.1 Traffic Counts on Tapps Lane

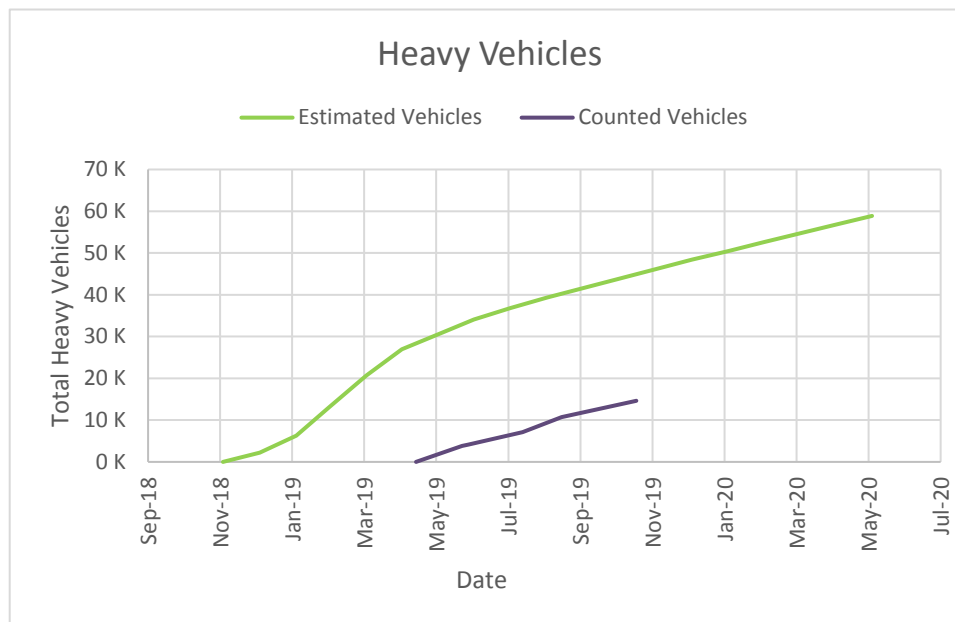
A traffic counter was installed at an approximate chainage of 120m on Tapps Lane. The traffic counter does not include vehicles moving in and out of the heavy vehicle compound just south of Terang-Mortlake Road, nor vehicles moving into the main site compound (although exiting and turning north is captured).

Traffic Volumes for Tapps Lane are summarised in the table below:

Date Range	Days	AADT	% Heavy Vehicles
13/5/2019 to 21/6/2019	40	244	39
26/6/2019 to 11/8/2019	47	218	29
13/9/2019 to 15/11/2019	64	419	38

Predicted total and daily traffic volumes were provided by Acciona and have been plotted over time in the graphs below. These predicted volumes have been compared against available traffic count data and presented in the graphs below.





Traffic volumes since 16th November 2019 have not been received and there is a gap in the data between 12 August and 12 September 2019.

2.2 Tapps Lane

Tapps Lane is a local access road that was recently upgraded from an unsealed single lane pavement to a 6.2m wide pavement with 0.5m unsealed gravel shoulder on each side. From Terang-Mortlake Road to Chamallak Lane intersection the road pavement is sealed. Further south of Chamallak Lane the road has been left unsealed.

The pavement has recently been asphalted and no noticeable defects were identified from the visual surface inspection. Loose gravel was observed on the asphalt pavement and line marking was identified as faded. Several guide posts were damaged or broken. A shoulder shove has occurred at the entry to the batching compound.

Drainage was being installed at the tower entry road intersections with excavators forming table drains. Stock grids were also installed at most entry roads.

Generally conditions are as follows:-

Road Segment	Original Condition	Prior Report	This Report	Comments
Ch 0.00 to 2.32	Very Good	Very Good	Very Good	Asphalt sealed pavement with very good surface. Some gravel on roads. Faded line marking. Some guide posts damaged or broken. Shoulder shove at batching plant entry..
Ch 2.32 to 5.26	Very Good		Very Good	Gravel surface in good condition.

Photos with notes and running chainage of road conditions along the travel route are provided in the Appendix.

2.3 *Grinters Lane*

Grinters Lane is a local access road that was recently upgraded from an unsealed single lane pavement to a 7.2m unsealed gravel road.

No noticeable deterioration of road pavement was overserved since the previous inspection apart from localized potholing and rutting at the tower entry roads. The guard rail near the Tapps Lane intersection has been repaired and the terminal chevron sign has been replaced.

Generally, the road conditions are as follows:-

Road Segment	Original Condition	Prior Report	This Report	Comments
Ch 1.15 to 1.30	Good	Good	Good	
Ch 1.30 to 2.95	Very Good	Very Good	Good	Minor potholing and rutting at tower entry roads
Ch 2.95 to 3.10	Good	Good	Good	
Ch 3.10 to 3.98	Very Good	Very Good	Good	Guard rail repaired and sign replaced.

Photos with notes and running chainage of road conditions along the travel route are provided in the Appendix.

2.4 *Chamallak Lane*

Chamallak Lane is a local access road that was recently upgraded from an unsealed single lane pavement to a 7.2m unsealed gravel road.

No noticeable defects in the road pavement were identified apart from a short section of shoulder rutting.

Generally, the road conditions are as follows:-

Road Segment	Original Condition	Prior Report	This Report	Comments
Ch 0.28 to 1.95	Very Good	Very Good	Very Good	Shoulder soft and rutted.

Photos with notes and running chainage of road conditions along the travel route are provided in the Appendix.

3.0 CONCLUSIONS

As the local roads have been recently upgraded the condition of the road pavement is generally very good.

Tapps Lane has some minor defects relating to faded line marking and gravel left on the asphalt; guide posts damaged and a shoulder shove.

Grinters Lane has minor potholing and rutting at the tower entry roads.

Chamallak Lane has localised minor shoulder rutting.

4.0 RECOMMENDATIONS

It is recommended that the works presented in the following table are undertaken:

Location	Item	Finding	Recommendation	Priority
Tapps Lane CH 15, 268	Guide Posts	Guide posts broken, damaged or missing.	Reinstate guide posts	Moderate
Tapps Lane CH 298	Shoulder	Shove at turn into batching compound.	Repair shoulder	Moderate
Tapps Lane CH 615	Road Surface	Loose gravel on surface.	Sweep sealed surface.	Low
Chamallak Lane CH 1950	Shoulder	Rutting in shoulder from errant truck.	Grade shoulder.	Low
Grinters Lane at Tower Entry Roads	Pavement	Potholes at rutting at tower entrance roads.	Grade when problematic.	Low

Priority in the table above is intended as follows:

- Urgent** - Indicates a defect presenting imminent danger to road users requiring immediate attention;
- High** - Indicates a defect presenting a potential danger requiring immediate attention or a potential for ongoing severe damage to infrastructure;
- Moderate** - Indicates a defect presenting a concern requiring attention to improve safety or a potential for ongoing moderate damage to infrastructure;
- Low** - Indicates a defect presenting a low risk of danger to road users or low ongoing damage concerns to infrastructure.

APPENDIX 1 – LOCAL UPGRADED ROAD CONDITION PHOTOS



Grinters Lane - CH 1359

Facing E

Pavement

Typical view of pavement

Photo 1 (GOPR6901.JPG) - E-38.1298741, N142.8274059



Grinters Lane - CH 1796

Facing E

Pavement

Some minor rutting and potholing at wind tower entry road

Photo 2 (GOPR6902.JPG) - E-38.1304325, N142.8323481



Grinters Lane - CH 2300

Facing E

Pavement

Some minor rutting and potholing at wind tower entry road

Photo 3 (GOPR6903.JPG) - E-38.1311638, N142.838036



Grinters Lane - CH 2320

Facing E

Pavement

Some minor rutting and potholing at wind tower entry road

Photo 4 (GOPR6904.JPG) - E-38.1312016, N142.8383182



Grinters Lane - CH 2997

Facing E

Pavement

Some minor rutting and potholing at wind tower entry road

Photo 5 (GOPR6905.JPG) - E-38.1320121, N142.845988



Grinters Lane - CH 3880

Facing E

Signage

Chevron sign replaced on guard rail terminal

Photo 6 (GOPR6906.JPG) - E-38.133238, N142.8556295



Grinters Lane - CH 3895

Facing E

Guard Rail

Section of damaged guard rail has been replaced.

Photo 7 (GOPR6907.JPG) - E-38.1332539, N142.8557998



Tapps Lane - CH 15

Facing S

Guide Posts

Three guide posts missing at intersection with Terang-Mortlake Rd

Photo 8 (GOPR6908.JPG) - E-38.1274236, N142.8577828



Tapps Lane - CH 268

Facing S

Guide Post & Line Marking

Guide post missing on west side and line marking faded.

Photo 9 (GOPR6909.JPG) - E-38.1296541, N142.8572219



Tapps Lane - CH 298

Facing S

Shoulder & Line Marking

Shoulder shove through turn into materials compound

Photo 10 (GOPR6910.JPG) - E-38.1299168, N142.857151



Tapps Lane - CH 2330

Facing S

Pavement

View at end of seal

Photo 11 (GOPR6911.JPG) - E-38.1479867, N142.85362



Tapps Lane - CH 4861

Facing S

Pavement

Typical view of gravel section of road.

Photo 12 (GOPR6912.JPG) - E-38.1705047, N142.8493838



Tapps Lane - CH 5330

Facing S

Pavement

View at end of upgraded gravel section of road.

Photo 13 (GOPR6913.JPG) - E-38.1746707, N142.8485931



Tapps Lane - CH 5035

Facing N

Table Drain

Table drain being formed at tower entrance road intersection with Tapps Lane

Photo 14 (GOPR6914.JPG) - E-38.1720423, N142.8490685



Tapps Lane - CH 2587

Facing N

Stock Grid

Typical stock grid installed at tower entrance road

Photo 15 (GOPR6915.JPG) - E-38.1502484, N142.8530216



Chamallak Lane - CH 1950

Facing W

Shoulder

Soft shoulder and rut on north side of road.

Photo 16 (GOPR6916.JPG) - E-38.1460485, N142.8397925

--- END OF REPORT ---



INITIAL DILAPIDATION REPORT

LAKE GILLEAR QUARRY HAULAGE ROUTE

RILEY ROAD
CH 0 – CH 1.317
1.317 km

Inspection Date
11 January 2020

Report Issue Date
15 January 2020

Version: A

For:
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Document History

Rev. No.	Description of Revision	Prepared By	Checked By	Date
A	First Report	Brett Johnston	Stephen Brodie	15/01/2019

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Table of Contents

Report

1.0	INTRODUCTION	4
2.0	ROAD LOCATION AND BASE INFORMATION	4
3.0	DEFINITIONS	5
4.0	DILAPIDATION SUMMARY	5
5.0	CONCLUSION	6

Appendix : ROAD CONDITION PHOTOS

1.0 INTRODUCTION

As part of their Traffic Management Plan and planning conditions, Acciona Energy Oceania Construction Pty Ltd (Acciona) have engaged The CSE Group Consulting Engineers Pty Ltd (CSE) to perform regular condition assessment and road quality auditing of the haulage road network for materials being sourced from the Lake Gilllear Quarry at Allansford, for construction of the Mortlake South Wind Farm.

The initial dilapidation survey was conducted on 11 January 2020 to form a basis of the road conditions prior to haulage commencing from the quarry. This audit report provides detailed information of the road pavement, roadside furniture, drainage and other items pertaining to the road between table drains for Riley Road, Terang. A centre line video run through of the road was also captured as evidence of the condition of the road for the entire length surveyed.

Regular inspections are scheduled following this initial audit to monitor and report on road conditions. All inspections and audits are visual only and no geotechnical testing is undertaken.

This report is intended to be a summary of road conditions at the time of inspection. Liaison between Acciona and the responsible authority shall determine required maintenance or works required. CSE accept no responsibility for delegating maintenance and/or repair works.

2.0 ROAD LOCATION AND BASE INFORMATION

The haulage route from the Lake Gilllear Quarry follows several local roads and highways to the construction sites at the wind farm. The Riley Road segment of the haulage route is shown in the map below.



MAP: Riley Road, Terang (Courtesy Google Maps)

The road segment commences at the intersection of Keilambete Rd with Riley Rd at CH 0.0km. It continues east along Riley Rd to the intersection of Racecourse Rd at CH 1.317km. The haulage road in this segment is managed by Corangamite Shire Council.

3.0 DEFINITIONS

The initial dilapidation survey has divided the road into segments of varying lengths based on the condition of each segment. The initial condition descriptions for each audited item are defined as follows:-

Very Good	- Some minor localised defects to up to 10% of the item;
Good	- Defects observed involving between 10 and 20% of the item;
Fair	- Defects observed involving between 20 and 50% of the item;
Poor	- Defects observed involving more than 50% of the item;

Regular road quality audits will assess road conditions with comparison made to the conditions at the initial dilapidation survey and the previous regular road quality audit. Conditions will be referred to as follows:

Much Improved	- Conditions have improved considerably with defects repaired to a high standard;
Slightly Improved	- Conditions have improved slightly with some defects repaired, or repairs have been made to a lower quality standard;
No Change	- Conditions have not changed or repairs have been made but new/similar defects have presented;
Slightly deteriorated	- Conditions have deteriorated with some increase in defects
Significantly deteriorated	- Conditions have deteriorated with significant increase in defects

4.0 DILAPIDATION SUMMARY

Riley Road is a gravel road with a marked lack of guide posts. The road appears very lightly trafficked and has a condition rating of Good.

