




Boggabri Coal Pty Limited

Traffic Management Plan

Review 3 – 31 January 2015



Revision Control

Revision	Q1 (Rev 1)	Review 2 (Rev 1)	Review 3 (Rev 1)
Revision Date	16/04/14	31/10/2014	31/01/2015
Prepared by	Michael Bloem	Ben Rossiter / Michael Bloem	Michael Bloem
Reviewed by	Ben Rossiter / Chase Dingle	Michael Bloem / Peter Dawson	Brad Maclean
Approved by	Brad Maclean	Brad Maclean	Brad Maclean
Signed			

Uncontrolled Copy when printed

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	i

Table of Contents

1.	Introduction.....	2
1.1	Project Background	2
1.2	Construction Activities & Operations	2
1.3	Scope of the Traffic Management Plan (TMP)	3
2.	Compliance & Stakeholders.....	5
2.1.	Legislative Requirements	5
2.2.	Conditions of Approval	5
2.3.	Stakeholder Consultation	6
3.	Existing Situation	11
3.1.	Surrounding Road Network.....	11
3.2.	Kamilaroi Highway.....	14
3.2.1.	<i>Kamilaroi Highway Intersection with Manilla Road</i>	14
3.3.	Manilla Road (Rangari Road)	14
3.3.1.	<i>Manilla Road Intersection with Leard Forest Road</i>	14
3.4.	Leard Forest Road.....	14
3.4.1.	<i>Goonbri Road intersection with Leard Forest Road</i>	15
3.4.2.	<i>Mine Access Road intersection with Leard Forest Road</i>	15
3.5.	Goonbri Road.....	15
3.6.	Coal Haul Road	15
3.6.1.	<i>Leard Forest Road & Therribri Road Intersections with Coal Haul Road</i>	16
3.7.	Therribri Road.....	18
3.8.	Barbers Lagoon Road.....	18
3.9.	Braymont Road.....	18
4.	Public Transport / Pedestrians and Cyclists.....	19
5.	Site Access & Traffic Generation	20
5.1.	Site Access for Operations.....	20
5.2.	Site Access for Construction	20
5.3.	Operational Traffic Volumes.....	23
5.4.	Construction Traffic Arrangements and Traffic Volumes	24
5.4.1.	<i>Construction Employee Transport</i>	27
5.5.	<i>Actual Traffic Counts</i>	28

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	ii

5.6.	Project Hours & Shift Times.....	29
5.7.	Other Major Projects (Cumulative Traffic Impacts).....	30
5.7.1.	<i>Maules Creek Coal Project</i>	30
5.7.2.	<i>Tarrawonga Coal Project</i>	33
6.	Traffic Impacts	35
6.1.	Site Access Arrangements and Traffic Impacts.....	35
6.1.1.	<i>Interim Access Arrangements</i>	35
6.1.2.	<i>Primary Access Arrangements</i>	39
6.2.	Project Interfaces with Public Roads	40
6.2.1.	<i>Road Safety Improvements</i>	41
6.2.2.	<i>Temporary Access with Kamilaroi Highway</i>	42
6.2.3.	<i>Left In / Left Out Intersections with Kamilaroi Highway</i>	44
6.2.4.	<i>Rail Overpass Bridge over the Kamilaroi Highway</i>	47
6.2.5.	<i>Viaduct over Therribri Road</i>	48
6.2.6.	<i>Rail Balloon Loop (at Grade) with Leard Forest Road</i>	48
6.2.7.	<i>Relocation of Leard Forest Road</i>	49
6.2.8.	<i>Electricity Transmission Line</i>	50
6.3.	Road Closures, Road Openings & Restricted Local Road Access	50
6.3.1.	<i>Road Signage</i>	52
6.4.	Construction Traffic on Coal Haul Road.....	53
6.5.	Public Transport / Pedestrians and Cyclists.....	53
7.	Control Measures and Safeguards	55
7.1.	Management Requirements.....	55
7.1.1.	<i>Road Inspections</i>	55
7.2.	Contractor Requirements	56
7.2.1.	<i>Contractor TMP's</i>	56
7.2.2.	<i>Contractor Vehicle Movement Plans</i>	57
7.3.	Code of Conduct for Vehicle Drivers	58
7.4.	Summary of Control Measures and Safeguards	58
8.	Training.....	59
9.	Inspections, Monitoring, Reporting and Auditing	60
	BCP and the primary contractors will be responsible for ensuring the following:	60
9.1.	Reporting	60

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	iii

9.2. Auditing61

10. Review & Improvement.....62

11. Roles and Responsibilities63

12. References66

Appendix A – Control Measures and Safeguards A

Appendix B – Presumed Construction Traffic Volumes..... B

Appendix C – Boggabri Coal Road Signage C

Appendix D – Consultation D

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	iv

List of Figures

Figure 1 – Broader Public Road Network11

Figure 2 – Heavy Vehicle Routes12

Figure 3 – Traffic Arrangements at Coal Haul Road Intersection17

Figure 4 – Left In / Left Out Intersections with Kamilaroi Highway22

Figure 5 – MCC Project Schedule.....31

Figure 6 – Schedule of Roadwork Construction Activity41

Figure 7 – Temporary Access with Kamilaroi Highway.....43

Figure 8 – Configuration of Southern Left In / Left out Intersection.....45

Figure 9 – Configuration of Northern Left In / Left Out Intersection46

Figure 10 – Rail Overpass Bridge48

Figure 11 – Existing Alignment of Leard Forest Road and New Alternative Alignment49

List of Tables

Table 1- Traffic Related Conditions of Approval.....5

Table 2 - Narrabri Shire Council Consultation6

Table 3 - Roads & Maritime Services – Western Region Consultation.....7

Table 4 – Background AADT for Surrounding Road Network.....13

Table 5 – Estimated Daily Operational Traffic Volumes (vpd).....23

Table 6 – Primary Deliveries associated with Construction26

Table 7 – Shift Times.....29

Table 8 – Maules Creek Coal Project – Traffic Numbers32

Table 9 – Tarrawonga Coal Project – Traffic Numbers.....34

Table 10 – Additional Traffic (vpd) – Interim Access Arrangements.....36

Table 11 – Road Safety Issues.....37

Table 12– Additional Traffic (vpd) – Primary Access Arrangements40

Table 13 – Roles and Responsibilities.....63

List of Charts

Chart 1 – Estimated Total Traffic Movements (vpd) Associated with Construction Traffic25

Chart 2 – Estimated Traffic Movements (vpd) on Coal Haul Road with Left In / Left Out Intersections during Construction Phase.....25

Chart 3 – Estimated Construction Traffic Movements (vpd) on Manilla Road & Leard Forest Road.....26

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	v

Terms and Definitions

Term or Acronym	Definition or Description
AADT	Average Annual Daily Traffic
BCP	Boggabri Coal Project
BCPL	Boggabri Coal Pty Ltd
CEMP	Construction Environmental Management Plan
CHPP	Coal Handling and Preparation Plant
CHR	Channelised Right Hand Turn
CWAP	Construction Workforce Accommodation Plan
DoPI	Department of Planning and Infrastructure
EA	Environmental Assessment
GSC	Gunnedah Shire Council
GCM	Gross Combined Mass
GVM	Gross Vehicle Mass
HV	Heavy Vehicle
LV	Light Vehicle
NSC	Narrabri Shire Council
RMS	Roads and Maritime Services
ROM	Run-of-Mine
TCP	Traffic Control Plan
TIA	Traffic Impact Assessment
TMP	Traffic Management Plan
VPA	Voluntary Planning Agreement
VPD	Vehicles Per Day
VMP	Vehicle Movement Plan
WAD	Works Authorisation Deed

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	1

1. Introduction

1.1 Project Background

Boggabri Coal Mine is located 15 km northeast of the township of Boggabri in north-western New South Wales. This open cut coal mine that has been operating since 2006 has been granted approval to expand. Truck and shovel operations are undertaken to produce a crushed and screened run-of-mine (ROM) coal product. Coal is transported on a sealed Private Haul Road (the Coal Haul Road) to a rail loading facility at the township of Boggabri, where coal is then transported to the Port of Newcastle for export.

The Mine is managed by Boggabri Coal Pty Limited (BCPL), who engages contractors to undertake construction, mining, coal crushing and transportation activities.

In 2009, BCPL lodged a major project application under the now-repealed Part 3A of the Environmental Planning and Assessment Act, 1979 (EP&A Act). In the project application, BCPL sought to extend its mining operations for a further 21 years, and increase its production rate from the current 3.5Mtpa to 7Mtpa of ROM coal from a total resource of 145 Mt (the Project).

Construction activities of the Project include:

- New Coal Handling and Preparation Plant (CHPP);
- 17 km rail spur line (in part with Maules Creek Coal Project);
- Rail bridges over the Namoi River and Kamilaroi Highway;
- Rail load-out facility located at the mine;
- Upgrade of the overburden and coal extraction haulage fleet (with an option for a drag-line);
- Upgrade of electricity transmission lines; and
- Upgrades of other ancillary infrastructure.

The project application was determined by the NSW Planning Assessment Commission, under delegation by the Minister for Planning and Infrastructure. Project Approval 09_0182 (the Project Approval) was granted in July 2012. The Project shall subsequently be referred to as the Boggabri Coal Project (BCP).

A Section 75W (S75W) modification is currently being sought for two permanent access roads from the Kamilaroi Highway to the Coal Haul Road.

Review 3 – 31 January 2015

The S75W modification was approved on 17 March 2014. The construction of the two new permanent intersections was completed on 10 October 2014 with formal acceptance of the works from RMS notified on 17 October 2014.

1.2 Construction Activities & Operations

As described above the primary construction activities include the CHPP, rail spur line and electricity transmission lines. The preferred construction contractors are as follows:

- CHPP: Thiess Sedgman Joint Venture (TSJV);

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	2

- Rail Spur Line: Leighton Contractors; and
- Electricity Transmission Lines and substation: Transgrid/UGL.

There will be numerous other contractors attending the site, including sub-contractors to the primary contractors listed above and stand-alone contractors undertaking other ancillary works.

The primary construction activities are anticipated to commence in the fourth quarter of 2013, be undertaken over a period of 18 months to 2 years, and involve up to 400 personnel.

Once the construction phase is completed operations will involve extraction volumes up to a peak of 7Mtpa of coal each year. This will be processed at the new on-site CHPP and then be transported by train to the Port of Newcastle for export, as is currently the case.

The operational phase will last for 21 years, with the workforce size varying considerably over this time. The original 2010 Environmental Assessment (EA) states at peak capacity the BCP is forecast to have a total workforce of up to 500 full time equivalent employees.

1.3 Scope of the Traffic Management Plan (TMP)

This TMP has been developed to provide the framework for the effective management of traffic generated by construction and operations activities of the BCP. By doing so, it will satisfy the requirements of the Project Approval Conditions where relevant. The TMP shall supplement and remain consistent with the Construction Environmental Management Plan (CEMP) and BCPLs other operational management plans. It takes precedence over and supersedes any previous plans or provisions concerned with traffic management related to the BCP.

The TMP aims to minimise and mitigate any potential impacts that construction and operational traffic generated by the BCP may have on the existing public road network. It will consider traffic generated by the following activities:

- Existing operational traffic of Boggabri Coal Mine;
- Traffic generated by the Boggabri Coal Expansion Project (BCEP);
- Traffic generated by the Tarrawonga Coal Mine Development;
- Traffic generated by the Maules Creek Coal Mine Project; and
- Existing background (non-mine) traffic.

The TMP shall consider the broader issues associated with traffic management and prescribe the overall requirements of the contractors associated with the BCP during both construction and operational phases. The primary construction contractors shall be responsible for the development of stand-alone traffic management plans specific to their activities that are consistent with this TMP.

This TMP does not cover the following:

1. Specific traffic control plans (TCPs) and traffic control procedures;
2. Traffic management arrangements relating to the use of private roads, some traffic management principles for the Coal Haul Road have been included;
3. Vehicle movement plans (VMs), which shall be a requirement of the primary contractors;
4. Onsite TMPs; or

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	3

5. Specific Workplace Health and Safety (WHS) requirements of the project relevant to the respective contractors.

Operational heavy and light vehicle traffic shall also be considered over the operational life of the BCP. This TMP supersedes the December 2012 BCP TMP.

Review 3 – 31 January 2015

This TMP supersedes the “Traffic Management Plan Quarterly Review 2 – 30 September 2014”

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	4

2. Compliance & Stakeholders

2.1. Legislative Requirements

The Project has been approved under the now repealed Part 3A of the Environmental Planning and Assessment Act 1979. Under Section 75J of the Act approval was granted subject to numerous conditions. The conditions of approval are included in the following section.

Under Section 138 of the Roads Act 1993 the Proponent requires separate approvals from New South Wales Roads and Maritime Services (RMS), and/or Narrabri Shire Council (NSC) as the appropriate road authorities prior to any construction or closure of public roads. Under Section 34 of this Act a public road can be proposed for closure by the relevant road authority. As the Project proposes road and bridge construction adjacent to and over public roads and the closure of Leard Forest Road, such approvals are directly relevant.

A development consent modification is currently being sought under S75W of the Environmental Planning and Assessment Act for the establishment of permanent access from the Kamilaroi Highway to the Coal Haul Road. The specific conditions applicable to this development consent modification shall be incorporated into subsequent revisions of the TMP.

Review 3 – 31 January 2015

The S75W modification for the revised access arrangements was approved on 17 March 2014.

2.2. Conditions of Approval

Project Approval includes several conditions that directly relate to traffic management. The relevant conditions are included in Table 1 below:

Table 1- Traffic Related Conditions of Approval

Project Approval Condition		TMP Section Reference
<i>Schedule 3, Condition 58</i>	The Proponent shall construct, operate and maintain the bridges over the Kamilaroi Highway for the Boggabri Rail Spur Line and the haul road bridge to the satisfaction of RMS, and shall bear all costs associated with the construction and maintenance of these bridges.	Section 6.2.4
<i>Schedule 3, Condition 59</i>	The Proponent shall meet the requirements of RMS in respect of road access from the Kamilaroi Highway for temporary construction traffic, road intersection upgrades and maintenance of RMS roads used in respect of the Project.	Section 6.2.2 Section 6.2.3
<i>Schedule 3,</i>	The Proponent shall prepare and implement a TMP for the	

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	5

Project Approval Condition		TMP Section Reference
<i>Condition 60</i>	<p>Project to the satisfaction of the Director-General. This plan must:</p> <ul style="list-style-type: none"> (a) be prepared in consultation with the RMS, NSC and Gunnedah Shire Council (GSC); (b) be submitted to the Director-General for approval within 6 months of the date of this approval; (c) propose an appropriate program and schedule of works for any intersection upgrades to be undertaken or contributed to by the Proponent arising from conditions 58 and 59 of Schedule 3; (d) include: <ul style="list-style-type: none"> (i) a code of conduct for drivers of heavy vehicles; (ii) nominated heavy vehicle access routes for construction and operational stages, including details on volumes and nature of over-size and over- mass heavy vehicles; (iii) measures to minimise traffic impacts at school bus pick up and drop off times; (iv) consideration of measures to minimise dust from unsealed roads that may be used for access to the mine site; and (v) a monitoring program to audit vehicle movements against predictions in the EA. 	<p>Section 2.3 Previous revision. Section 6 & 7 Section 7.3 Section 6.1 Section 4, 6.5 & 7 Appendix A Section 9 & 11</p>

The TMP has been prepared in accordance with these Project Approval conditions.

2.3. Stakeholder Consultation

Stakeholder consultation has been ongoing for an extensive period. Meetings have been held with the primary stakeholders NSC and RMS on the following dates to discuss traffic management. The following tables contain a summary of the meetings held and key discussion points.

Table 2 - Narrabri Shire Council Consultation

Date	Meeting Purpose	Attendees	Key Outcomes (for TMP)
20/07/2011	<ul style="list-style-type: none"> • Leard Forest Road Alignment 	Phil Marshall	Update
04/09/2012	<ul style="list-style-type: none"> • Leard Forest Road Closure; • Therribri Road Rail Overpass; 	Pat White, Lew Oldfield, Paul Wearne	Update
02/11/2012	<ul style="list-style-type: none"> • Leard Forest Road Closure; 	Pat White, Lew	Update; presentation of

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	6

Date	Meeting Purpose	Attendees	Key Outcomes (for TMP)
	<ul style="list-style-type: none"> Therribri Road Rail Overpass; Harparary Road Upgrade 	Oldfield, Paul Wearne	concept designs
16/01/2013	<ul style="list-style-type: none"> Leard Forest Road relocation/closure; Therribri Road and rail overpass; Kamilaroi Highway overpass and temporary intersections 	Lew Oldfield, Anthony Smetanin, Luke Tanner	Update, presentation of preliminary designs
12/03/2013	<ul style="list-style-type: none"> Leard Forest Road Closure Strategy 	Nick Wilton, Lew Oldfield, Luke Tanner	Update, discussions regarding Part 5 approval process
22/05/2013	<ul style="list-style-type: none"> Leard Forest Road; Kamilaroi Highway intersections; TMPs 	Paul Wearne Graham McPherson	Update; consultation process for TMP
06/06/2013	<ul style="list-style-type: none"> Update and submission of TMP Leard Forest Road Relocation Other matters (non traffic) 	Luke Tanner, Anthony Smetanin Pat White, Paul Wearne, Paul Bowden, Graham McPherson	TMP submitted in electronic and hard copy. Update on Leard Forest Road relocation progress on approval
28/06/2013	<ul style="list-style-type: none"> TMP 	Luke Tanner	TMP resent via email
03/07/2013	<ul style="list-style-type: none"> Dust and sealing 	Luke Tanner	Email received

Table 3 - Roads & Maritime Services – Western Region Consultation

Date	Meeting Purpose	Stakeholder Attendees	Key Outcomes (for TMP)
23/6/11	Discuss project and constraints to access including potential solutions	Tony Hendry Susie Mackay Alistair Lunn	<ul style="list-style-type: none"> Construction period condensed resulting in increased activity; Direct access from highway requested to streamline access and alleviate pressure on local road network. Also no direct access to the West of highway; Rail overbridge construction requirements discussed; and Associated works

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	7

Date	Meeting Purpose	Stakeholder Attendees	Key Outcomes (for TMP)
			authorisation deeds discussed.
22/6/12	Discuss potential access direct to highway, review rail contractors proposed traffic impacts/interface with highway for rail spur construction.	Tony Hendry Alexandra Hartwig Peter Hamilton Gai Mitchelson	<ul style="list-style-type: none"> • Discussed proposals for crossing highway for rail spur construction; • Discussed construction of rail overbridge and impact on traffic and proposed TMP measures; • Proposals not entirely agreed to by RMS. RMS proposed that two way traffic should be maintained at a minimum long term speed of 80km/hr with only short term lane closures acceptable; • Bridge design to be reviewed to prevent the need to close lanes for piles and pile caps; • General concurrence with left in / left out intersections advised although minor design modifications requested; and • Discussion relating to the Works Authorisation Deed (WAD) progress took place.
28/03/13	Update on project progress and outline primary traffic management measures and temporary access	Tony Hendry Andrew McIntyre Jeffrey Hall ¹	<ul style="list-style-type: none"> • General project update provided; • WAD for rail bridge progressing; • WAD for left in / left out intersections executed; and • In principle support for temporary access for over-size and over-mass vehicles

¹ Meeting with Jeffrey Hall occurred the day prior.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	8

Date	Meeting Purpose	Stakeholder Attendees	Key Outcomes (for TMP)
			obtained subject to conditions.
06/06/13 to present	Numerous correspondence regarding the temporary intersection and left in / left out intersection including one site meeting	Dion Killiby	<ul style="list-style-type: none"> Pre-Construction WAD Requirements.
16/08/13	To discuss a proposal from BCPL to utilise the temporary intersection with the Kamilaroi Highway for fuel deliveries as an interim solution	Tony Hendry Andrew McIntyre Dion Killiby Ken McClaren Mark Cornwell	<ul style="list-style-type: none"> Further consideration will be given pending the provision of further supporting information from BC in relation to the proposal.

RMS, NSC, and Department of Planning and Infrastructure (DoPI) reviewed the Draft TMP submitted on the 6 June 2013. The correspondence and associated responses are included as Appendix D. The final draft was resubmitted to RMS on 9 September 2013. RMS made minor comments which have been incorporated into Appendix D.

NSC's primary comments are associated with the relocation of Leard Forest Road. Continuing consultation with NSC is required in relation to this matter, particularly to obtain Road Occupancy Approvals in accordance with Section 138 of the Roads Act and Section 75V of the Environmental Planning and Assessment Act.

Review 3 – 31 January 2015

Condition 61 of the Project Approval Schedule 3 states that:-

“The Proponent shall prepare and submit a Leard Forest Road Closure Strategy for approval by the Director-General in consultation with Council, Forest NSW, MCCC, CCC and the local community affected by the road closure.....”

The Leard Forest Road Closure Strategy (LFRCS) was approved on 31 January 2014. A copy of the LFRCS is included as Appendix E.

The Goonbri Road Upgrade was completed on 19 September 2014 and following consultation with Narrabri Shire Council, Leard Forest Road was closed on 24 September 2014 in accordance with the LFRCS.

Contact has been made with Mr Wayne Kerr, Director of Infrastructure Services, Gunnedah Shire Council (GSC). He acknowledged that the impact to the road network in the Gunnedah Local Government Area, with the exception of the Kamilaroi Highway, is negligible therefore a meeting was not warranted. A copy of the draft TMP (Revision C) was forwarded to GSC for comment.

Since the draft TMP was forwarded to GSC the utilisation of the Tarrawonga Coal Haul Route for B double access to the mine site is being discussed with Whitehaven Coal. Subsequently GSC has been advised that Bluevale Road may be utilised on a temporary basis until the left in / left out intersections are available. Mr

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	9

Wayne Kerr verbally indicated that some form of maintenance arrangement may be required should the use of Bluevale Road by BCP related traffic eventuate.

Review 3 – 31 January 2015

RMS approved the construction of a temporary access arrangement on the Kamilaroi Highway just south of the Coal Haul Road bridge overpass. This temporary access was completed in November 2013 and provides direct access from the Kamilaroi Highway onto the Coal Haul Road for over-mass and over-size heavy vehicles associated with the existing mine operation and construction activities for the mine expansion.

The temporary access is no longer being utilised and has been decommissioned.

Over-mass and over-size vehicles now access the mine site via the new permanent intersections with the Kamilaroi Highway.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	10

3. Existing Situation

3.1. Surrounding Road Network

Figure 1 below shows the surrounding road network.