The pavement is well formed with adequate superelevation and roadside drainage is appropriate, though there are no driveway culverts in place. A head wall at the Racecourse Rd intersection is damaged.

Signage is minimal and considered not required on this road due to the low traffic volumes and straight alignment which has good forward visibility.

Photographs with notes of conditions observed are provided in the Appendix to this report. The appendices also includes a map of photo locations. In this initial dilapidation and condition assessment general condition photos have been captured every 250m or closer where warranted.

A summary of the conditions observed are as follows:-

ROAD SEGMENT	PAVEMENT	LINE MARKING	DRAINAGE & VERGE	SIGNS & GUARD RAIL	GUIDE POSTS	COMMENTS
Riley Rd CH 0 – 1.317km	Good	N/A	Good	Good	Poor	Gravel road. Lack of guide posts. Good drainage.

5.0 CONCLUSION

The haulage route along the segment has an overall condition rating of Good, with no significant defects other than a lack of guide posts.

Drainage along the road is generally good with adequate table drains, though there are no culverts at driveways.

A culvert head wall at the Racecourse Rd intersection is damaged.

APPENDIX - ROAD CONDITION PHOTOS



Riley Road - CH 0

Facing E

Intersection

General view at intersection with Keilambete Rd.

Photo 1 'GOPR7467.JPG' (-38.22431, 142.88009)



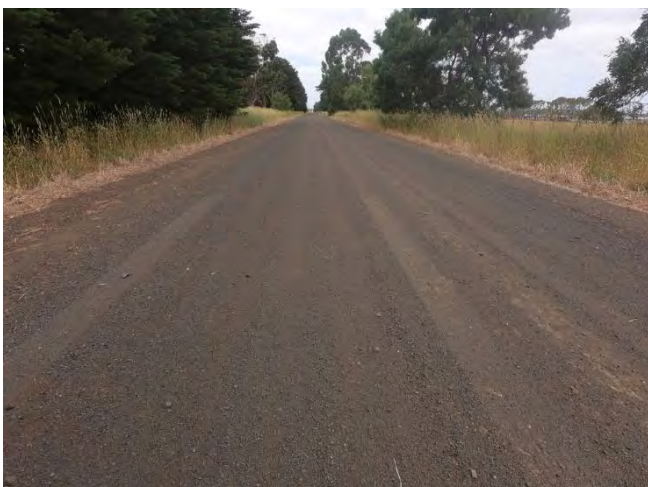
Riley Road - CH 0.110

Facing E

Shoulder

Tree branch on shoulder.

Photo 2 'GOPR7468.JPG' (-38.22441, 142.88123)



Riley Road - CH 0.250

Facing E

Pavement

General view of pavement

Photo 3 'GOPR7469.JPG' (-38.22464, 142.88289)



Riley Road - CH 0.500

Facing E

Pavement

General view of pavement

Photo 4 'GOPR7470.JPG' (-38.22496, 142.88565)



Riley Road - CH 0.750

Facing E

Pavement

General view of pavement

Photo 5 'GOPR7471.JPG' (-38.2253, 142.88853)



Riley Road - CH 1.000

Facing E

Pavement

General view of pavement

Photo 6 'GOPR7472.JPG' (-38.22565, 142.89138)



Riley Road - CH 1.250

Facing E

Pavement

General view of pavement

Photo 7 'GOPR7473.JPG' (-38.22598, 142.89421)



Riley Road - CH 1.302

Facing E

Intersection

General view at intersection with Racecourse Rd

Photo 8 'GOPR7474.JPG' (-38.22605, 142.89478)



Riley Road - CH 1.307

Facing E

Culvert

Head wall damaged on south side of road

Photo 9 'GOPR7475.JPG' (-38.22608, 142.89482)

- END OF REPORT -

MORTLAKE SOUTH WIND FARM HAULAGE ROUTE ROAD QUALITY ASSESSMENT & CONDITION MONITORING

**SURVEY FOR:-
SISTERS NOORAT ROAD CH 3.35 – 13.13km
TERANG MORTLAKE ROAD CH 5.56 – 15.19km**

Inspection Date
30/01/2020

Report Date
05/02/2020

Version: A

For:
Acciona Energy Oceania Construction Pty Ltd

INSPECTION REGISTER – SISTERS QUARRY

PROJECT	2018.165																															
Mortlake South Wind Farm Road Upgrades Tapps Lane, Kolora	DATE OF ISSUE																															
	DAY	8	17	24	20	28	14	27	20	6	17	3	6	13	2	10	20	21	05													
	MONTH	1	4	4	5	5	6	6	8	9	9	10	11	11	12	12	12	01	02													
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John Kelly CSC						1	1	1	1	1	1	1	1	1	1	1	1	1	1													
Aaron Moyne CSC												1	1	1	1	1	1	1	1													
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3		17/04/2019				A																										
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Document History

Rev. No.	Description of Revision	Prepared By	Checked By	Date
A	First Report	Brett Johnston	Stephen Brodie	05/02/2020

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Table of Contents

Report

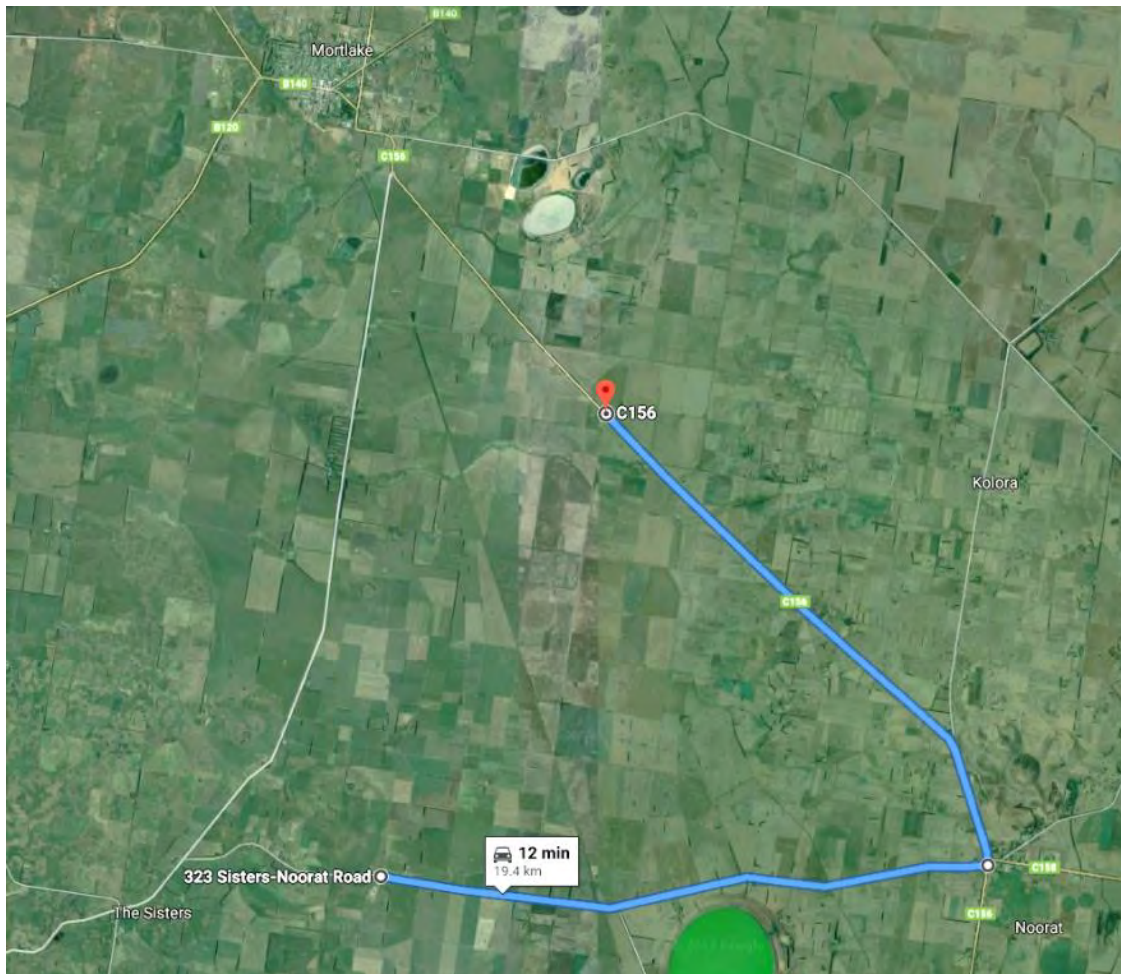
1.0	INTRODUCTION	4
2.0	CONDITION SUMMARY	4
2.1	Sisters-Noorat Road	5
2.2	Terang-Mortlake Road	6
3.0	CONCLUSION & RECOMMENDATIONS	7

Appendices

Appendix 1 – Road Condition Photographs

1.0 INTRODUCTION

Acciona have requested a road monitoring survey of the road pavement for the proposed route for quarry product cartage to the proposed Mortlake South Wind Farm from the Sisters Quarry on the Sisters Noorat Road through the Noorat Township to the Terang Mortlake Road intersection with Tapps Lane. The following report compares current conditions to the original visual inspection (21 December 2018). No geotechnical testing of the actual pavement was performed for this report.



2.0 CONDITION SUMMARY

For the purposes of this report pavement condition descriptions are as follows:-

Very Good	- No pavement intervention required
Good	- Localised pavement intervention required
Fair	- Moderate pavement intervention required
Poor	- Extensive pavement intervention required

A general summary of each of the roads and key segments is outlined in tables below and photographs are provided in Appendix 1.

2.1 Sisters-Noorat Road

The Sisters-Noorat Road is a local road and has a 6.2m seal with 1.5m unsealed gravel shoulder on each side. The existing pavement has been deteriorating as heavy vehicle traffic increases.

There are still many areas of pavement failure, potholing, seal stripping, shoving and crocodile cracking. Some defects have resurfaced in recently asphalted patches indicating that the base and/or subgrade material has failed. New areas of the pavement are also deteriorating and breaking up.

There has been further damage to roadside furniture including guide posts. Only damage occurring since the last audit is documented in this report – refer to previous reports for older damaged items.

Some patching works have been undertaken in the past fortnight weeks which has improved the surface in general, though new defects have appeared. Some of the patching works is substandard with fill in the defective areas sitting proud of the road surface and it appears the failed areas have not been cut out prior to repair works. Spoil material has also been dumped in the table drains or on the road shoulder in many locations which is presenting as a hazard and is generally untidy.

The road in general will likely continue to fail rapidly in the poor condition areas. Two segments have had condition downgraded to FAIR due to the extent of defects.

Refer to the latter part of the appendix to this report for photographic details of all defects found.

Generally conditions are as follows:-

Road Segment	Original Condition	Prior Report	This Report	Comments
Ch 3.35 to 3.43	Fair	Fair	Fair	Crocodile cracking in Quarry entrance.
Ch 3.43 to 4.37	Fair	Fair	Fair	Patch failing, shoving, seal breaking out, crocodile cracking and guide post damage. Spoil on shoulder.
Ch 4.37 to 5.76	Good	Good/Fair	FAIR	Crocodile cracking, edge break-out & guide post damage. Some repairs done.
Ch 5.76 to 6.44	Good	Fair	Fair	Damaged guide posts, signs missing/damaged. Large pavement failures at Tapps Ln intersection.
Ch 6.44 to 6.70	Fair	Poor	Poor	Patches breaking open again. Guide post damage.
Ch 6.70 to 7.49	Very Good	Good	FAIR	Warning sign missing. Patch breaking open.
Ch 7.49 to 9.01	Poor	Poor	Poor	Recent areas patched. Many patches breaking open again. Seal stripping. Crocodile cracking. Longitudinal cracking. Guide post damage.
Ch 9.01 to 9.14	Good	Fair	Fair	Guide post damage.
Ch 9.14 to 9.84	Very Good	Good	Good	Guide post damage.

Ch 9.84 to 10.40	Poor	Poor	Poor	Recent patches breaking open again, crocodile cracking. Guide post damage. Spoil dumped in table drain
Ch 10.40 to 10.60	Poor	Poor	Poor	Recent patching cracking around perimeter. Spoil dumped in table drain.
Ch 10.60 to 12.20	Poor	Poor	Poor	Patch failures have been repaired. Small potholes formed. Guide post damage.
Ch 12.20 to 13.13	Good	Fair	Fair	Seal break-outs. Rutting. Crocodile cracking through intersection. Guide post damage.

2.2 Terang-Mortlake Road

The Terang-Mortlake Road is a declared main road and has a 6.8m seal with 1.5m unsealed gravel shoulder on each side.

In general, the road has continued to deteriorate since the last inspection though there has been some pothole patching. Extensive areas of the seal are breaking out, shoving and rutting.

There has been damage to several guide posts, though much of this damage is not recent. Some guide posts have been replaced in the last fortnight, but not all those reported as defective. Only damage occurring since the last audit is documented in this report – refer to previous reports for older damaged items.

The grass on the verge has been slashed in most areas.

Refer to the first part of the appendix to this report for photographic details of all defects found.