Figure 1 – Broader Public Road Network

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	11

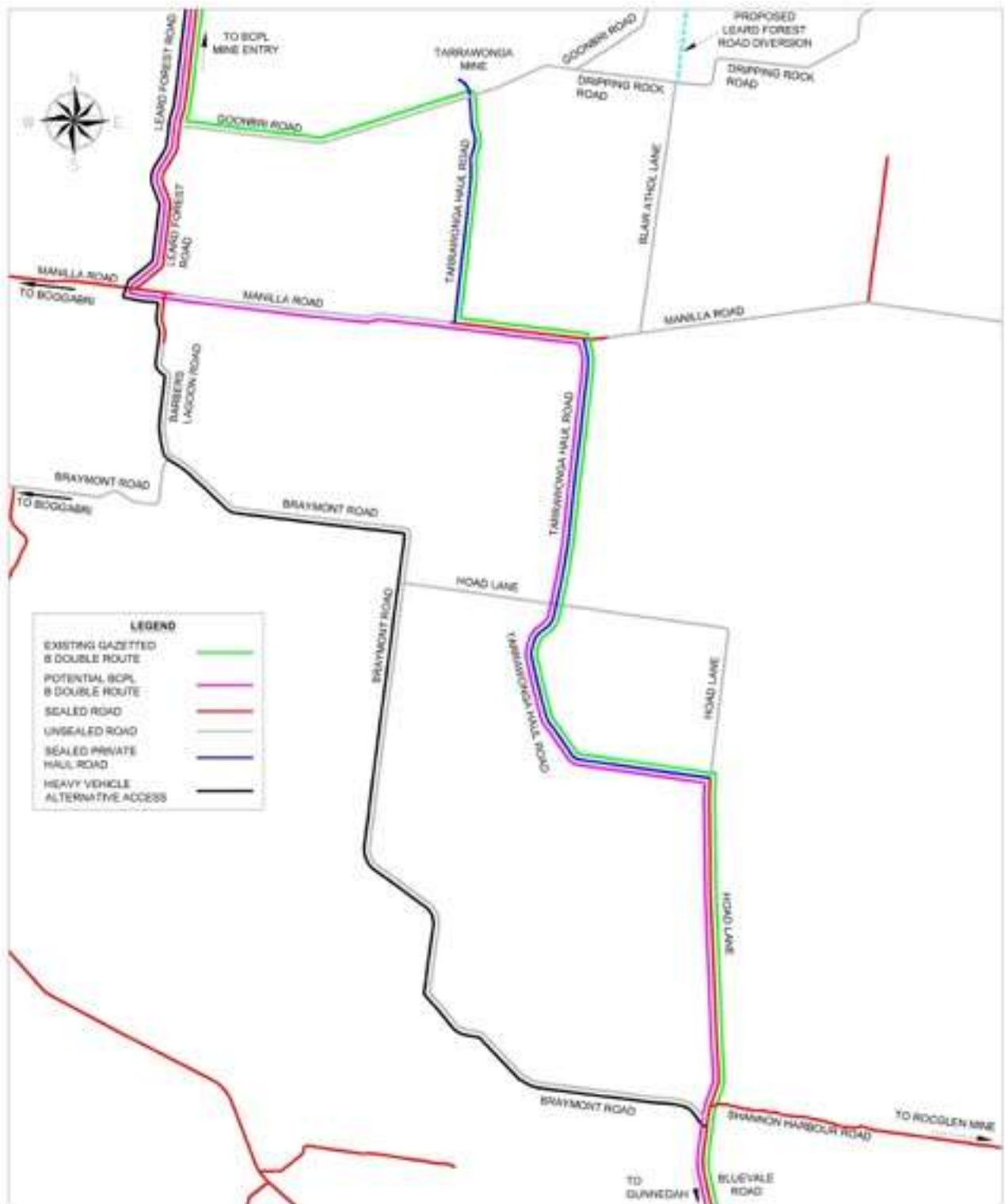


Figure 2 – Heavy Vehicle Routes

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	12

The following roads have been considered in this TMP:

- SH29 Kamilaroi Highway;
- RR357 Manilla Road;
- SR12 Leard Forest Road;
- SR15 Therribri Road;
- SR26 Goonbri Road;
- SR22 Braymont Road; and
- SR23 Barber’s Lagoon Road.

The use of Bluevale Road may result subject to commercial arrangements with Whitehaven Coal. If the use of Bluevale Road eventuates a maintenance agreement will need to be negotiated with GSC.

The following table contains the available traffic counts for the roads under consideration. The 2005 data was recorded before any mines were operational in the area. The 2010 data reflects additional traffic generated by the Boggabri and Tarrawonga mines, which both commenced operations in 2006.

Table 4 – Background AADT for Surrounding Road Network

	2005	September 2010 ²	November 2010 ³	Adopted Background Traffic
Kamilaroi Highway	1,832	2,185	2,028	2,185
Manilla Road	175	459	369	459
Leard Forest Road			311	311
Therribri Road		79	62	79
Goonbri Road			57	57
Braymont Road			122	122
Barber’s Lagoon Road		46		46

The traffic counts shown in Table 4 were undertaken at the following locations:

- Kamilaroi Highway – south of Manilla Road;
- Manilla Road – east of Kamilaroi Highway;
- Leard Forest Road – north of Goonbri Road;
- Therribri Road – north of Manilla Road;
- Goonbri Road – east of Leard Forest Road;
- Braymont Road – at Namoi River Bridge; and
- Barber’s Lagoon Road – south of Manilla Road.

² Source: Maules Creek Coal Project - Traffic and Transport Assessment

³ Source: Tarrawonga Coal Project – Road Transport Assessment

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	13

3.2. Kamilaroi Highway

The Kamilaroi Highway is a State Highway (SH29) linking the Upper Hunter and North West Regions of NSW. Closer to the Project, it connects the towns of Boggabri and Gunnedah. The Highway is a two lane, two way sealed road with an AADT south of Manilla Road of 1,832 vpd (2005) and a posted speed limit of 100km/hr. The Kamilaroi Highway is the primary arterial road for access to the mine site.

Review 3 – 31 January 2015

Temporary speed zones have been in place for the duration of the construction of the two new permanent intersections and the installation of the safety barriers adjacent to the rail overbridge piers.

All works associated with the Kamilaroi Highway have been completed and the temporary speed zones have been removed.

3.2.1. Kamilaroi Highway Intersection with Manilla Road

Manilla Road forms a T-intersection with the Kamilaroi Highway approximately 4.3 km north of the Boggabri town boundary (Kamilaroi Highway intersection with Grantham Street). It has a 'channelised right' (CHR) configuration, with a right turn lane for vehicles turning into Manilla Road approaching from the south. The Highway also has a short left turn deceleration lane for vehicles turning into Manilla Road approaching from the north.

3.3. Manilla Road (Rangari Road)

Manilla Road (RR357) links the Kamilaroi Highway and the town of Manilla. The road standard varies from a two lane two way sealed road to a narrow gravel road. An AADT of 175 vpd measured in 2005 had increased significantly to 459 vpd by 2010 due to mining activity of both Boggabri Coal and Tarrawonga Mines.

Approximately 1.6km east of its intersection with the Kamilaroi Highway, Manilla Road crosses the Namoi River with a one-lane bridge ('the Iron Bridge'). This has a signed load limit of 42.5t and a posted speed limit of 10km/hr. It is controlled by a Give Way sign as the bridge is too narrow for two way traffic, traffic from the west gives way to traffic from the east.

3.3.1. Manilla Road Intersection with Leard Forest Road

Leard Forest Road forms a T-intersection with Manilla Road approximately 7.8 km west of the Kamilaroi Highway. It is controlled with Give Way signage and a sight screen. There are no auxiliary or channelised lanes for turning traffic. The hold line is either non-existent or well worn.

3.4. Leard Forest Road

Leard Forest Road is a two lane, two way minor local road with very low traffic volumes other than mine related traffic. It is sealed from Manilla Road to north of the Coal Haul Road, where it is unsealed to Harparary Road.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	14

3.4.1. Goonbri Road intersection with Leard Forest Road

Goonbri Road intersects with Leard Forest Road in a basic T intersection. There are no controls with the primary queue for right of way being the intersection configuration. There are no auxiliary or channelised lanes.

3.4.2. Mine Access Road intersection with Leard Forest Road

The Boggabri Coal Mine Access Road intersects with Leard Forest Road in a basic T intersection configuration, albeit it at a tight approach angle from the north. All traffic to and from Boggabri Coal Mine, other than coal haulage, currently accesses the mine site this way. The controls at the intersection include a stop sign and hold line. The mouth of the intersection is narrow and has limited dimensional capacity for turning vehicles.

Review 3 – 31 January 2015

In consultation with Narrabri Shire Council, Leard Forest Road was closed at the points of intersection of Leard Forest Road and the southern and northern boundaries of the coal lease CL386 in accordance with the LFRCS on 24 September 2014.

The closure removes a section of a local road used to provide access from Maules Creek to Manilla/Boggabri however this has been replaced with the alternative alignment via Goonbri Road (the Goonbri Road Upgrade) which was opened to traffic on 24 September 2014.

3.5. Goonbri Road

Goonbri Road is generally an unsealed two lane two way minor local road with very low traffic volumes, measured at 57 vpd in 2010. It provides public road access to the Tarrawonga mine site. An alternate private access road is available directly from Manilla Road. It is unsealed except for a 250m section east from the intersection with Leard Forest Road.

Goonbri Road will not be utilised as an access to the Boggabri Coal mine site although it may be utilised for the relocation of Leard Forest Road which is subject to a separate approval from NSC.

Review 3 – 31 January 2015

The Goonbri Road Upgrade was completed on 19 September 2014 and in consultation with Narrabri Shire Council was opened to traffic on 24 September 2014.

3.6. Coal Haul Road

All product from the Mine has been transported by truck to the Boggabri Rail Coal Loader along the private Coal Haul Road since operations commenced in 2006. Although not a public road, it intersects with Therribri Road and Leard Forest Road. The Coal Haul Road is grade separated from the Kamilaroi Highway.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	15

BCPL has recently been granted permission for the establishment of a temporary access to the Coal Haul Road from the Kamilaroi Highway under a WAD with RMS. Use of this temporary access will be limited to over-mass and over-size heavy vehicles.

Review 3 – 31 January 2015

The temporary access has been decommissioned following the completion of the new permanent intersections on the Kamilaroi Highway which now provides access for over-mass and over-size vehicles.

A S75W modification will be sought for the use of the Coal Haul Road for both construction access and later as the primary access for the mine site. Further details are provided in Section 5.

Review 3 – 31 January 2015

The S75W modification was approved on 17 March 2014. All works associated with the construction of the two new permanent intersections with the Kamilaroi Highway and the associated access roads were completed on 10 October 2014.

3.6.1. Leard Forest Road & Therribri Road Intersections with Coal Haul Road

The Coal Haul Road has cross intersections with two public roads - Leard Forest Road and Therribri Road. There are extensive traffic control measures at both these intersections, designed after negotiations with RMS, NSC and road safety audits. The public road approaches include a range of control measures including advanced warning signage with wig wag lights for the period when haulage vehicles are nearby the intersection, rumble strips, signage, a Give Way line and a boom gate on the haul road. The boom gate remains closed until an approaching vehicle on the haul road passes a trip point opening the gates.

Figure 3 shows the treatments replicated on all approaches on public roads to the haul road.

Review 3 – 31 January 2015

Leighton Contractors Pty Ltd (Leighton's) commenced works associated with the Rail Spur Line in November 2013. To facilitate the safe movement of vehicles associated with the construction of the Rail Spur Line, temporary access roads for construction were established that run parallel to the Coal Haul Road.