Generally, the road conditions are as follows:-

Road Segment	Original Condition	Prior Report	This Report	Comments
Ch 5.56 to 5.99	Good	Good	Good	Small shoves, crocodile cracking and guide post damage.
Ch 5.99 to 7.67	Fair	Poor	Poor	Extensive crocodile cracking, shoving, flushing and rutting. Potholes opening. Line marking tracking.
Ch 7.67 to 8.94	Fair	Fair	Fair	Seal flushing, shoving and rutting. Line marking tracking.
Ch 8.94 to 11.60	Good	Fair	Fair	Potholes filled but shoving out. Rutting, flushing and shoving. Crocodile cracking and seal areas breaking out. Large pavement failure at CH 11.27km.
Ch 11.60 to 11.70	Fair	Fair	Fair	
Ch 11.70 to 12.36	Good	Good	Good	

Ch 12.36 to 12.80	Fair	Poor	Poor	Extensive deep rutting and crocodile cracking. Seal breaking out.
Ch 12.80 to 13.51	Fair	Fair	Fair	Crocodile cracking and rutting. Guide post replaced.
Ch 13.51 to 14.04	Fair	Good	Good	Guide post damage.
Ch 14.04 to 15.02	Fair	Fair	Fair	Guide post replaced.
Ch 15.02 to 15.19	Very Good	Very Good	Very Good	Guide post damage.

3.0 CONCLUSION & RECOMMENDATIONS

The Sisters-Noorat Rd is generally in fair to poor condition though has seen some improvement with repairs performed since the last audit. Heavy traffic loads will cause defects to reappear in the pavement. Recently repaired sections of the road are beginning to fail likely due to the base and subgrade material not being adequate to support the traffic. New areas of pavement are also breaking out.

The maintenance that has been performed on the road has been of varied quality with some patches cut out, recompact and asphalt sealed, whilst other break-outs have been crudely filled and topped up to high levels (proud of surrounding pavement) without cutting out the pavement and squaring up patch. Pavement repairs should be cut square and the failed base material removed before new material is placed and fully compacted prior to applying primer and asphaltting or sealing over.

There are many roadside furniture items damaged, particularly guide posts and several signs, though much of these were damaged at the onset of haulage along this road. Several guide posts have been damaged in the past fortnight.

Terang-Mortlake Road is showing signs of distress with large areas of crocodile cracking pavement failures, shoving and seal stripping. Damage is becoming extensive in some segments and it appears as though minimal maintenance has been performed on this road other than the occasional pothole filling. A large failed section at CH 11.27km is particularly prominent and heavy rutting is a concern through chainages 12.52 to 12.80.

In general, repairs should be performed to many sections of both roads to improve conditions. Several asphalt overlays conducted recently have started to fail, indicating that this treatment method is inadequate and reconstruction of the pavement in failed areas is necessary for a mid to long term solution.

APPENDIX 1 – ROAD CONDITION PHOTOGRAPHS



Photo 1 'GOPR7840.JPG' - (-38.19162, 142.92719)

Terang-Mortlake Road - CH 5.567

Facing N

Crocodile cracking through intersection



Photo 2 'GOPR7841.JPG' - (-38.19054, 142.92722)

Terang-Mortlake Road - CH 5.689

Facing N

Shoving of patch on west side, guide post missing on east side.



Photo 3 'GOPR7842.JPG' - (-38.18792, 142.92623)

Terang-Mortlake Road - CH 5.993

Facing NW

Edge shove and crocodile cracking through all wheel paths



Photo 4 'GOPR7843.JPG' - (-38.18704, 142.92587)

Terang-Mortlake Road - CH 6.095

Facing NW

Rutting and crocodile cracking. Seal flush.



Photo 5 'GOPR7844.JPG' - (-38.18428, 142.92475)

Terang-Mortlake Road - CH 6.415

Facing NW

Typical view of crocodile cracking through segment.



Photo 6 'GOPR7845.JPG' - (-38.1747, 142.92093)

Terang-Mortlake Road - CH 7.535 – 7.580

Facing NW

Shoving, rutting and edge line tracking.



Terang-Mortlake Road - CH 7.550

Facing NW

Centre line tracking

Photo 7 'GOPR7846.JPG' - (-38.17457, 142.92083)



Terang-Mortlake Road - CH 7.626

Facing NW

Shove at intersection

Photo 8 'GOPR7847.JPG' - (-38.17393, 142.92037)



Terang-Mortlake Road - CH 7.665

Facing NW

Flushing, shoving, edge line tracking, rutting and seal breaking out south bound lane

Photo 9 'GOPR7848.JPG' - (-38.1737, 142.92018)



Photo 10 'GOPR7849.JPG' - (-38.17256, 142.9187)

Terang-Mortlake Road - CH 7.844

Facing NW

Flushing, shoving and edge line tracking south bound lane



Photo 11 'GOPR7850.JPG' - (-38.15772, 142.89718)

Terang-Mortlake Road - CH 10.347

Facing NW

Potholes patched but shoving out, crocodile cracking north bound lane



Photo 12 'GOPR7851.JPG' - (-38.15736, 142.89664)

Terang-Mortlake Road - CH 10.405 – 10.439

Facing NW

Potholes patched but shoving out, crocodile cracking north bound lane



Photo 13 'GOPR7852.JPG' - (-38.15687, 142.89601)

Terang-Mortlake Road - CH 10.486 – 10.507

Facing NW

Rutting, shoving and seal breaking out south bound lane



Photo 14 'GOPR7853.JPG' - (-38.15676, 142.89573)

Terang-Mortlake Road - CH 10.513

Facing NW

Potholes patched but shoving out, crocodile cracking north bound lane



Photo 15 'GOPR7854.JPG' - (-38.15256, 142.88999)

Terang-Mortlake Road - CH 11.195

Facing NW

Potholes patched but shoving out, crocodile cracking north bound lane



Photo 16 'GOPR7855.JPG' - (-38.15243, 142.8898)

Terang-Mortlake Road - CH 11.216

Facing NW

Rutting, shoving, edge line tracking and seal breaking out



Photo 17 'GOPR7856.JPG' - (-38.15213, 142.88939)

Terang-Mortlake Road - CH 11.270

Facing NW

Major pavement failure full width with rutting, flushing, large areas of seal breaking out and shoving



Photo 18 'GOPR7857.JPG' - (-38.14428, 142.87907)

Terang-Mortlake Road - CH 12.524

Facing NW

Typical view of heavy rutting in north bound lane.



Terang-Mortlake Road - CH 12.585

Facing NW

Typical view of heavy rutting in north bound lane.

Photo 19 'GOPR7858.JPG' - (-38.14391, 142.87859)

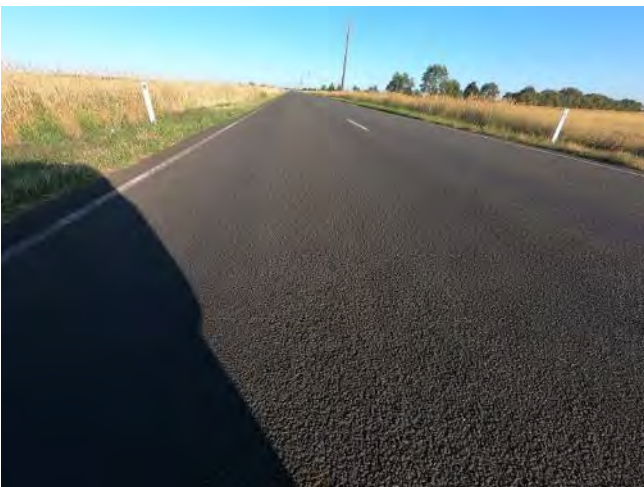


Terang-Mortlake Road - CH 12.819

Facing NW

Rutting and crocodile cracking in south bound lane

Photo 20 'GOPR7859.JPG' - (-38.1424, 142.8767)



Terang-Mortlake Road - CH 12.920

Facing NW

Guide post replaced NE side of road.

Photo 21 'GOPR7860.JPG' - (-38.14183, 142.87588)



Terang-Mortlake Road - CH 14.034

Facing NW

Guide post damaged SW side of road

Photo 22 'GOPR7861.JPG' - (-38.13485, 142.86679)



Terang-Mortlake Road - CH 14.633

Facing NW

Guide post replaced south west side of road

Photo 23 'GOPR7862.JPG' - (-38.13095, 142.86198)



Terang-Mortlake Road - CH 15.161

Facing NW

Guide posts damaged/missing in intersection

Photo 24 'GOPR7863.JPG' - (-38.12751, 142.85788)



Sisters-Noorat Road - CH 3.327

Facing E

Crocodile cracking and edge of seal breaking out at quarry entrance

Photo 25 'GOPR7864.JPG' - (-38.1934, 142.817)



Sisters-Noorat Road - CH 4.205

Facing E

Patch breaking out and shoving

Photo 26 'GOPR7865.JPG' - (-38.19475, 142.82686)



Sisters-Noorat Road - CH 4.254

Facing E

Patching completed. Spoil left on shoulder.

Photo 27 'GOPR7866.JPG' - (-38.19482, 142.82739)



Sisters-Noorat Road - CH 4.290

Facing E

Crocodile cracking through long heavy patch.

Photo 28 'GOPR7867.JPG' - (-38.19489, 142.82785)



Sisters-Noorat Road - CH 4.455

Facing E

Edge of seal breaking out and crocodile cracking at driveway.

Photo 29 'GOPR7868.JPG' - (-38.19515, 142.82967)



Sisters-Noorat Road - CH 5.750

Facing E

Patch failure repaired. New area cracking and breaking up in crown.

Photo 30 'GOPR7869.JPG' - (-38.19664, 142.84436)



Sisters-Noorat Road - CH 5.763

Facing E

Patched pothole, breaking out and shoving at intersection of Tapps Lane. Finger sign (road name sign) missing off pole.

Photo 31 'GOPR7870.JPG' - (-38.19659, 142.84443)



Sisters-Noorat Road - CH 6.464

Facing E

Patch breaking open

Photo 32 'GOPR7871.JPG' - (-38.19736, 142.85251)



Sisters-Noorat Road - CH 6.493

Facing E

Patch repaired but breaking open again either side and crocodile cracking beyond.

Photo 33 'GOPR7872.JPG' - (-38.1974, 142.85274)



Photo 34 'GOPR7873.JPG' - (-38.19764, 142.85406)

Sisters-Noorat Road - CH 6.610

Facing E

Recently damaged guide post south side of road.



Photo 35 'GOPR7874.JPG' - (-38.19767, 142.85444)

Sisters-Noorat Road - CH 6.640

Facing E

Recent patch breaking open.



Photo 36 'GOPR7875.JPG' - (-38.19778, 142.85511)

Sisters-Noorat Road - CH 6.695

Facing E

Recent patches breaking out.



Sisters-Noorat Road - CH 6.923

Facing E

Sign missing off pole

Photo 37 'GOPR7876.JPG' - (-38.19804, 142.85749)



Sisters-Noorat Road - CH 7.486

Facing E

Patch breaking open

Photo 38 'GOPR7877.JPG' - (-38.19723, 142.86384)



Sisters-Noorat Road - CH 7.555

Facing E

Recent patches in pavement, large rectangular patches have very thin seal stripping off

Photo 39 'GOPR7878.JPG' - (-38.19708, 142.86451)



Sisters-Noorat Road - CH 7.565

Facing E

Recent patches in pavement. Large rectangular patches have very thin seal stripping off and potholing.

Photo 40 'GOPR7879.JPG' - (-38.19704, 142.86471)



Sisters-Noorat Road - CH 7.620

Facing E

Crocodile cracking and patch breaking up

Photo 41 'GOPR7880.JPG' - (-38.19696, 142.86535)



Sisters-Noorat Road - CH 7.785

Facing E

Recent patch repair.

Photo 42 'GOPR7881.JPG' - (-38.19656, 142.8672)



Sisters-Noorat Road - CH 7.918

Facing E

Longitudinal cracking in major patch.

Photo 43 'GOPR7882.JPG' - (-38.19628, 142.86869)



Sisters-Noorat Road - CH 8.080

Facing E

Recent patches starting to break open.

Photo 44 'GOPR7883.JPG' - (-38.19595, 142.87047)



Sisters-Noorat Road - CH 8.374

Facing E

Thin seal on patch stripping

Photo 45 'GOPR7884.JPG' - (-38.19529, 142.87377)



Sisters-Noorat Road - CH 8.432

Facing E

Patch in crown reopening.

Photo 46 'GOPR7885.JPG' - (-38.19519, 142.87438)



Sisters-Noorat Road - CH 8.809

Facing E

Recent patch repair. Seal beyond thin and breaking out.

Photo 47 'GOPR7886.JPG' - (-38.19438, 142.87858)



Sisters-Noorat Road - CH 9.128

Facing E

Damaged guide posts both sides and seal stripping

Photo 48 'GOPR7887.JPG' - (-38.19371, 142.88207)



Sisters-Noorat Road - CH 10.150

Facing E

Recent patch breaking out.

Photo 49 'GOPR7888.JPG' - (-38.19456, 142.89352)



Sisters-Noorat Road - CH 10.296

Facing E

Recent patches breaking out in crown.

Photo 50 'GOPR7889.JPG' - (-38.19475, 142.89536)



Sisters-Noorat Road - CH 10.324

Facing E

Crocodile cracking around recent patches.

Photo 51 'GOPR7890.JPG' - (-38.19478, 142.89563)



Photo 52 'GOPR7891.JPG' - (-38.19484, 142.89608)

Sisters-Noorat Road - CH 10.364

Facing E

Recent patch repaired and beginning to break out.



Photo 53 'GOPR7892.JPG' - (-38.19482, 142.8963)

Sisters-Noorat Road - CH 10.380

Facing E

Shoving repaired with asphalt. Spoil dumped in table drain.



Photo 54 'GOPR7893.JPG' - (-38.19487, 142.89642)

Sisters-Noorat Road - CH 10.387 – 10.409

Facing E

Recent major patch stripping, some patching performed.



Photo 55 'GOPR7894.JPG' - (-38.19488, 142.89722)

Sisters-Noorat Road - CH 10.470

Facing E

Guide post missing north side of road, warning sign knocked over, spoil heaped in table drain.



Photo 56 'GOPR7895.JPG' - (-38.19488, 142.89772)

Sisters-Noorat Road - CH 10.490 – 10.526

Facing E

Recent patches breaking out have been repaired, but cracking around repairs.



Photo 57 'GOPR7896.JPG' - (-38.19481, 142.8982)

Sisters-Noorat Road - CH 10.555

Facing E

Edge break out repaired.



Photo 58 'GOPR7897.JPG' - (-38.19468, 142.89949)

Sisters-Noorat Road - CH 10.660 – 10.680

Facing E

Small patched potholes reopening on west bound side.



Photo 59 'GOPR7898.JPG' - (-38.19416, 142.90301)

Sisters-Noorat Road - CH 10.970 – 11.037

Facing E

Recent patches breaking out have been repaired.



Photo 60 'GOPR7899.JPG' - (-38.19193, 142.9173)

Sisters-Noorat Road - CH 12.255

Facing E

Seal break out repaired.



Sisters-Noorat Road - CH 12.702

Facing E

Seal breaking out

Photo 61 'GOPR7900.JPG' - (-38.19203, 142.92244)



Sisters-Noorat Road - CH 12.753

Facing E

Seal breaking out

Photo 62 'GOPR7901.JPG' - (-38.19203, 142.92301)



Sisters-Noorat Road - CH 12.772

Facing E

Seal breaking out and crocodile cracking.

Photo 63 'GOPR7902.JPG' - (-38.192, 142.92321)



Sisters-Noorat Road - CH 13.107

Facing E

Seal breaking out and crocodile cracking in lead up to intersection.

Photo 64 'GOPR7903.JPG' - (-38.19169, 142.92702)

---- END OF DOCUMENT ----

Appendix B – Haulage Code of Conduct

Mortlake South Wind Farm Haulage Code of Conduct

SCOPE:

This code of conduct will prevail in every aspect of the haulage of materials to the Mortlake South Wind Farm.

AIM:

- To demonstrate to the community a very real commitment to professional, efficient, safe and responsible haulage of materials to the Mortlake South Wind Farm construction site.
- To develop and maintain community confidence in the wind farm industry.

OBJECTIVES:

- Minimise impacts of trucks on all public roads.
- Professional and timely haulage planning by civil contractors.
- Endorsement of and compliance with Local and State Government regulations
- Universal commitment to enforce and abide by the Code of Conduct
- Transparent and proactive compliance to the Code of Conduct
- To maximise safety in all aspects of haulage of plantation products

CODE OF CONDUCT RESPONSIBILITIES

The Civil Contractor and ACCIONA will:

- Implement the endorsed Mortlake South Wind Farm Traffic Management Plan.
- Ensure that contractors are inducted into the Mortlake South Wind Farm Traffic Management Plan prior to the commencement of any haulage operation.
- Undertake surveys of planned haul routes to identify any pre-emptive works.
- Supervise and manage all haulage operations.
- Ensure that all proposed haulage routes are maintained to an agreed satisfactory standard.
- Provide induction for all drivers to the construction site.
- Embrace fatigue management strategies by organising scheduling for drivers.



TRANSPORT CONTRACTORS

- Adopt and enforce a Drug and Alcohol Policy
- Adopt and enforce a fatigue management system in accordance with State Government regulations, and the Occupational Health and Safety **Regulations 1996, 'Workplace safety requirements for Driving Commercial Vehicle's, and Worksafe standards and regulations.**
- Ensure that all drivers have the required licenses
- Provide personal protective equipment for all employees
- Provide appropriate safety equipment to all employees.
- Maintain all trucks and trailers in a safe and clean working condition in accordance with regulations
- Not tolerate overloading for any haulage combination
- Encourage professional and appropriate use of UHF radios and not tolerate the use of obscene language
- Promptly advise relevant road authority (such as VicRoads or the Council), of damage to roads, culverts, bridges and any encroaching road verge vegetation that limits visibility and safety
- Ensure that all trucks carry an appropriate fully operational fire extinguisher at all times
- Ensure that all signs are maintained in a clearly visible and readable state.
- Ensure that all load bindings straps conform to the appropriate Australian Standard.
- Not tolerate any littering by any employees.
- Not allow the transport of any dangerous article, explosive or firearm in any vehicle.
- Ensure drivers are inducted prior to entering processing site
- Ensure all trucks display clearly legible telephone contact numbers on sides and rear of trucks.

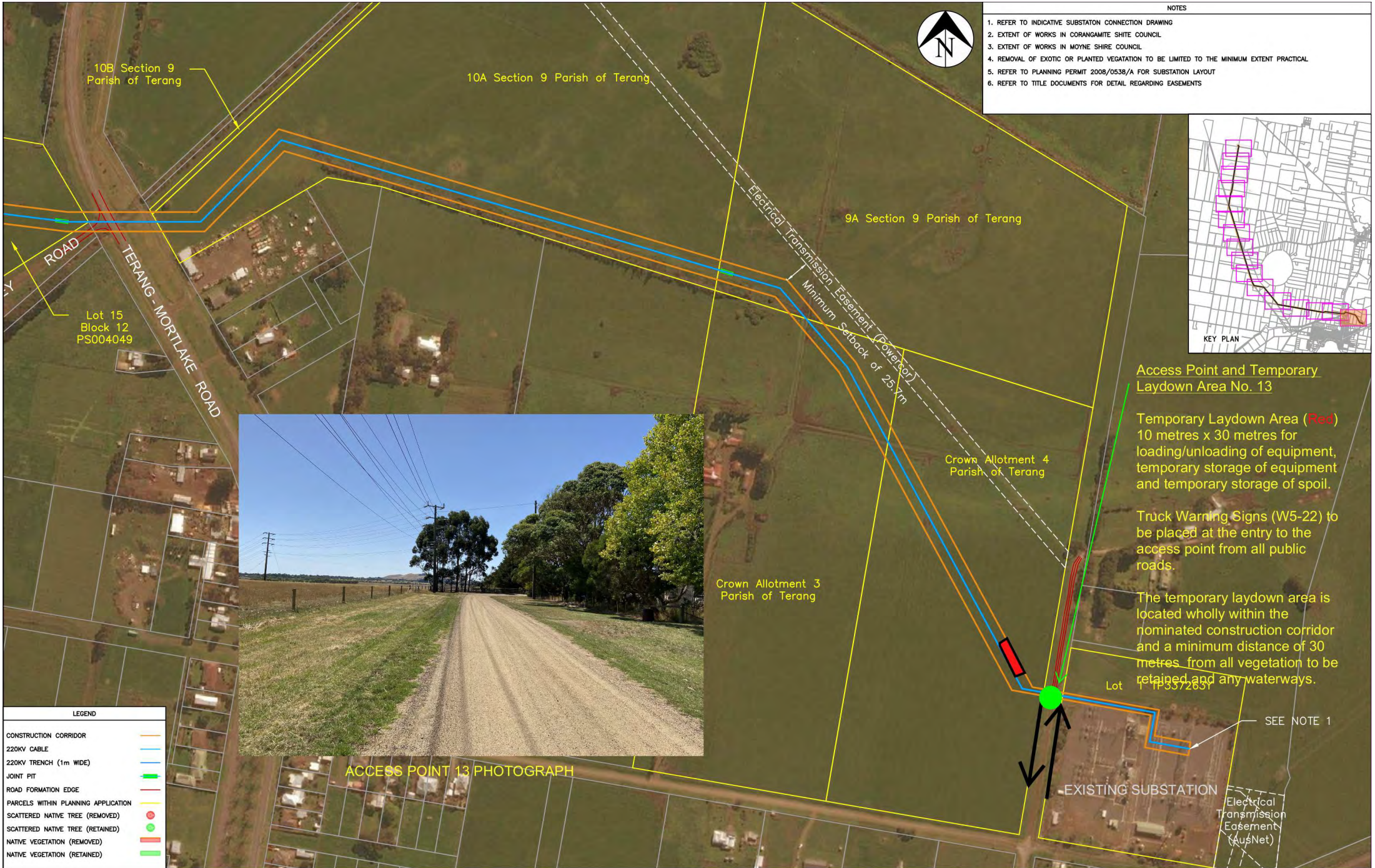
TRUCK DRIVERS WILL:

- Hold a current appropriate licence for the vehicle they are operating
- Strictly comply with all traffic regulations
- Comply with all gazetted speed limits on all roads
- Comply with fatigue management guidelines
- Drive in a manner at all times that is accordance with road conditions
- **Yield "right of way" whenever appropriate to ensure safe passage of other road users**
- At all times leave adequate distance between trucks to allow safe passing by other road users
- Decrease truck speeds to minimise dust and noise around private dwellings, roadworks and stationary vehicles.



- Preferably not use engine braking where noise is likely to adversely impact residents
- switch the lights of the truck on at all times during haulage operations
- remain calm and courteous when in contact with other road users, members of the public landowners and plantation owners
- Not operate machinery whilst under the influence of drugs and/or alcohol
- Not operate machinery whilst suffering fatigue
- Not interfere with any public property, livestock or farm infrastructure in the course of haulage operations.
- Wear personal Protective Equipment supplied by their employer.
- Maintain a professional standard and do not obscene language when using UHF radios
- Not accept overloading of trucks
- Position themselves safely outside the cab whilst being loaded; ensuring each bay is loaded correctly.
- Remain in a safe location being visible to the loader operator during the truck loading operation
- Ensure that any other person at the loading point is kept a safe distance from the loading operation
- Inspect any preloaded trailer prior to load binding and hitching up.
- Ensure the removal of all protruding limbs, loose bark or trailing debris prior to leaving the loading point or immediately when noticed enroute.
- Not secure any part of any load whilst loading is in progress
- Accurately complete required paperwork prior to departure and as necessary
- Check security of the load at least once in transit and re-secure where necessary.
- Leave all gates as found at all times.
- Maintain trucks in a clean and tidy condition.
- Ensure that there is no littering.
- Not carry any dangerous article, explosive or firearm in any truck at any time.
- Abide by the Country Fire Authority Act at all times.

Appendix C – Access and Route Alignment Plans



- NOTES
1. REFER TO INDICATIVE SUBSTATION CONNECTION DRAWING
 2. EXTENT OF WORKS IN CORANGAMITE SHIRE COUNCIL
 3. EXTENT OF WORKS IN MOYNE SHIRE COUNCIL
 4. REMOVAL OF EXOTIC OR PLANTED VEGETATION TO BE LIMITED TO THE MINIMUM EXTENT PRACTICAL
 5. REFER TO PLANNING PERMIT 2008/0538/A FOR SUBSTATION LAYOUT
 6. REFER TO TITLE DOCUMENTS FOR DETAIL REGARDING EASEMENTS



Access Point and Temporary Laydown Area No. 13

Temporary Laydown Area (Red)
10 metres x 30 metres for loading/unloading of equipment, temporary storage of equipment and temporary storage of spoil.

Truck Warning Signs (W5-22) to be placed at the entry to the access point from all public roads.

The temporary laydown area is located wholly within the nominated construction corridor and a minimum distance of 30 metres from all vegetation to be retained and any waterways.