Major works associated with the Rail Spur Line were completed in December 2014. Whilst the Leard Forest Road intersection with the Coal Haul Road has been closed (as per the LFRCS) temporary access roads shall remain in place until all works associated with the Rail spur Line have been completed which is scheduled for March 2015.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	16

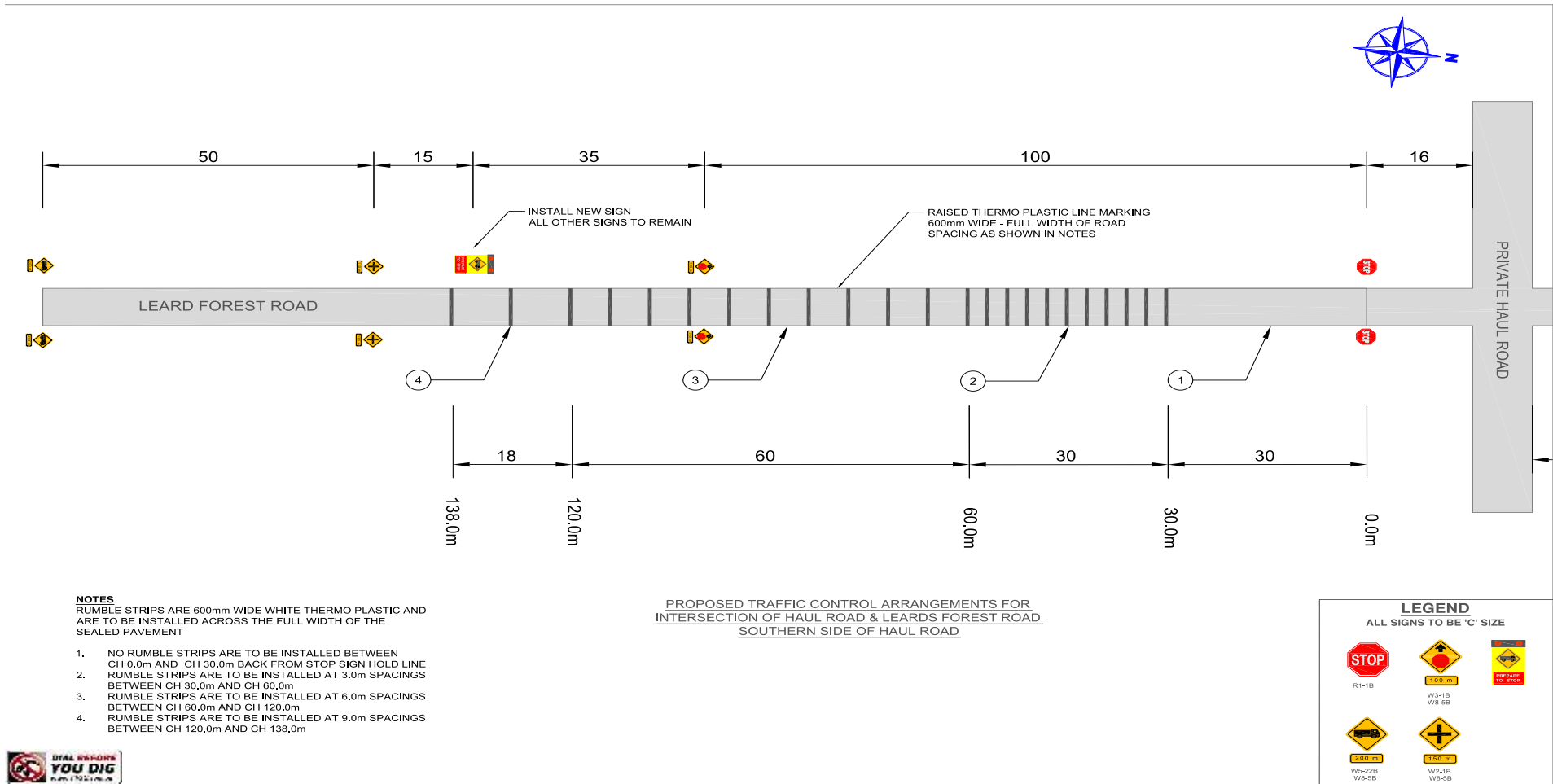


Figure 3 – Traffic Arrangements at Coal Haul Road Intersection

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	17

3.7. Therribri Road

Therribri Road is a minor, unsealed rural road with low traffic volumes which provides for local access. It connects Harparary Road with Manilla Road. As described above, Therribri Road intersects with the Coal Haul Road and includes a range of control measures including advanced warning signage with wig wag lighting for the period when haulage vehicles are nearby the intersection, flashing lights, rumble strips, signage, a Give Way line and a boom gate on the haul road (see Figure 3).

Review 3 – 31 January 2015

The viaduct associated with the Rail Spur Line traverses Therribri Road. The installation of safety barriers on Therribri Road adjacent to the viaduct piers is in progress with all works anticipated for completion in February 2015.

3.8. Barbers Lagoon Road

Barbers Lagoon Road is a minor local road that forms a T-junction with Manilla Road at its northern end. It is entirely unsealed apart from a short length approaching Manilla Road, with currently very low traffic volumes at 46 vpd. It forms part of the heavy vehicle alternate access route, with Braymont Road, between the Kamilaroi Highway and Manilla Road, avoiding the 42.5t load limit applied to the 'Iron Bridge' over the Namoi River. It is also known to provide access for a small number of mine employees.

Barbers Lagoon Road and Braymont Road may be utilised as heavy vehicle alternate access route under strict provisions including a reduced speed limit of 20km per hour and escort vehicles accompanying all over-size and over-mass vehicle movements. This route will only be utilised where absolutely necessary until the proposed permanent left in / left out intersections are constructed between the Kamilaroi Highway and the Coal Haul Road.

3.9. Braymont Road

Braymont Road is a wholly unsealed local road with low traffic volumes at 122 vpd. It forms part of the Heavy Vehicle Alternate Access route, with Barber's Lagoon Road, between the Kamilaroi Highway and Manilla Road, avoiding the 42.5t load limit applied to the 'Iron Bridge' over the Namoi River. The use of Braymont Road by BCP is outlined in Section 3.8 above.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	18

4. Public Transport / Pedestrians and Cyclists

There are no scheduled public bus services that operate on any of the surrounding local road network with the exception of school bus services.

The following school bus operations in the vicinity of the mine access route have been considered in this TMP:

- **MW & JA Roy Bus Service**

This company runs two bus services, however, only one is relevant to the Project site. This route, known as the Davis Nursery to Narrabri School Bus Service, has a pick up location at the intersection of Leard Forest Road and Harparary Road. The route does not currently operate beyond this intersection, south along Leard Forest Road.

- **CD & CA Baldwin Bus Service**

This company runs a bus service commencing at Mallee Lane (SR140) subsequently travelling along Dripping Rock Road, Goonbri Road, Leard Forest Road and Manilla Road to the Kamilaroi Highway. The bus then goes to Baan Baa and returns via Manilla Road, Barbers Lagoon Road and Braymont Road to Boggabri. The only pick up and drop off locations along the Mine access route are located at the Therribri Road intersection with Manilla Road. The associated times of pick up and drop off occur at 8:20am and 3:30pm respectively. The school bus is carrying children along the Mine access route between the times of 7:30am - 7:55am, 8:15am – 8:35am, 3:20pm – 3:40pm and 4:15pm – 4:40pm.

There are school bus services along the Kamilaroi Highway, however, they currently operate under high traffic volumes, and as such, operators should be cognisant of the need to operate in an appropriate manner. However, drivers of over-size and over-mass heavy vehicles associated with the BCP will be required to take this into account.

Cyclists have not been observed to be active on the road network considered although the occasional cyclist is likely on the Kamilaroi Highway. Similarly pedestrians have not been observed. There are no organised cycling activities, such as races, sports training or recreational group rides known to currently occur on the surrounding public road network.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	19

5. Site Access & Traffic Generation

5.1. Site Access for Operations

The primary site access currently available for operations is via the Kamilaroi Highway, Manilla Road, and Leard Forest Road. It is known that Therribri Road, Barbers Lagoon Road / Braymont Road and Manilla Road (east of Leard Forest Road) are also used by employees, albeit to a lesser extent than the primary site access.

Restrictions on use of the 'Iron Bridge' mean operational heavy vehicles that are either over-mass and over-size (including vehicles exceeding 42.5t) shall access the site via two alternative routes. The current Heavy Vehicle Alternative Access route is Bluevale Road, Braymont Road, Barbers Lagoon Road, Manilla Road and Leard Forest Road to the mine site. The Tarrawonga haul route may be utilised, pending commercial arrangements with Whitehaven Coal, via Bluevale Road, Tarrawonga Haul Road (private section of road), Manilla Road and Leard Forest Road. The Tarrawonga Haul Route is currently used extensively for the haulage of coal from both the Tarrawonga and RocGlen Mine sites to the Whitehaven CHPP.

Until alternative arrangements can be obtained, operational B-double deliveries are achieved by decoupling the trailers prior to the Manilla Road intersection.

Use of the temporary construction access from the Kamilaroi Highway is restricted to over-mass and over-size construction vehicles and up to three (3) operational B-Double deliveries of fuel per day. Operational fuel deliveries to the mine site using the temporary construction access from the Kamilaroi Highway shall be restricted to the same hours of access as construction vehicles, see Section 6.2.2.

Review 3 – 31 January 2015

It is anticipated that fuel deliveries to the mine site shall be via the permanent intersections with the Kamilaroi Highway following the cessation of coal haulage activities, currently scheduled for April 2015.

A Section 75W modification is currently being sought to provide alternative access directly from the Kamilaroi Highway to the Coal Haul Road then the Mine site. Once the rail spur is commissioned, coal haulage will no longer be required along this route and it will become the primary access route to the mine site for the remaining duration of the mine life. Section 6.2.3 provides further details of this proposed future access.

Review 3 – 31 January 2015

The Section 75W modification was approved on 17 March 2014.

5.2. Site Access for Construction

The current site access via the Kamilaroi Highway, Manilla Road, and Leard Forest Road shall be utilised for construction access. However, restrictions on the 'Iron Bridge' will prevent access for all vehicles exceeding 42.5t GCM and the majority of oversize vehicles.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	20

As an interim measure, a temporary access shall be established to link the Kamilaroi Highway and the existing Coal Haul Road. This will enable over-size and over-mass heavy vehicles to access the BCP via that route.

Review 3 – 31 January 2015

The temporary access has been decommissioned following the completion of the new permanent intersections on the Kamilaroi Highway which now provides access for over-mass and over-size vehicles.

As outlined above, a S75W modification is being sought to obtain permanent access directly from the Kamilaroi Highway to the Coal Haul Road. This access arrangement will replace the temporary intersection with the Kamilaroi Highway and will significantly reduce the traffic on the current Mine access route. Vehicles that will utilise the new intersections (which are referred to as the left in / left out intersections) during the construction phase are:

- Pre-approved construction related heavy vehicles associated with over-mass and over-size vehicles;
- Pre-approved construction related light vehicles suitable for use on construction sites (i.e. vehicles that are certified for use on the respective construction sites);
- Operational heavy vehicles that either exceed 42.5t or are oversize;
- Deliveries associated with the rail spur; and
- Major deliveries for the CHPP.

Vehicles prohibited from using the left in / left out intersections and the Coal Haul Road during the construction phase include:

- All employee private vehicles; and
- Other vehicles not pre-approved for operating on the Coal Haul Road.

Figure 4 illustrates the location of the proposed temporary intersection and the left in / left out intersections in proximity to the Kamilaroi Highway and the existing Coal Haul Road.

Review 3 – 31 January 2015

5.2.1 Leighton’s Heavy Vehicle cross road at Therribri Road & Leard Forest Road

Leighton’s prepared TMP’s for all works associated with the Rail Spur Line with relevant TCPs prepared and implemented along both Therribri Road and Leard Forest Road.

As works by Leighton’s have been completed where the Rail Spur Line crosses Therribri Road and Leard Forest Road, TCP’s have been removed.

5.2.2 Access via the New Permanent Intersections on the Kamilaroi Highway

Access to the mine site for pre-approved heavy delivery vehicles have been via the new permanent intersections on the Kamilaroi Highway since their completion in 10 October 2014

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	21

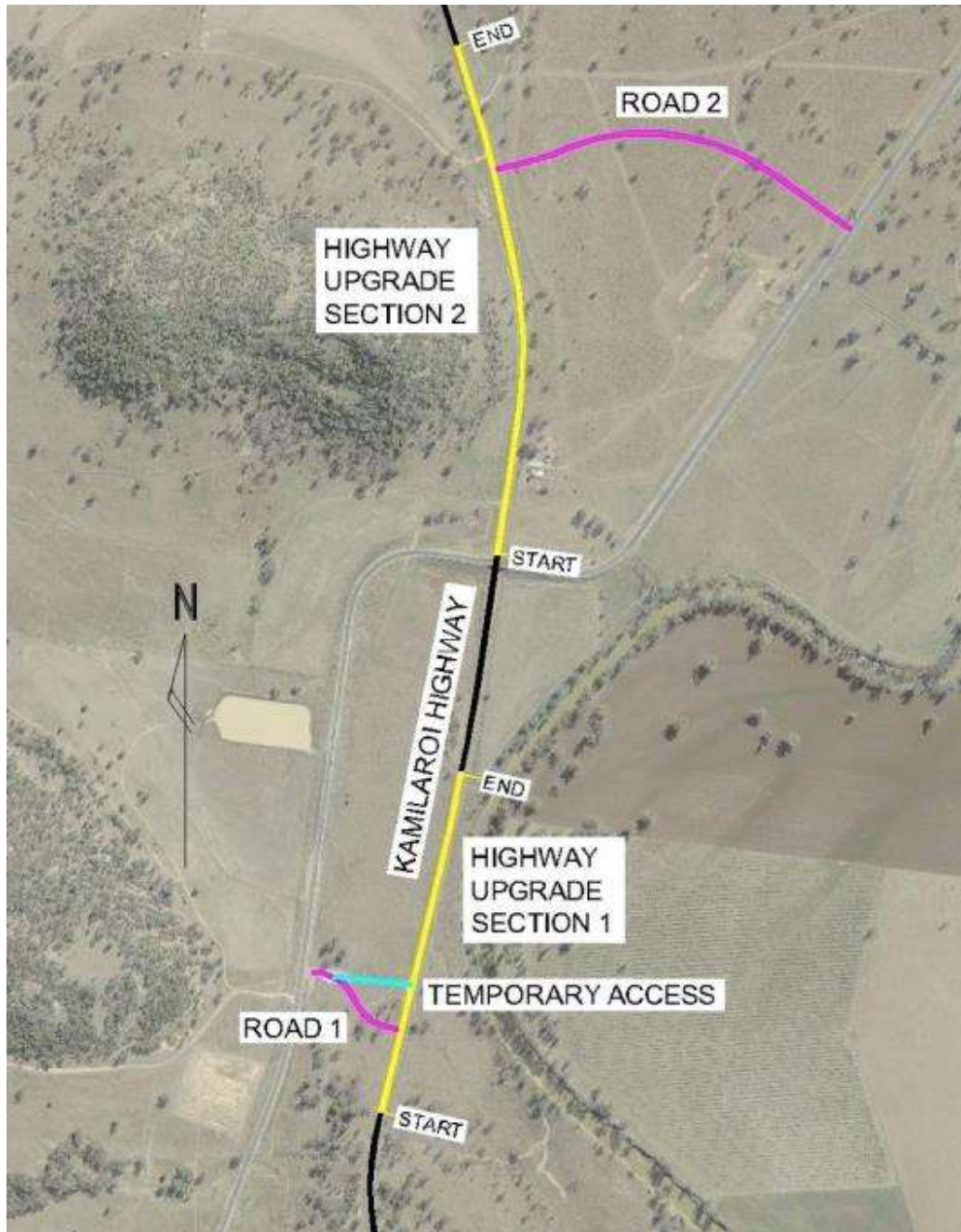


Figure 4 – Left In / Left Out Intersections with Kamilaroi Highway

Access to various points required for construction activities within the infrastructure corridor (consisting of rail and 132kVA power) will be via the Coal Haul Road, with the exception of Therribri Road which shall be utilised for minor volumes of specific deliveries associated with the rail viaduct and power infrastructure.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	22

5.3. Operational Traffic Volumes

Operational traffic volumes generated by the Project, after the construction phase is complete, were forecast within the Project Traffic Impact Assessment - Parsons Brinckerhoff 2010 (Project TIA). These assumptions remain unchanged and are shown in Table 5 below. This total of 353 additional operational employees, resulting in 527 vpd is considered to be the maximum level that may occur during periods of peak operational activity. Given recent trends in coal mine operations, primarily the need to reduce operational costs and increase production, this estimate is considered conservative.

These volumes shown in Table 5 are for light vehicles, mostly the privately owned cars of employees. The Project TIA found the only significant increase in operational heavy vehicle traffic would be up to 10 hourly additional B-double movements for coal haulage as production approached 7Mtpa. Being confined to the Coal Haul Road, these additional movements would have a negligible impact on the public road network. They would increase traffic through the existing intersections with minor roads with low traffic volumes, yet these currently have significant measures (see Figure 3). It is planned for the rail spur to be fully constructed and operational, directly hauling all product coal from the site, well before production reaches this peak level.

Table 5 – Estimated Daily Operational Traffic Volumes (vpd)

Description	Number of Staff	% of Total Staff	Trip Generation rate per day	Vehicles per staff member	Total Vehicle trips per day
Professional, supervisory and office employees	49	14	1.8	0.83	73
Mining operations	194	55	1.8	0.83	290
Maintenance	81	23	1.8	0.83	121
Coal Preparation	29	8	1.8	0.83	43
Total	353	100			527

Given the constraints to productivity prior to the completion of the CHPP and the rail spur the operational numbers estimated in Table 5 are not likely to eventuate during the construction phase.

Based on current operational employees at just over 400, and the car parking spaces being taken by operational employees during each shift, observed (during a survey of vehicles associated with operations undertaken in July 2013) to be approximately 130 vehicles during the day shift and 60 vehicles during the night shift, this equates to 190 vehicles per day. This results in 0.46 vehicles per employee, which is significantly lower than the assumption made in Table 5 above.

It is therefore presumed that the current operational traffic is 380 vpd which is unlikely to differ throughout the construction phase.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	23

The Project TIA did not consider operational heavy vehicle movements. At present there are on average 12 heavy vehicle deliveries associated with operations that are associated with fuel, ammonium nitrate and stemming deliveries resulting in an average number of movements (vpd) of 24 per day. It is envisaged that this will remain relatively constant for the life of the mine.

5.4. Construction Traffic Arrangements and Traffic Volumes

Given the preconstruction phase of the BCP has progressed significantly, revised construction traffic estimates have been developed to assist in the development of the TMP. The assumptions made in the Project TIA are no longer relevant given the decision to bring forward the construction of the rail spur and the proposal to utilise the existing Coal Haul Road for both construction and operations access.

Estimates of traffic volumes for the primary construction activities have been generated and are contained in Appendix B. The estimates have been derived in consultation with the primary contractors including Leightons, UGL and TSJV.

The estimates of additional traffic (in both directions) over the duration of the construction phase are illustrated in the following charts. Assumptions associated with the construction traffic are as follows:

- That approximately ¾ of all construction traffic shall be pre-approved to utilise the Coal Haul Road leaving the balance to access via the existing site access;
- That all construction employee access be via bus with the exception of 30 vehicles associated with local construction employees (see section 0); and
- Adjustments for minor traffic movements (i.e. minor deliveries for Therribri Road and the temporary access) have not been made.

Review 3 – 31 January 2015

The temporary access has been decommissioned following the completion of the new permanent intersections on the Kamilaroi Highway which now provides access for over-mass and over-size vehicles.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	24

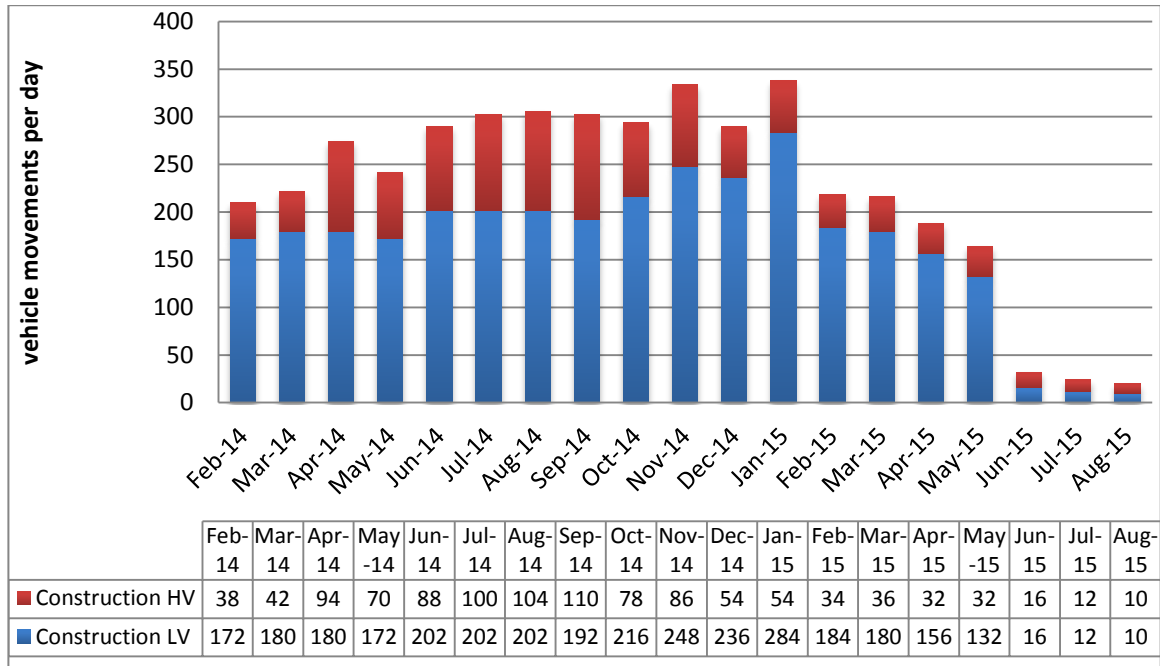


Chart 1 – Estimated Total Traffic Movements (vpd) Associated with Construction Traffic