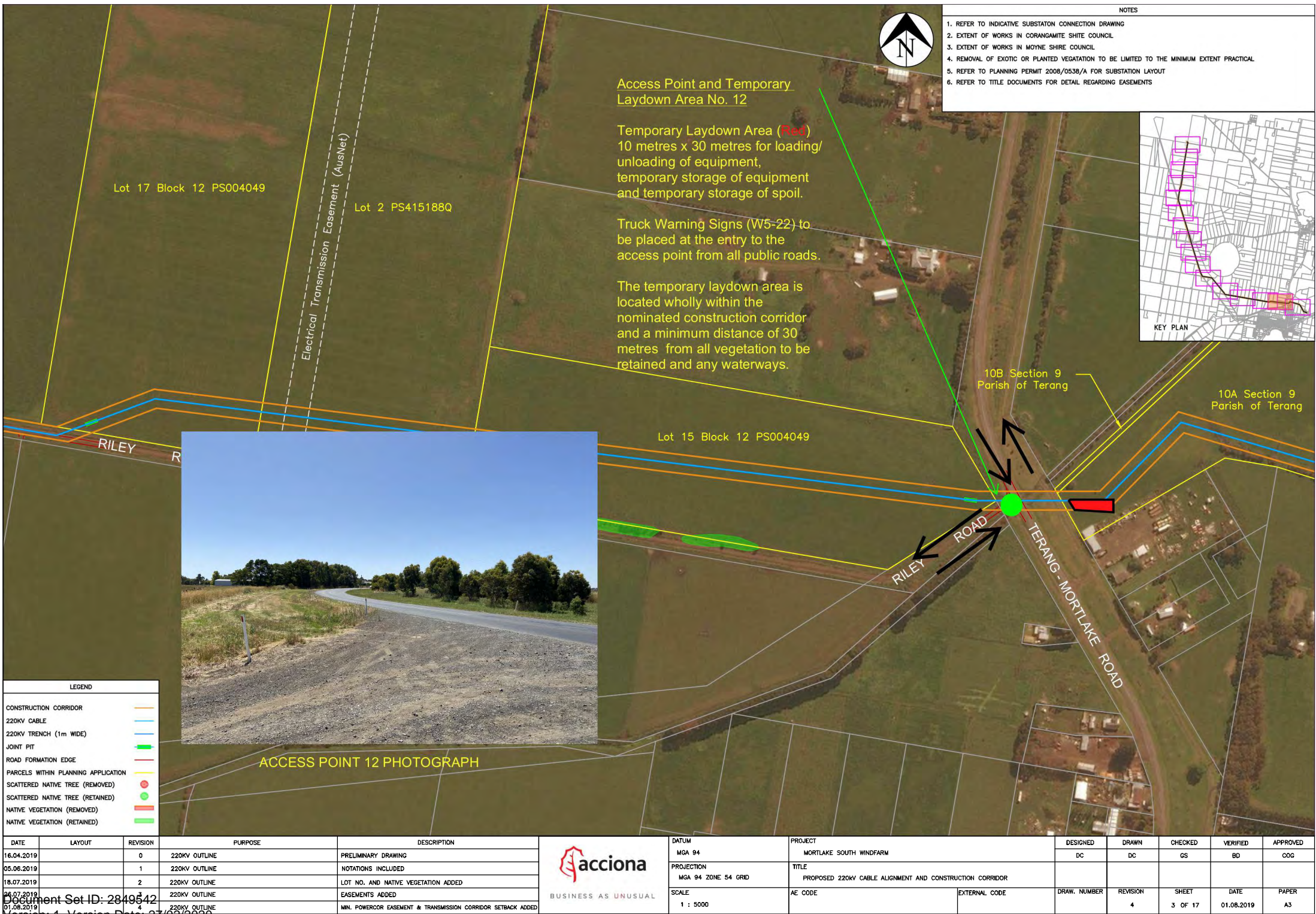
SEE NOTE 1

LEGEND	
CONSTRUCTION CORRIDOR	
220KV CABLE	
220KV TRENCH (1m WIDE)	
JOINT PIT	
ROAD FORMATION EDGE	
PARCELS WITHIN PLANNING APPLICATION	
SCATTERED NATIVE TREE (REMOVED)	
SCATTERED NATIVE TREE (RETAINED)	
NATIVE VEGETATION (REMOVED)	
NATIVE VEGETATION (RETAINED)	

DATE	LAYOUT	REVISION	PURPOSE	DESCRIPTION
16.04.2019		0	220KV OUTLINE	PRELIMINARY DRAWING
05.06.2019		1	220KV OUTLINE	NOTATIONS INCLUDED
18.07.2019		2	220KV OUTLINE	LOT NO. AND NATIVE VEGETATION ADDED
26.07.2019		3	220KV OUTLINE	EASEMENTS ADDED
01.08.2019		4	220KV OUTLINE	MIN. POWERCOR EASEMENT & TRANSMISSION CORRIDOR SETBACK ADDED



DATUM MSA 94	PROJECT MORTLAKE SOUTH WINDFARM	DESIGNED DC	DRAWN DC	CHECKED GS	VERIFIED BD	APPROVED COG
PROJECTION MSA 94 ZONE 54 GRID	TITLE PROPOSED 220KV CABLE ALIGNMENT AND CONSTRUCTION CORRIDOR	SCALE 1 : 5000	AE CODE	EXTERNAL CODE	DRAW. NUMBER	REVISION 4
					SHEET 2 OF 17	DATE 01.08.2019
					PAPER A3	



- NOTES
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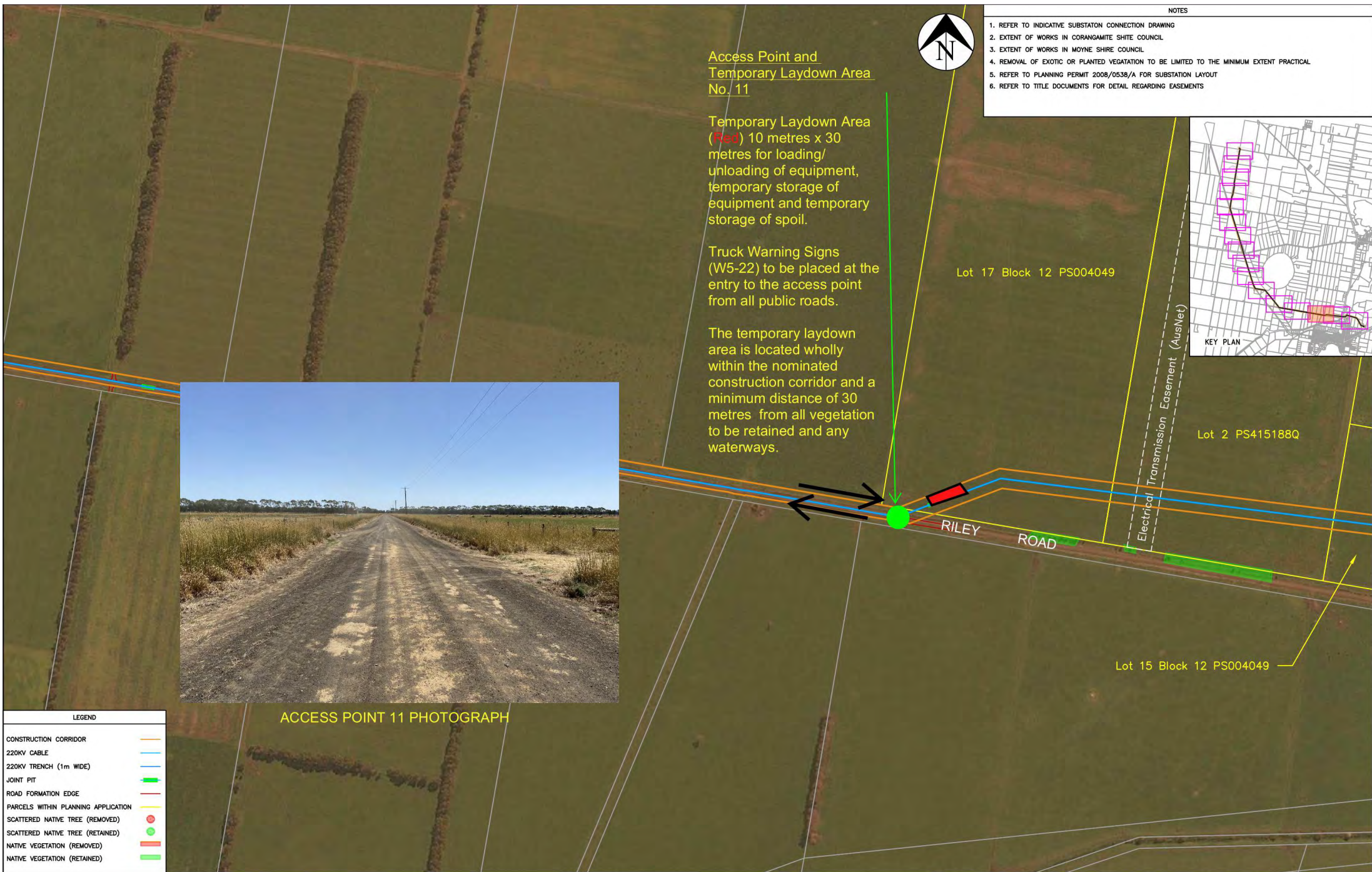


LEGEND	
CONSTRUCTION CORRIDOR	
220KV CABLE	
220KV TRENCH (1m WIDE)	
JOINT PIT	
ROAD FORMATION EDGE	
PARCELS WITHIN PLANNING APPLICATION	
SCATTERED NATIVE TREE (REMOVED)	
SCATTERED NATIVE TREE (RETAINED)	
NATIVE VEGETATION (REMOVED)	
NATIVE VEGETATION (RETAINED)	

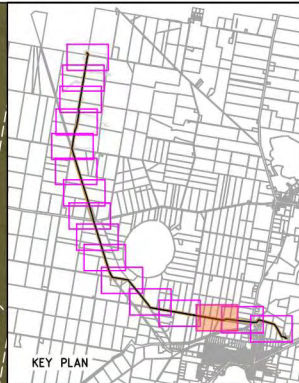
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05.06.2019		1	220KV OUTLINE	NOTATIONS INCLUDED
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01.08.2019		4	220KV OUTLINE	MIN. POWERCOR EASEMENT & TRANSMISSION CORRIDOR SETBACK ADDED



DATUM	PROJECT	DESIGNED	DRAWN	CHECKED	VERIFIED	APPROVED
MGA 94	MORTLAKE SOUTH WINDFARM	DC	DC	GS	BD	COG
PROJECTION	TITLE					
MGA 94 ZONE 54 GRID	PROPOSED 220KV CABLE ALIGNMENT AND CONSTRUCTION CORRIDOR					
SCALE	AE CODE	EXTERNAL CODE	DRAW. NUMBER	REVISION	SHEET	PAPER
1 : 5000				4	3 OF 17	A3



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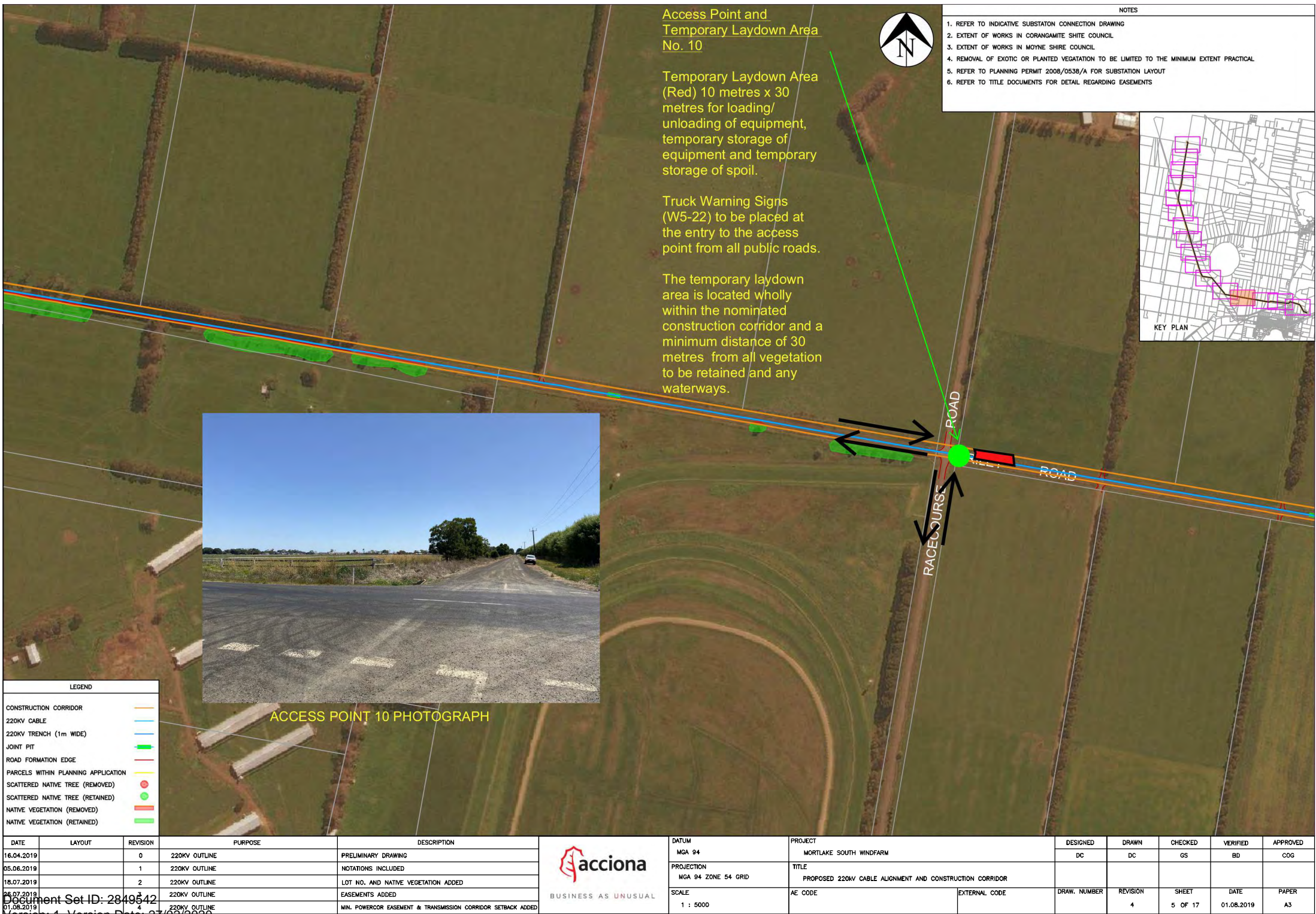
ACCESS POINT 11 PHOTOGRAPH