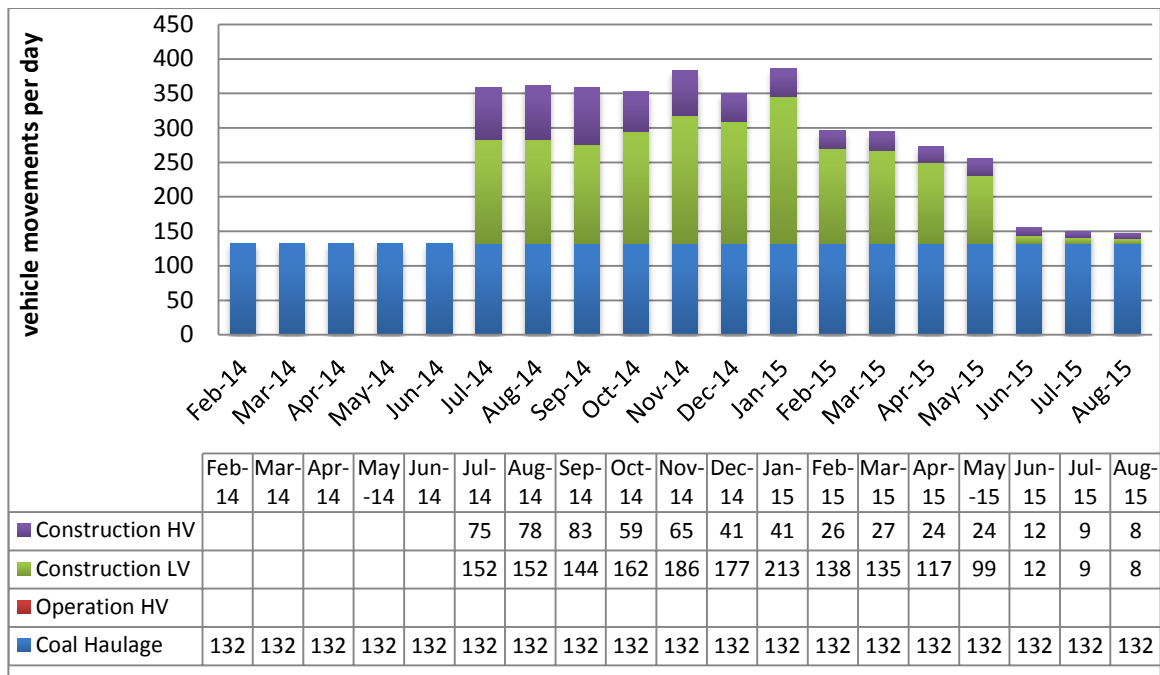


Chart 2 – Estimated Traffic Movements (vpd) on Coal Haul Road with Left In / Left Out Intersections during Construction Phase⁴

⁴ Internal movements on the Coal Haul Road are not shown. Coal haulage movements shown are those currently made during an average 12 hour shift. They do not represent any increase in vehicle movements.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	25

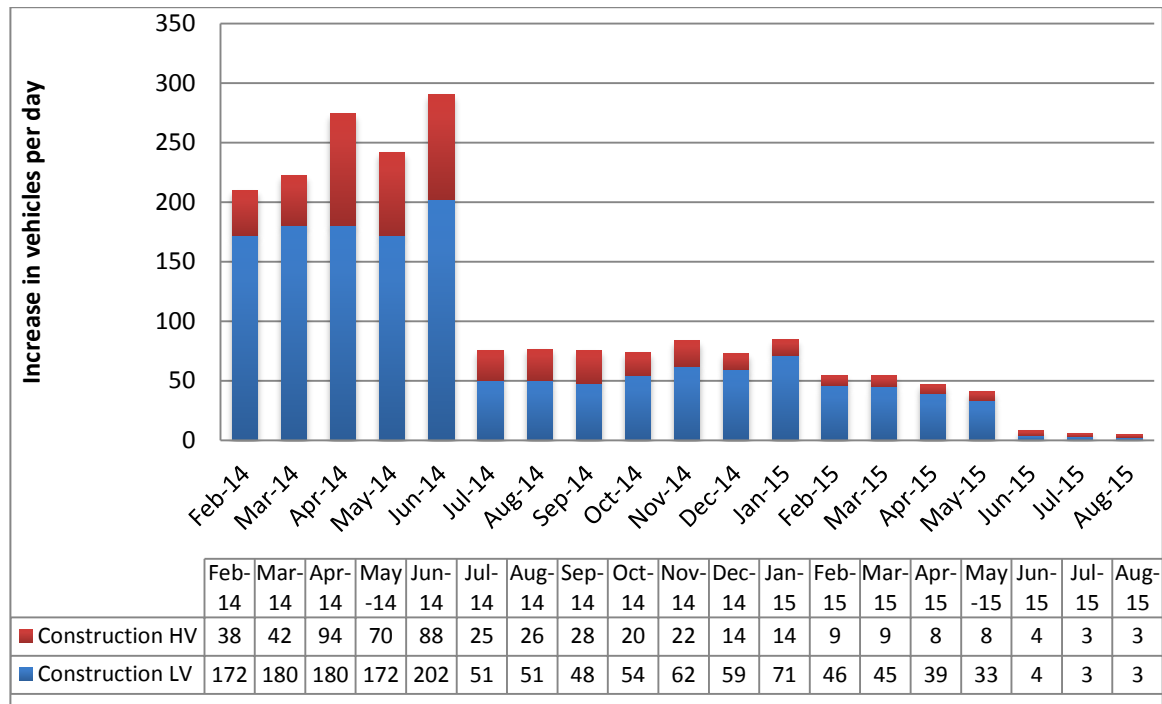


Chart 3 – Estimated Construction Traffic Movements (vpd) on Manilla Road⁵ & Leard Forest Road

Some of the primary deliveries, resulting in significant haulage volumes, and the number of anticipated loads are shown in the table below. These movements are incorporated into the figures in the charts generated above. The proposed access route has been nominated.

Table 6 – Primary Deliveries associated with Construction

Contractor	Materials	No. Loads	% Complete	Transport Vehicle	Proposed Access Route
Leighton's	Ballast	1,200	100%	Truck & super dog	Left In / Left Out
Leighton's	Track	120	100%	Articulated Truck (over-length)	Site Access Left In / Left Out
Leighton's	Sleepers	250	100%	Articulated Truck	Site Access Left In/Left Out
Leighton's	Imported fill	1,000	100%	Truck & super dog	Site Access Left In / Left Out
Leighton's	Bridge / Viaduct Girders	170	100%	Special purpose (over-length)	Temporary Access Therribri Road

⁵ Between Kamilaroi Highway and Leard Forest Road

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	26

Contractor	Materials	No. Loads	% Complete	Transport Vehicle	Proposed Access Route
					Left In / Left Out
TSJV	Steelwork	98	100%	Articulated Truck	Site Access Left In / Left Out
TSJV	Mechanical Equipment	300	100%	Articulated Truck	Site Access Left In / Left Out
TSJV	Tunnel (uniculverts)	270	100%	Articulated Truck	Site Access Left In / Left Out
UGL	High voltage equipment	120	100%	Articulated Truck	Site Access Left In / Left Out
UGL	Structural Steel	10	100%	Articulated Truck	Site Access Left In / Left Out

Review 3 – 31 January 2015

The delivery schedule included in Table 6 has been updated.

5.4.1. Construction Employee Transport

Previous assumptions about the size of the construction workforce have changed given the construction period has been condensed from five years to 18-24 months. This is primarily due to the delay in the granting of necessary subsidiary approvals.

The Construction Workforce Accommodation Plan (CWAP) has been developed to assume a peak construction workforce of 363 from May to August 2014. The entire non-local workforce, typically over 80% of the total, will be housed in the Boggabri Accommodation Village (Boggabri MAC) located in the township of Boggabri. It is estimated that up to 63 locals will be employed by the construction project.

All construction employees housed at the Boggabri MAC will access the site via bus. The buses are likely to carry between 20 and 30 employees each. Bus numbers on any given day are likely to vary between 7 and 20, depending on site activity.

Buses will be available to local employees from both Boggabri and Narrabri (including a pick up at Baan Baa) to further reduce the number of construction employee vehicles accessing the site. It has been estimated that a total of 30 vehicles carrying construction employees will access the site utilising their own transport.

Utilising buses is estimated to reduce light vehicle numbers associated with the project by between 200 and 500 light vehicles per day.

There will be some construction related employees access the site in construction related light and heavy vehicles that are required for specific functions (i.e. not associated with deliveries). These traffic numbers have been incorporated into the assumptions for construction traffic volumes.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	27

Review 3 – 31 January 2015

5.5. Actual Traffic Counts

Traffic counts were undertaken in November 2013, May 2014, September 2014 and January 2015. To estimate the daily traffic, it was presumed that a further 20% of traffic would travel outside the peak periods

November 2013

Three (3) daily counts were taken during late November 2013 between 5:30am to 9:30am and 2:30pm to 6:30pm with an average determined for each period.

May 2014

Two (2) daily counts were taken on 7 May 2014 and 19 May 2014 between 4:30am to 7:00am and 4:00pm to 7:00pm with an average determined for each period.

September 2014

Three (3) daily counts were taken on 25 August 2014, 2 September 2014 and 10 September 2014 between 5:00am to 9:30am and 2:30pm to 7:00pm with an average determined for each period.

January 2015

Counts were taken on 15 and 29 January 2015 from 2:30pm to 7:00pm, and 16 and 30 January 2015 from 5:00am to 8:30am with an average determined.

The average traffic volumes for each period are provided in the table below.

Location	November 2013		May 2014		September 2014		January 2015	
	LV	HV	LV	HV	LV	HV	LV	HV
Manilla-Boggabri Rd (at the Iron Bridge)	642	47	968	48	1090	72	902	144
Therribri Rd (north of Manilla-Boggabri Rd)	37	4	No data	No data	85	13	82	24
Leard Forest Rd (north of Goonbri Rd)	313	32	198 ⁽¹⁾	23 ⁽¹⁾	688	47	943	83
Leard Forest Rd (south of Goonbri Rd)	331	14	300 ⁽¹⁾	20 ⁽¹⁾	636	35	936	87
Leard Forest Rd (north of the Leighton's site compound)	-	-	198	23	204	32	- ⁽²⁾	- ⁽²⁾
Goonbri Rd (east of Leard Forest Rd)	45	1	64	6	68	17	64	9

(1) There is an anomaly with the traffic information for Leard Forest Road as there has been an increase in traffic since November 2013 as a result of the construction traffic associated with the expansion project and the commencement of the Maules Creek Coal Project.

(2) Leard Forest Road (north of the Leighton's site compound) was closed to the public on 24 September 2014.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	28

5.6. Project Hours & Shift Times

The project approval has limited construction hours for the rail spur line to the following:

- a) 7:00 am to 6:00 pm Monday to Fridays, inclusive;
- b) 8:00 am to 1:00 pm on Saturdays; and
- c) at no time on Sundays or public holidays.

No limitations have been applied to construction hours for any other works, except those involving blasting. Such works are restricted to 9:00am – 5:00pm, Monday through Saturday. It should be noted that an out of hours work protocol may be developed and subsequently approved for works on the rail spur (see Section 5.1.1 of CEMP).

The primary shift times for each of the primary construction components, and the existing shift times for operational staff are shown in Table 7.

Table 7 – Shift Times

	Contractor	Shift	Beginning	End
CHPP	TSJV	Day	6:30am	5:30pm
Rail Spur	Leighton's	Day	6:00am	5:00pm
Electricity Transmission Line	Transgrid / UGL	Day	7:00am	6:00pm
		Saturday	8:00am	1:00pm
Operational	LCR	Morning	5:30am	5:30pm
		Night	5:30pm	5:30am
	Downer (workshop)	Day	6:30am	6:30pm
	Downer (production)	Day	6:00am	6:00pm
		Afternoon	6:00pm	6:00am
Office Employees	Day	6:00am	5:00pm	

Leighton's has proposed shift times of 6:00am to 5:00pm on their standard cycle of 10 days on, 4 days off. Therefore an OOW is being sought for these periods and an OOWP has been submitted to DoPI.

Review 3 – 31 January 2015

The OOWP has been approved by DoPI which approves the working hours proposed by Leighton's. The other shift times remain the same.