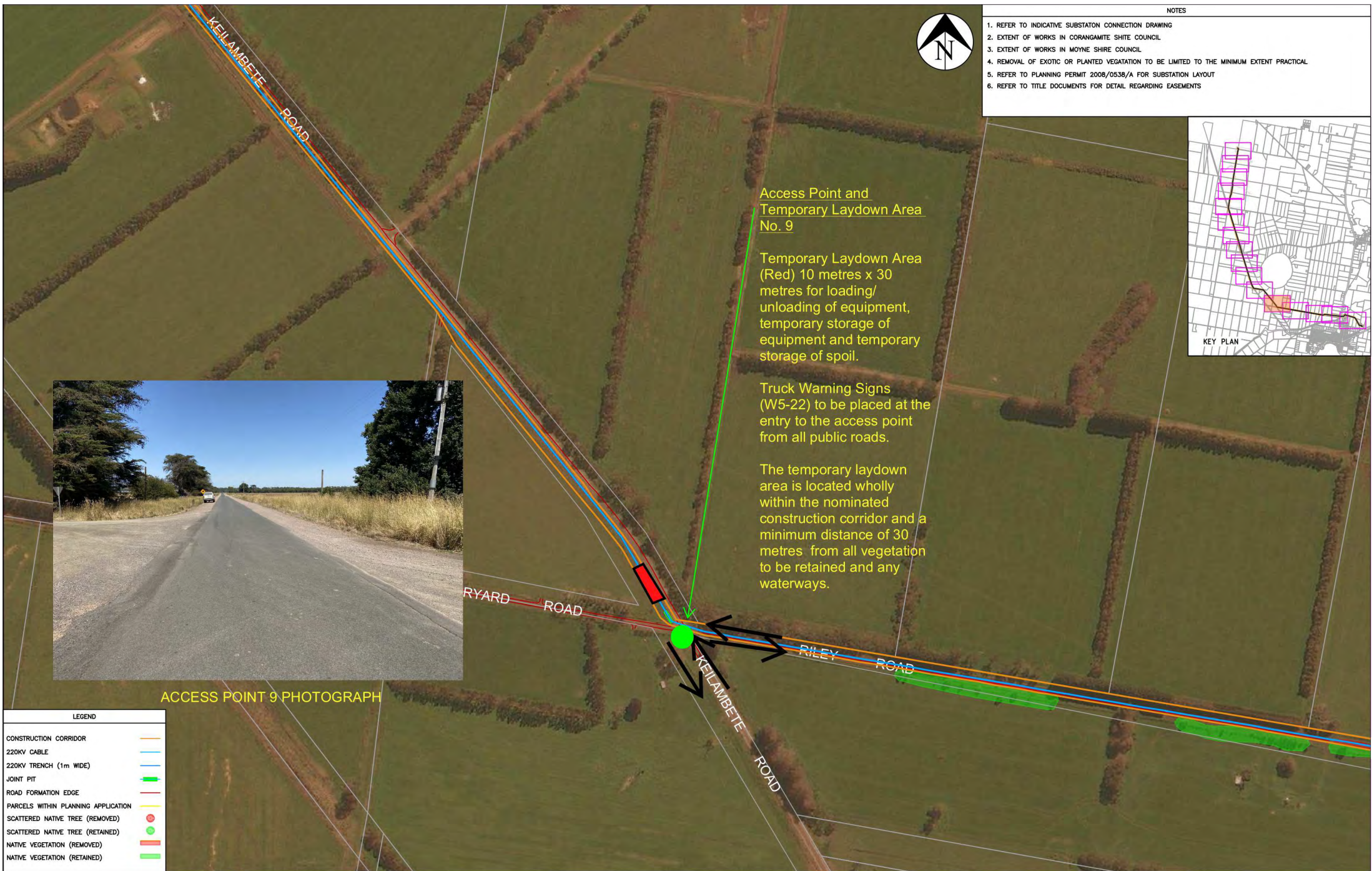
LEGEND	
CONSTRUCTION CORRIDOR	
220KV CABLE	
220KV TRENCH (1m WIDE)	
JOINT PIT	
ROAD FORMATION EDGE	
PARCELS WITHIN PLANNING APPLICATION	
SCATTERED NATIVE TREE (REMOVED)	
SCATTERED NATIVE TREE (RETAINED)	
NATIVE VEGETATION (REMOVED)	
NATIVE VEGETATION (RETAINED)	

DATE	LAYOUT	REVISION	PURPOSE	DESCRIPTION
16.04.2019		0	220KV OUTLINE	PRELIMINARY DRAWING
05.06.2019		1	220KV OUTLINE	NOTATIONS INCLUDED
18.07.2019		2	220KV OUTLINE	LOT NO. AND NATIVE VEGETATION ADDED
26.07.2019		3	220KV OUTLINE	EASEMENTS ADDED
01.08.2019		4	220KV OUTLINE	MIN. POWERCOR EASEMENT & TRANSMISSION CORRIDOR SETBACK ADDED



DATUM	PROJECT	DESIGNED	DRAWN	CHECKED	VERIFIED	APPROVED
MGA 94	MORTLAKE SOUTH WINDFARM	DC	DC	GS	BD	COG
PROJECTION	TITLE					
MGA 94 ZONE 54 GRID	PROPOSED 220KV CABLE ALIGNMENT AND CONSTRUCTION CORRIDOR					
SCALE	AE CODE	EXTERNAL CODE	DRAW. NUMBER	REVISION	SHEET	PAPER
1 : 5000				4	4 OF 17	A3





- NOTES
1. REFER TO INDICATIVE SUBSTATION CONNECTION DRAWING
 2. EXTENT OF WORKS IN CORANGAMITE SHIRE COUNCIL
 3. EXTENT OF WORKS IN MOYNE SHIRE COUNCIL
 4. REMOVAL OF EXOTIC OR PLANTED VEGETATION TO BE LIMITED TO THE MINIMUM EXTENT PRACTICAL
 5. REFER TO PLANNING PERMIT 2008/0538/A FOR SUBSTATION LAYOUT
 6. REFER TO TITLE DOCUMENTS FOR DETAIL REGARDING EASEMENTS



Access Point and
Temporary Laydown Area
No. 9

Temporary Laydown Area
(Red) 10 metres x 30
metres for loading/
unloading of equipment,
temporary storage of
equipment and temporary
storage of spoil.

Truck Warning Signs
(W5-22) to be placed at the
entry to the access point
from all public roads.

The temporary laydown
area is located wholly
within the nominated
construction corridor and a
minimum distance of 30
metres from all vegetation
to be retained and any
waterways.



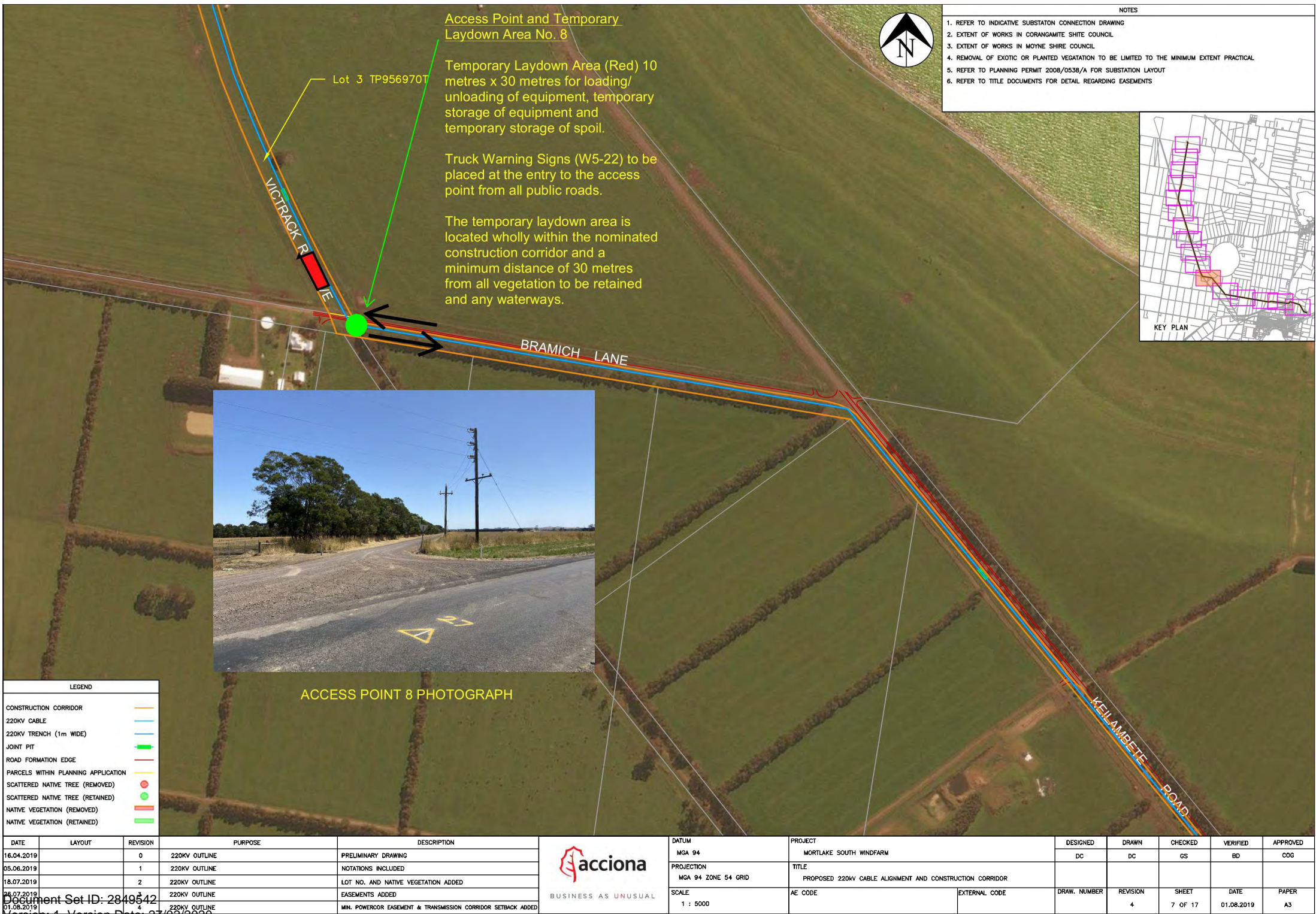
ACCESS POINT 9 PHOTOGRAPH

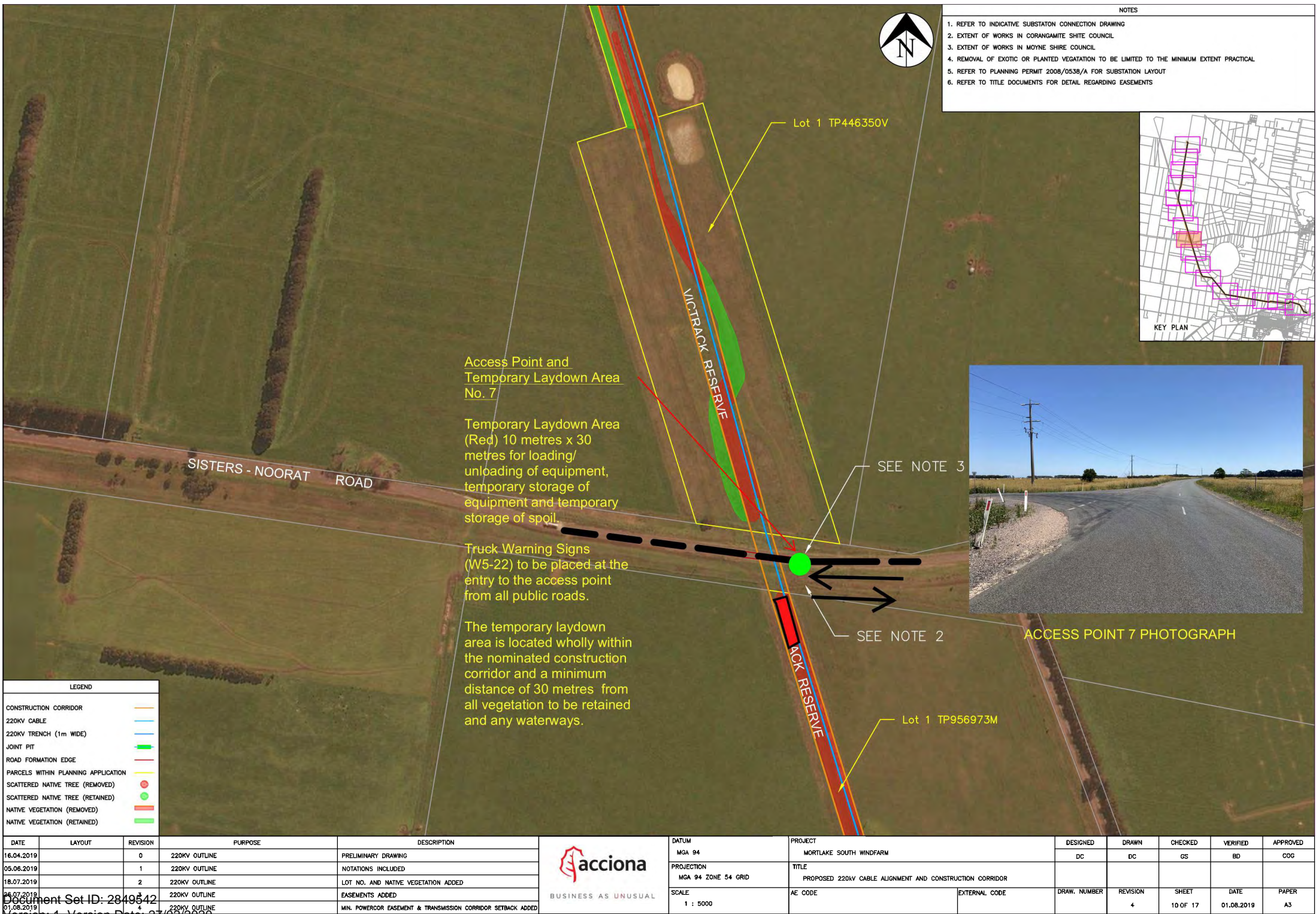
LEGEND	
CONSTRUCTION CORRIDOR	
220KV CABLE	
220KV TRENCH (1m WIDE)	
JOINT PIT	
ROAD FORMATION EDGE	
PARCELS WITHIN PLANNING APPLICATION	
SCATTERED NATIVE TREE (REMOVED)	
SCATTERED NATIVE TREE (RETAINED)	
NATIVE VEGETATION (REMOVED)	
NATIVE VEGETATION (RETAINED)	