The major contractors including TSJV and Leighton's will commence and end on a staggered roster to enable all of their employees to register at the site and to spread the traffic volumes. The staggered rosters will

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	29

avoid the known times that school buses operate on Leard Forest Road and Manilla Road (between Leard Forest Road and the Highway) which are between the hours of 7:30am to 8:35am and 3:20pm to 4:40pm.

Operations at the existing Boggabri Coal Mine occur 24 hours per day, 7 days per week and it is assumed in the Project TIA this will continue in BCP. As shown above the shifts do vary for operations and are likely to vary further throughout the operational phase. As with the construction contractors the operational contractors will also start and finish on a staggered roster system which will provide specific consideration for the existing school bus service and other staggered rosters associated with the construction phase.

After the construction phase the permanent access arrangements will alleviate issues associated with the school bus operations and provide suitable traffic capacities well beyond the mines intended use.

5.7. Other Major Projects (Cumulative Traffic Impacts)

This TMP considers the cumulative impact of Project traffic coupled with existing and new traffic that may be generated by other adjacent projects on the same area of the surrounding road network. This is to ensure the cumulative traffic impacts are considered and mitigated.

The two major projects that are likely to generate additional traffic in the vicinity of the BCP are the Maules Creek Coal Project and the Tarrawonga Coal Project. Details of the traffic associated with each mine site are provided below where data has been made available.

5.7.1. Maules Creek Coal Project

The proposed Maules Creek Coal Project is for a new open cut coal mine north of, and adjacent to, the BCP. With currently no operational traffic, all traffic will initially be construction-related. The estimated timing of the project is illustrated in the Gantt chart in Figure 5 below taken from a Whitehaven Coal Pty Ltd Investor Presentation of 27 August 2013.

Review 3 – 31 January 2015

Construction activities associated with Maules Creek Col Project commenced in January 2014. The schedule shown in Figure 5 below is believed to have remained relatively unchanged based on the construction progress outlined in the Whitehaven Coal Full Year Results 2014.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	30

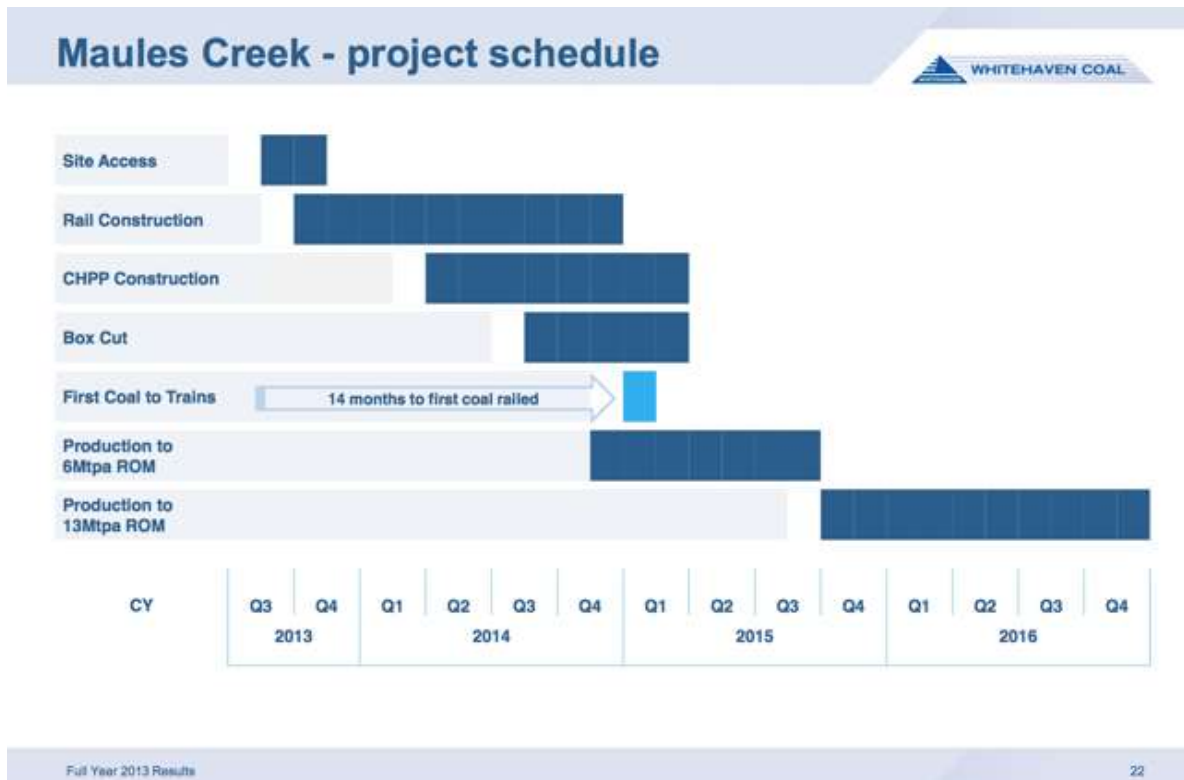


Figure 5 – MCC Project Schedule

As shown there is some overlap given the period of condensed activity between Q4 2013 and Q1 2014.

The proposed interim access to the Maules Creek Coal Project site from either direction along the Kamilaroi Highway would be via Manilla Road and Leard Forest Road, then existing tracks within Leard State Forest. It is proposed to operate this route until the Maules Creek Coal Project Mine Access Road is constructed, from which all traffic up to 42.5t GVM will then access via Therribri Road.

The Maules Creek Coal Project TMP indicates that around 90% of construction and operational employees will be transported to the mine site by a shuttle bus service. This will significantly reduce the number of light vehicles associated with this project using local roads.

The proposed access route for vehicles exceeding 42.5t GVM is along Blue Vale Road, a section of the Tarrawonga Coal private haul road, Manilla Road and then Leard Forest Road and/or Therribri Road depending on which access is currently active.

Based on the project schedule, shown above, the primary Maules Creek Coal Project construction activities are anticipated to run parallel with the BCP. The construction traffic assumptions, as detailed in the Traffic Assessment (Hyder, 2010) and the Maules Creek Coal Project TMP are proposed to be:

- Construction period duration of 75 weeks;
- Working hours are 7:00am to 6:00pm;
- Estimated 340 workers at peak activity requiring 15 buses (one way);

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	31

- Approximately 10% of employees anticipated to make their own travel arrangements (34 employees) of which 90% are proposed to access via Manilla Road (31 employees); and
- Estimate an average of 33 heavy vehicle movements per day at peak activity.

Review 3 – 31 January 2015

The Goonbri Road Upgrade was opened to traffic on 24 September 2014. Access to the Maules Creek Coal site via Goonbri Road commenced on that date.

Table 8 – Maules Creek Coal Project – Traffic Numbers

Road	Presumed Traffic Generation (2013)
Manilla Road	157
Leard Forest Road	157
Braymont Road	7

During the operational phase the Maules Creek Coal Project have presumed that there will be up to 470 permanent employees corresponding with a peak production rate of 13Mtpa. The mine is proposed to operate for 24 hours per day, seven days per week (DCTE, 2013).

Given available information, it is anticipated that the primary cumulative traffic impacts of the Maules Creek Coal Project combined with BCP will be:

- Joint use of the Kamilaroi Highway and varying sections of Manilla Road until the BCP alternate access is available via the current Coal Haul Road;
- Joint use of Leard Forest Road until the Maules Creek Coal Project establishes Route 2 via Therribri Road; and
- Peak traffic activity occurring simultaneously in the morning and the afternoon given the approved working hours.

The Maules Creek Coal Project proposes to undertake the following works, as part of their Voluntary Planning Agreement (VPA), in cooperation with the BCP (where the two Projects have shared interests):

1. Upgrade of the Kamilaroi Highway / Manilla Road intersection to a channelised right turn (CHR) facility that meets the Austroads design guidelines;
2. Upgrade to the section of Manilla Road between Tarrawonga Coal Mine Access Road and Barbers Lagoon Road (other than the section covered in the Tarrawonga VPA) to provide a sealed roadway between these two points;
3. The Rail Bridge Overpass over the Kamilaroi Highway which will be constructed as a joint venture involving the Maules Creek Coal Project and the BCP; and
4. Upgrade to the section of Therribri Road between Manilla Road and the future Mine Access Road to provide a sealed roadway between these two points.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	32

Review 3 – 31 January 2015

Commencement of the Maules Creek Coal Project suffered delays of approximately 3 months arising from a legal challenge against the Maules Creek EPBC Act approval. On 20 December 2013, the Federal Court dismissed the judicial review application, thereby confirming the validity of the Maules Creek EPBC approval. Subsequent delays have resulted due to a challenge over the clearing of Leard State Forest.

Construction activities associated with the Maules Creek Coal Project commenced in January 2014. Despite the delays, Whitehaven Coal's Full Year Results for 2014 indicates that they are still on track and are continuing to construct the key infrastructure as itemised in the schedule in Figure 5.

The status for works to date as per the VPA are as follows:-

- 1. Upgrade of the Kamilaroi Highway / Manilla Road intersection – works has not yet commenced.*
- 2. Upgrade to the section of Manilla Road between Tarrawonga Coal Mine Access Road and Barbers Lagoon Road – works completed during the third quarter of 2014;*
- 3. The Rail Bridge Overpass over the Kamilaroi Highway – works completed on 12 January 2015; and*
- 4. Upgrade to the section of Therribri Road between Manilla Road and the future Mine Access Road – work has not yet commenced.*

5.7.2. Tarrawonga Coal Project

The Tarrawonga Coal Project involves continuation and expansion of an existing open cut coal mine south of and adjacent to the BCP. It has operated since 2006 and currently produces approximately 2Mtpa of Run-of-Mine (ROM) coal which is transported by road to Whitehaven CHPP on the outskirts of Gunnedah along the following route:

- Private haul road from mine across Goonbri Road, south to Manilla Road;
- Manilla Road east to private haul road, south and east to Hoads Lane;
- Hoads Lane south to Braymont Road; and
- Blue Vale Road south to Whitehaven CHPP on the Werris Creek - Mungindi railway line, south of Kamilaroi Highway.

The Tarrawonga Coal Project proposes increasing ROM coal production to approximately 3Mtpa and the operational workforce to 120 persons, up from the current level of 86 employees. A recent \$75W modification proposes construction and usage of a services corridor, including a haul road to transport ROM coal directly from the open cut pit to the new processing and handling facilities of the Boggabri Mine project.

The construction schedule in the Tarrawonga Coal Project Road Transport Assessment (Halcrow 2011) is not definitive although construction numbers have been incorporated into the year 2013 suggesting that the project is likely to have some overlap with BCP.

Although there is likely to be some traffic accessing the site via Manilla Road and possibly Goonbri Road it is anticipated that the majority of the traffic for the construction phase of the Tarrawonga Coal Project to achieve 3Mtpa will access the mine via the existing route described above.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	33

Some of the key assumptions for construction of the Tarrawonga Coal Project Road Transport Assessment include:

- 20 construction employees assumed to result in 40 light vehicles per day;
- Approved construction hours between 7:00am – 6:00pm weekdays;
- An average of 55 deliveries per day resulting in 110 vehicles per day of which 18 are heavy vehicles; and
- Deliveries shall be spread evenly 6:00am – 6:00pm.

During the operational phase of the Tarrawonga Coal Project Road Transport Assessment an increase of 34 workers has been presumed along with an average of 20 visitors / deliveries per week.