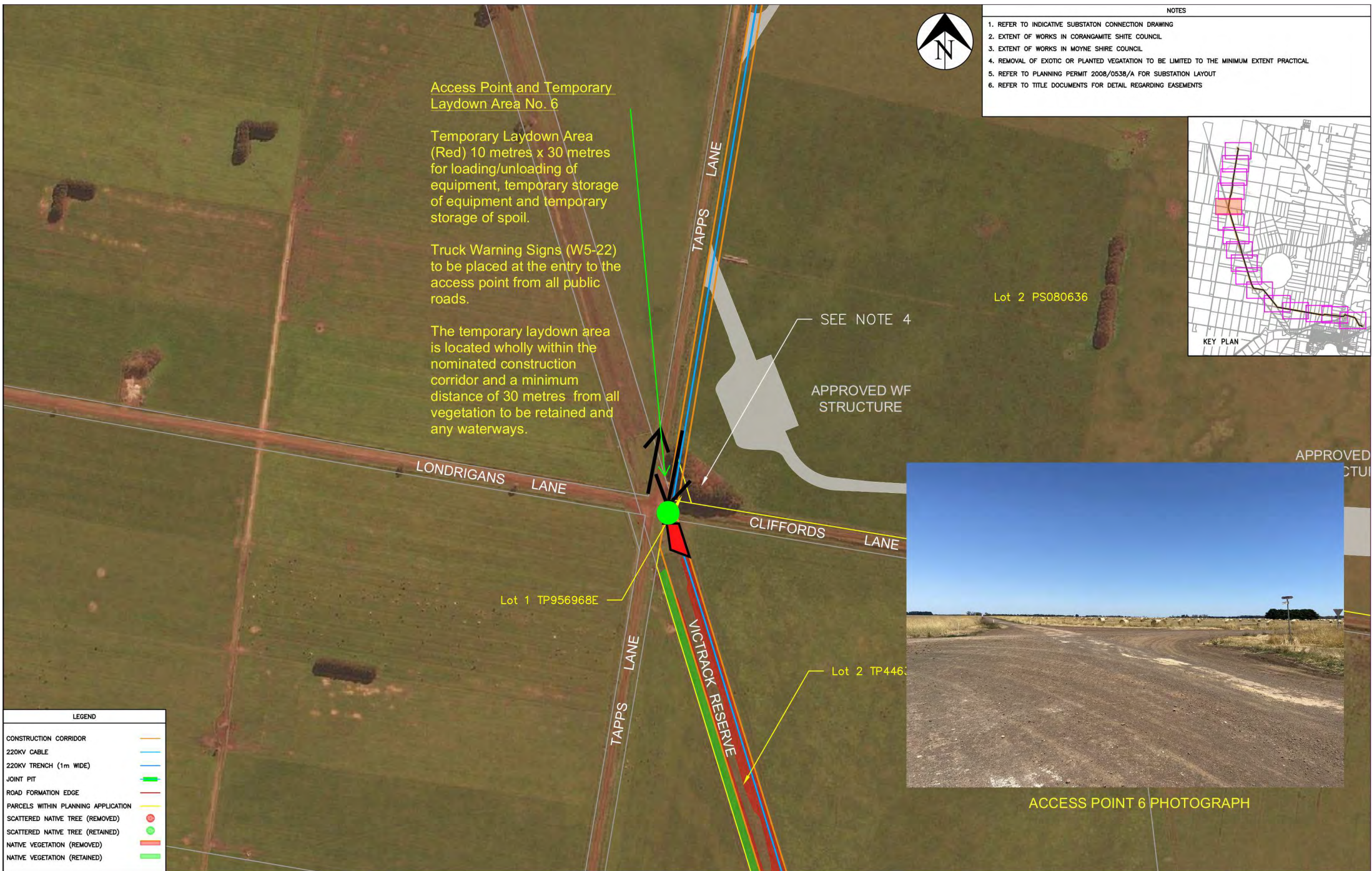
DATE	LAYOUT	REVISION	PURPOSE	DESCRIPTION
16.04.2019		0	220KV OUTLINE	PRELIMINARY DRAWING
05.06.2019		1	220KV OUTLINE	NOTATIONS INCLUDED
18.07.2019		2	220KV OUTLINE	LOT NO. AND NATIVE VEGETATION ADDED
24.07.2019		3	220KV OUTLINE	EASEMENTS ADDED
01.08.2019		4	220KV OUTLINE	MIN. POWERCOR EASEMENT & TRANSMISSION CORRIDOR SETBACK ADDED



DATUM	PROJECT	DESIGNED	DRAWN	CHECKED	VERIFIED	APPROVED
MGA 94	MORTLAKE SOUTH WINDFARM	DC	DC	GS	BD	COG
PROJECTION	TITLE					
MGA 94 ZONE 54 GRID	PROPOSED 220KV CABLE ALIGNMENT AND CONSTRUCTION CORRIDOR					
SCALE	AE CODE	EXTERNAL CODE	DRAW. NUMBER	REVISION	SHEET	DATE
1 : 5000				4	6 OF 17	01.08.2019
						PAPER
						A3







Access Point and Temporary Laydown Area No. 6

Temporary Laydown Area (Red) 10 metres x 30 metres for loading/unloading of equipment, temporary storage of equipment and temporary storage of spoil.

Truck Warning Signs (W5-22) to be placed at the entry to the access point from all public roads.

The temporary laydown area is located wholly within the nominated construction corridor and a minimum distance of 30 metres from all vegetation to be retained and any waterways.

SEE NOTE 4

APPROVED WF STRUCTURE

Lot 2 PS080636

Lot 1 TP956968E

Lot 2 TP446

APPROVED CTUI

ACCESS POINT 6 PHOTOGRAPH

LEGEND	
CONSTRUCTION CORRIDOR	
220KV CABLE	
220KV TRENCH (1m WIDE)	
JOINT PIT	
ROAD FORMATION EDGE	
PARCELS WITHIN PLANNING APPLICATION	
SCATTERED NATIVE TREE (REMOVED)	
SCATTERED NATIVE TREE (RETAINED)	
NATIVE VEGETATION (REMOVED)	
NATIVE VEGETATION (RETAINED)	

DATE	LAYOUT	REVISION	PURPOSE	DESCRIPTION
16.04.2019		0	220KV OUTLINE	PRELIMINARY DRAWING
05.06.2019		1	220KV OUTLINE	NOTATIONS INCLUDED
18.07.2019		2	220KV OUTLINE	LOT NO. AND NATIVE VEGETATION ADDED
24.07.2019		3	220KV OUTLINE	EASEMENTS ADDED
01.08.2019		4	220KV OUTLINE	MIN. POWERCOR EASEMENT & TRANSMISSION CORRIDOR SETBACK ADDED



DATUM MGA 94	PROJECT MORTLAKE SOUTH WINDFARM	DESIGNED DC	DRAWN DC	CHECKED GS	VERIFIED BD	APPROVED COG
PROJECTION MGA 94 ZONE 54 GRID	TITLE PROPOSED 220KV CABLE ALIGNMENT AND CONSTRUCTION CORRIDOR					
SCALE 1 : 5000	AE CODE	EXTERNAL CODE	DRAW. NUMBER	REVISION 4	SHEET 13 OF 17	DATE 01.08.2019
						PAPER A3



ACCESS POINT 4 PHOTOGRAPH

Access Point and Temporary Laydown Area No. 4

Temporary Laydown Area (Red) 10 metres x 30 metres for loading/unloading of equipment, temporary storage of equipment and temporary storage of spoil.

Truck Warning Signs (W5-22) to be placed at the entry to the access point from all public roads.

The temporary laydown area is located wholly within the nominated construction corridor and a minimum distance of 30 metres from all vegetation to be retained and any waterways.

Access Point and Temporary Laydown Area No. 5

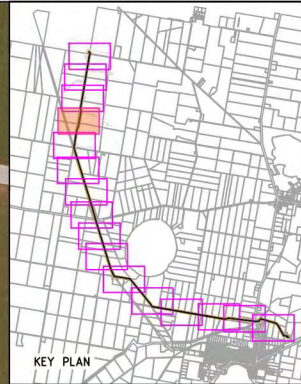
Temporary Laydown Area (Red) 10 metres x 30 metres for loading/unloading of equipment, temporary storage of equipment and temporary storage of spoil.

Truck Warning Signs (W5-22) to be placed at the entry to the access point from all public roads.

The temporary laydown area is located wholly within the nominated construction corridor and a minimum distance of 30 metres from all vegetation to be retained and any waterways.



NOTES	
1.	REFER TO INDICATIVE SUBSTATION CONNECTION DRAWING
2.	EXTENT OF WORKS IN CORANGAMITE SHIRE COUNCIL
3.	EXTENT OF WORKS IN MOYNE SHIRE COUNCIL
4.	REMOVAL OF EXOTIC OR PLANTED VEGETATION TO BE LIMITED TO THE MINIMUM EXTENT PRACTICAL
5.	REFER TO PLANNING PERMIT 2008/0538/A FOR SUBSTATION LAYOUT
6.	REFER TO TITLE DOCUMENTS FOR DETAIL REGARDING EASEMENTS



APPROVED WF STRUCTURE

Lot 1 TP761875X

TAPPS LANE

SEE NOTE 4

Drainage Easement



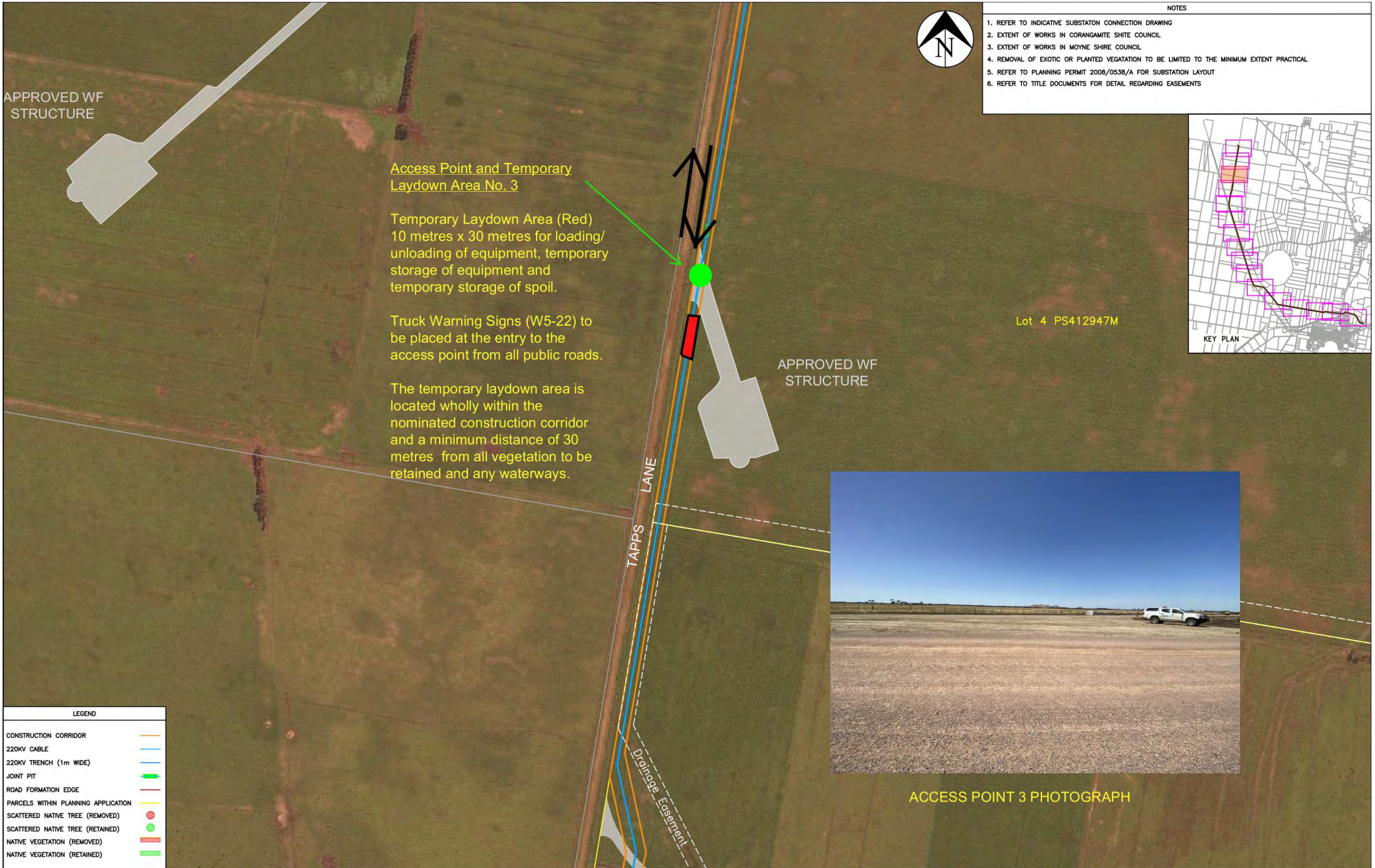
ACCESS POINT 5 PHOTOGRAPH

LEGEND	
CONSTRUCTION CORRIDOR	
220KV CABLE	
220KV TRENCH (1m WIDE)	
JOINT PIT	
ROAD FORMATION EDGE	
PARCELS WITHIN PLANNING APPLICATION	
SCATTERED NATIVE TREE (REMOVED)	
SCATTERED NATIVE TREE (RETAINED)	
NATIVE VEGETATION (REMOVED)	
NATIVE VEGETATION (RETAINED)	

DATE	LAYOUT	REVISION	PURPOSE	DESCRIPTION
16.04.2019		0	220KV OUTLINE	PRELIMINARY DRAWING
05.06.2019		1	220KV OUTLINE	NOTATIONS INCLUDED
18.07.2019		2	220KV OUTLINE	LOT NO. AND NATIVE VEGETATION ADDED
24.07.2019		3	220KV OUTLINE	EASEMENTS ADDED
01.08.2019		4	220KV OUTLINE	MIN. POWERCOR EASEMENT & TRANSMISSION CORRIDOR SETBACK ADDED



DATUM	PROJECT	DESIGNED	DRAWN	CHECKED	VERIFIED	APPROVED
MGA 94	MORTLAKE SOUTH WINDFARM	DC	DC	GS	BD	COG
PROJECTION	TITLE					
MGA 94 ZONE 54 GRID	PROPOSED 220KV CABLE ALIGNMENT AND CONSTRUCTION CORRIDOR					
SCALE	AE CODE	EXTERNAL CODE	DRAW. NUMBER	REVISION	SHEET	DATE
1 : 5000				4	14 OF 17	01.08.2019
						PAPER
						A3



- NOTES
1. REFER TO INDICATIVE SUBSTATION CONNECTION DRAWING

2. EXTENT OF WORKS IN CORANGAMITE SHIRE COUNCIL

3. EXTENT OF WORKS IN MOYNE SHIRE COUNCIL

4. REMOVAL OF EXOTIC OR PLANTED VEGETATION TO BE LIMITED TO THE MINIMUM EXTENT PRACTICAL

5. REFER TO PLANNING PERMIT 2008/0538/A FOR SUBSTATION LAYOUT

6. REFER TO TITLE DOCUMENTS FOR DETAIL REGARDING EASEMENTS



Lot 4 PS412947M

APPROVED WF
STRUCTURE

TAPPS
LANE

Drainage Easement



ACCESS POINT 3 PHOTOGRAPH

LEGEND	
CONSTRUCTION CORRIDOR	
220KV CABLE	
220KV TRENCH (1m WIDE)	
JOINT PIT	
ROAD FORMATION EDGE	
PARCELS WITHIN PLANNING APPLICATION	
SCATTERED NATIVE TREE (REMOVED)	
SCATTERED NATIVE TREE (RETAINED)	
NATIVE VEGETATION (REMOVED)	
NATIVE VEGETATION (RETAINED)	

DATE	LAYOUT	REVISION	PURPOSE	DESCRIPTION
16.04.2019		0	220KV OUTLINE	PRELIMINARY DRAWING
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24.07.2019		3	220KV OUTLINE	EASEMENTS ADDED
01.08.2019		4	220KV OUTLINE	MIN. POWERCOR EASEMENT & TRANSMISSION CORRIDOR SETBACK ADDED



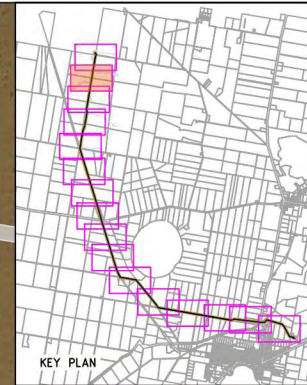
DATUM	PROJECT	DESIGNED	DRAWN	CHECKED	VERIFIED	APPROVED
MGA 94	MORTLAKE SOUTH WINDFARM	DC	DC	GS	BD	COG
PROJECTION	TITLE					
MGA 94 ZONE 54 GRID	PROPOSED 220KV CABLE ALIGNMENT AND CONSTRUCTION CORRIDOR					
SCALE	AE CODE	EXTERNAL CODE	DRAW. NUMBER	REVISION	SHEET	PAPER
1 : 5000				4	15 OF 17	A3



ACCESS POINT 2 PHOTOGRAPH



- NOTES
1. REFER TO INDICATIVE SUBSTATION CONNECTION DRAWING
 2. EXTENT OF WORKS IN CORANGAMITE SHIRE COUNCIL
 3. EXTENT OF WORKS IN MOYNE SHIRE COUNCIL
 4. REMOVAL OF EXOTIC OR PLANTED VEGETATION TO BE LIMITED TO THE MINIMUM EXTENT PRACTICAL
 5. REFER TO PLANNING PERMIT 2008/0538/A FOR SUBSTATION LAYOUT
 6. REFER TO TITLE DOCUMENTS FOR DETAIL REGARDING EASEMENTS



APPROVED WF
STRUCTURE

Lot 1 PS412947M

Access Point and
Temporary Laydown Area
No. 2

Temporary Laydown Area
(Red) 10 metres x 30
metres for loading/
unloading of equipment,
temporary storage of
equipment and temporary
storage of spoil.

Truck Warning Signs
(W5-22) to be placed at the
entry to the access point
from all public roads.

The temporary laydown
area is located wholly within
the nominated construction
corridor and a minimum
distance of 30 metres from
all vegetation to be retained
and any waterways.

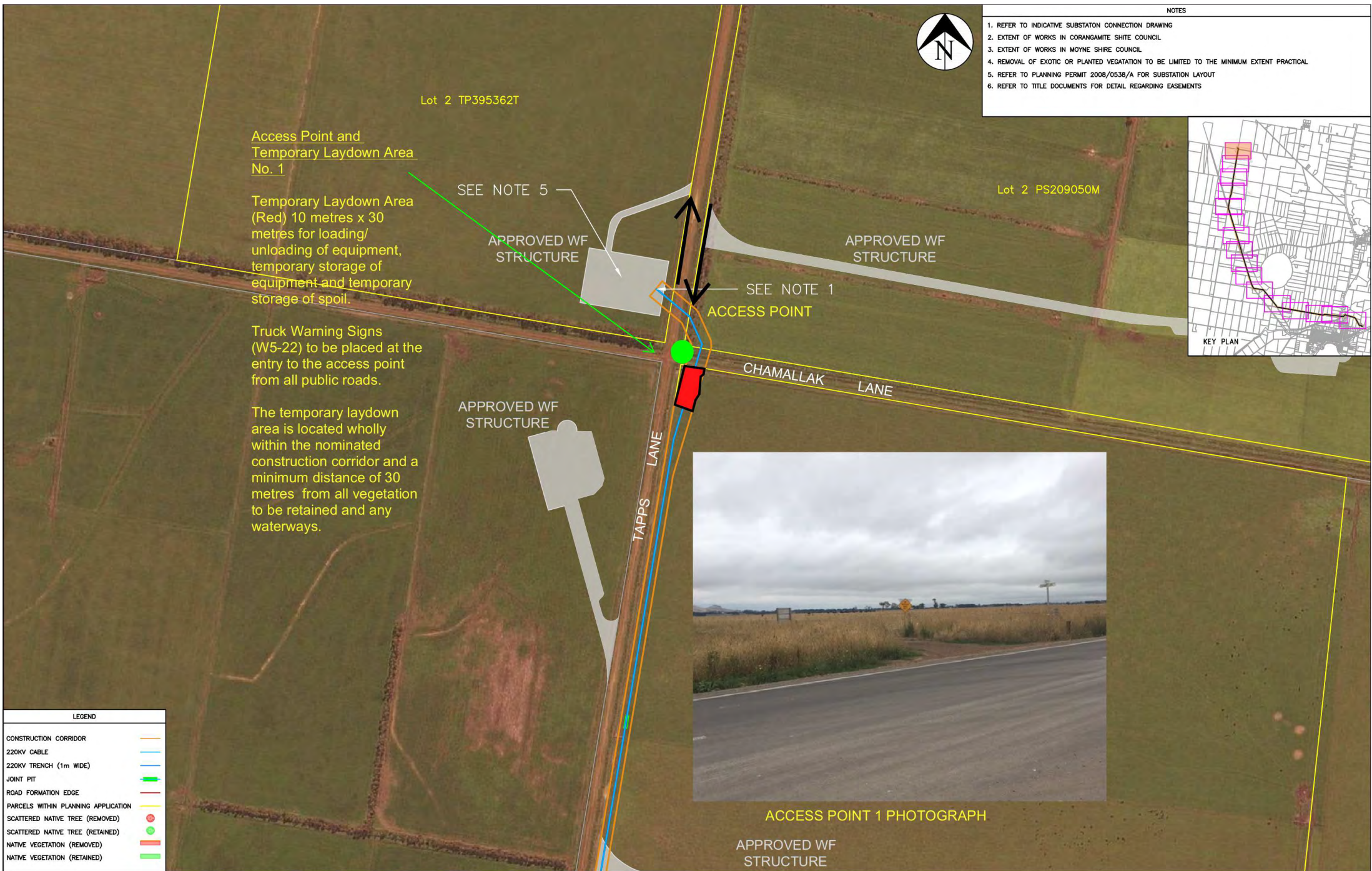
Lot 4 PS412947M

LEGEND	
CONSTRUCTION CORRIDOR	
220KV CABLE	
220KV TRENCH (1m WIDE)	
JOINT PIT	
ROAD FORMATION EDGE	
PARCELS WITHIN PLANNING APPLICATION	
SCATTERED NATIVE TREE (REMOVED)	
SCATTERED NATIVE TREE (RETAINED)	
NATIVE VEGETATION (REMOVED)	
NATIVE VEGETATION (RETAINED)	

DATE	LAYOUT	REVISION	PURPOSE	DESCRIPTION
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24.07.2019		3	220KV OUTLINE	EASEMENTS ADDED
01.08.2019		4	220KV OUTLINE	MIN. POWERCOR EASEMENT & TRANSMISSION CORRIDOR SETBACK ADDED



DATUM MGA 94	PROJECT MORTLAKE SOUTH WINDFARM	DESIGNED DC	DRAWN DC	CHECKED GS	VERIFIED BD	APPROVED COG
PROJECTION MGA 94 ZONE 54 GRID	TITLE PROPOSED 220KV CABLE ALIGNMENT AND CONSTRUCTION CORRIDOR					
SCALE 1 : 5000	AE CODE	EXTERNAL CODE	DRAW. NUMBER	REVISION 4	SHEET 16 OF 17	DATE 01.08.2019
						PAPER A3



- NOTES
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LEGEND	
CONSTRUCTION CORRIDOR	
220KV CABLE	
220KV TRENCH (1m WIDE)	
JOINT PIT	
ROAD FORMATION EDGE	
PARCELS WITHIN PLANNING APPLICATION	
SCATTERED NATIVE TREE (REMOVED)	
SCATTERED NATIVE TREE (RETAINED)	
NATIVE VEGETATION (REMOVED)	
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DATUM	PROJECT	DESIGNED	DRAWN	CHECKED	VERIFIED	APPROVED
MGA 94	MORTLAKE SOUTH WINDFARM	DC	DC	GS	BD	COG
PROJECTION	TITLE					
MGA 94 ZONE 54 GRID	PROPOSED 220KV CABLE ALIGNMENT AND CONSTRUCTION CORRIDOR					
SCALE	AE CODE	EXTERNAL CODE	DRAW. NUMBER	REVISION	SHEET	DATE
1 : 5000				4	17 OF 17	01.08.2019
						PAPER
						A3



www.ghd.com

GHD

Level 18 180 Lonsdale Street
Melbourne VIC 3000

T: 61 3 8687 8000 F: 61 3 8687 8111 E: melmail@ghd.com

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Document Status

Revision	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
A	Will Bull	Toby Cooper		Toby Cooper		20/12/19
B	Will Bull	Michael Byrne		Michael Byrne		09/01/20
C	Will Bull	Toby Cooper		Toby Cooper		31/01/2020
D	Will Bull	Toby Cooper		Toby Cooper		18/02/2020