The Tarrawonga Coal Project has proposed to undertake the following works. It is unknown if the works form part of a VPA. They propose to construct (over the Project life):

1. 1.4km unsealed road southwest of the Tarrawonga Coal Project site including a new intersection with the Tarrawonga haul route;
2. 1.2km unsealed south of the Tarrawonga Coal Project site including a new intersection with the haul route;
3. 400m unsealed road realignment around the southern extent of the open cut; and
4. 3.8km unsealed road from a new intersection with Dripping Rock Road and Blair Athol Lane, north to Goonbri Road, northeast of the Tarrawonga Coal Project.

To be conservative an allowance for additional traffic, associated with the Tarrawonga Coal Project, in accordance with the Tarrawonga Coal Project Road Transport Assessment has been assumed and is shown in the table below:

Review 3 – 31 January 2015
<i>To date, no road works associated with the Tarrawonga Coal Project as detailed above have commenced.</i>

Table 9 – Tarrawonga Coal Project – Traffic Numbers

	Presumed Generated Traffic (2013)
Manilla Road⁶	37
Leard Forest Road	0
Goonbri Road	9

⁶ West of Leard Forest Road

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	34

6. Traffic Impacts

As previously described in Section 5, there shall be varying access arrangements throughout the operational (see 5.1) and construction (see 5.2) phases of the Project.

The following traffic access arrangements and associated impacts are detailed in the relevant sections below:

6.1. Site Access Arrangements and Traffic Impacts

6.1.1. Interim Access Arrangements

The left in / left out intersections with the Kamilaroi Highway will not be available until at least January 2014, subject to final approvals and construction timing.

Review 3 – 31 January 2015

All works associated with the construction of the two new permanent intersections with the Kamilaroi Highway were completed on 10 October 2014.

In the interim period, construction access will be provided for:

- Over-size and over-mass heavy vehicles via a temporary access with the Kamilaroi Highway;
- Vehicles with a GVM less than 42.5t via the existing site access via Manilla Road over the 'Iron Bridge' and Leard Forest Road;
- Vehicles exceeding 42.5t via Barbers Lagoon and Braymont Road, Manilla Road and Leard Forest Road (under strict provisions);and
- If available, vehicles exceeding 42.5t via the existing Tarrawonga private haul route to Manilla Road and then Leard Forest Road.

A proposal to use the temporary access on the Kamilaroi Highway I for operational fuel deliveries has been discussed with RMS. To date, the proposal has not been approved by RMS and further clarification is required from DoPI to determine if this use is permissible under the existing Project approval. If the arrangement were to proceed it is anticipated that the temporary access would average an additional 6 B-double movements per day.

Review 3 – 31 January 2015

The temporary access has been decommissioned following the completion of the new permanent intersections on the Kamilaroi Highway which now provides access for over-mass and over-size vehicles.

Fuel deliveries to the mine site shall continue via the existing mine access however it is envisaged that deliveries will be via the permanent intersections following the cessation of coal haulage activities, currently scheduled for April 2015.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	35

If the Tarrawonga private haul route or the temporary access is not available for operational vehicles exceeding 42.5t, the trailers will continue to be de coupled to be taken along the existing access route to the mine site.

The following table shows an estimate of the additional traffic associated with all known activities whilst the interim access arrangements are in place.

Table 10 – Additional Traffic (vpd) – Interim Access Arrangements

	Manilla Road	Leard Forest Road	Therribri Road
Background	459	311	79
Boggabri Coal -Construction	230	230	0
Boggabri Coal -Operations ⁷	80	80	0
Maules Creek Coal	157	157	0
Tarrawonga Coal	37	0	0
TOTAL	963	778	79

As shown in the table above there is a marked increase in the traffic utilising Manilla Road, Leard Forest Road and the associated intersections. Although peak activity may not occur simultaneously for each of the projects there is likely to be overlap particularly between BCP and Maules Creek Coal Project which are generating the majority of traffic.

It has also been assumed the new access to the Maules Creek Coal Project utilising Therribri Road will not be completed until after the left in / left out intersections with the Kamilaroi Highway are operational, and the interim access arrangements described above have ceased.

It will therefore be essential that both projects work collaboratively to implement initiatives to minimise traffic volume peaks associated with the transportation of workforces.

Although the capacity of each road and intersection is not likely to be exceeded, there are some areas that will need to be addressed given the increased volumes. These include the items outlined in the table below:

Review 3 – 31 January 2015

The new access to the Maules Creek Coal Project utilising Therribri Road will commence following the cessation of coal haulage activities, currently scheduled for April 2015

⁷ Of the 459 vehicles and 311 vehicles on Manilla Road and Leard Forest Road respectively 300 are presumed to be a resultant of BC operations at that time (2010). Therefore the figure shown for BC operations for the interim access is the difference (i.e. 380 – 300 vpd)

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	36

Table 11 – Road Safety Issues

Concern	Responsibility	Proposed Mitigation Measure	Schedule
The storage length of the CHR for vehicles turning right into Manilla Road from the Kamilaroi Highway at peak periods or when there are a significant number of heavy vehicles turning at any given time	Maules Creek Coal Project / BCP	TMP Section 5.6.1 – Works to be undertaken by the Maules Creek Coal Project. Temporary measures to be installed by the BCP prior to BCP works.	<i>BC is unable to provide timing for works to be completed by Maules Creek Coal. BC has considered temporary measures, but there was insufficient room for temporary barriers.</i>
Significant drop offs over the box culvert headwalls at the Manilla Road intersection	Maules Creek Coal Project / BCP	TMP Section 5.6.1 - Works to be undertaken by the Maules Creek Coal Project. Temporary measures to be installed by the BCP prior to BCP works..	<i>BC is unable to provide timing for works to be completed by Maules Creek Coal. BC has considered temporary measures, but there was insufficient room for temporary barriers.</i>
Give way arrangements at the Iron Bridge over the Namoi River	Maules Creek Coal Project / BCP	Appendix A – Portable traffic signals during peak construction periods prior to permanent CHR access complete	<i>Give way signage in place at the western end of the Iron Bridge and a reduced speed limit of 10km/hr has been established. Temporary traffic signals have not been used due to concern over traffic delays during peak times.</i>
Controls and advanced warning at the intersection of Therribri Road with Manilla Road	Maules Creek Coal Project / BCP	Appendix A – line marking including new hold line closer to intersection	<i>Works completed.</i>
Controls and advanced warning at the	Maules Creek Coal	Appendix A - new	<i>Works completed.</i>

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	37

Concern	Responsibility	Proposed Mitigation Measure	Schedule
existing Leard Forest Road intersection with Manilla Road	Project / BCP / Tarrawonga Coal Project	centrelines (on Leard Forest Road approaches) and hold lines; duplicate Give Way signs	<i>Duplication of Give Way signs still to be completed.</i>
Controls and advanced warning at the existing Goonbri Road intersection with Leard Forest Road	Maules Creek Coal Project / BCP / Tarrawonga Coal Project	Appendix A – line marking including hold line; advance warning signage; re-locate and duplicate Give Way signs	<i>Works completed. Duplication of Give Way signs still to be completed.</i>
Controls at the Mine Access Road, dimensional capacity and approach angle	BCP	Appendix A – advance warning signage; shift over-size & over-mass heavy vehicles to temporary access; re-align after closure of Leard Forest Road	<i>Ongoing</i>

Review 3 – 31 January 2015

The schedule included in Table 11 has been updated.

The temporary access with the Kamilaroi Highway for over-size and over-mass heavy vehicles has been discussed with RMS. It has been recognised that the utilisation of a temporary access with the Kamilaroi Highway will require specific consideration of the inherent risks. A risk assessment and draft TCP have been submitted to RMS. The primary control measures were discussed at the meeting held on 28 March 2013, which were subsequently agreed to in principle by BCP.

The proposed mitigation measures for both the primary construction (left in / left out intersections with the Kamilaroi Highway) and the proposed temporary access with the Kamilaroi Highway are included in Sections 6.2.3 and 6.2.2 respectively.

Review 3 – 31 January 2015

The two new permanent intersections with the Kamilaroi Highway were completed on 10 October 2014 which now provides access for over-mass and over-size vehicles.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	38

6.1.2. Primary Access Arrangements

The primary points of access for the duration of the BCP construction phase are via the left in / left out intersections with the Kamilaroi Highway which are, pending approval, scheduled to be established in late January 2014.

The establishment of the left in / left out intersections with the Kamilaroi Highway are of paramount importance to enable access to the western side of the highway and facilitate major deliveries primarily for the rail spur. Once established the left in / left out intersections with the Kamilaroi Highway will be used for the following pre-approved vehicles:

- All over-size and over-mass vehicles;
- All deliveries associated with the rail spur;
- All major deliveries for the CHPP;
- All construction related light vehicles suitable for use on construction sites (i.e. vehicles that are certified for use on the respective construction sites); and
- All operational heavy vehicles that either exceed 42.5t or are over-size.

Once the left in / left out intersections with the Kamilaroi Highway are in use it is anticipated that the number of heavy vehicles utilising Manilla Road and Leard Forest Road will reduce significantly (by approximately 75%) as there will be limited use of these roads by heavy vehicles associated with both the construction and operational activities. At this point the mitigation measures for these roads shall be reviewed.

Review 3 – 31 January 2015

The two new permanent intersections with the Kamilaroi Highway were completed in on 10 October 2014 which now provides access for over-mass and over-size vehicles.

The following table shows an estimate of the additional traffic associated with all known activities whilst the primary access arrangements are in place. Peak construction traffic has been assumed.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	39

Table 12– Additional Traffic (vpd) – Primary Access Arrangements

	Manilla Road	Leard Forest Road	Therribri Road⁸
Background	459	311	79
BCP - Construction	85	85	0
BCP - Operations ⁹	80	80	0
Maules Creek Coal Project	157	157 ¹⁰	0
Tarrowonga Coal Project	37	0	0
TOTAL	818	633	79

The traffic shown on Therribri Road is an estimated number of vehicle movements on a daily basis for the delivery of some of the viaduct girders. As shown in Chart 3 (Section 5.4) there is a significant decrease in vehicle movements resulting from the use of the Coal Haul Road for construction traffic. Most notably the reduction in heavy vehicles will assist in alleviating safety issues at the respective intersections along the current mine access route.

After the primary access arrangements have been established a further review of the traffic conditions will be undertaken with the Maules Creek Coal Project to determine whether the temporary traffic control measures proposed along the route are still warranted, which is likely to be dependent on the Maules Creek Coal Project progress.

6.2. Project Interfaces with Public Roads

Activities that are being undertaken that have an interface with the public road network include the construction of:

- Road Safety Improvements;
- Temporary Access with Kamilaroi Highway;
- Left In / Left Out Intersections with Kamilaroi Highway;
- Rail Overpass Bridge over the Kamilaroi Highway;
- Viaduct over Therribri Road;
- Rail Balloon Loop (at Grade) with Leard Forest Road;
- Closure and relocation of Leard Forest Road;
- Temporary construction access off Therribri and Leard Forest Roads; and
- Water distribution pipelines under Therribri and Leard Forest Roads.

⁸ Therribri Road volumes likely to be highly variable depending on the primary access arrangements associated with MCC. BC traffic shall be limited where possible to girder deliveries which has not been shown given it will be over a short duration.

⁹ Of the 459 vehicles and 311 vehicles on Manilla Road and Leard Forest Road respectively 300 are presumed to be a resultant of BC operations at that time (2010). Therefore the figure shown for BC operations for the interim access is the difference (i.e. total operation traffic – 300 vpd)

¹⁰ The timing of the change in Maules Creek access arrangements is unknown however has been assumed to occur well after BC is utilising the primary access arrangements described above

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	40

The upgrade of the electricity transmission line shall also occur adjacent to and over the public road network.

The proposed timing of the remaining roadworks are shown in the schedule below.

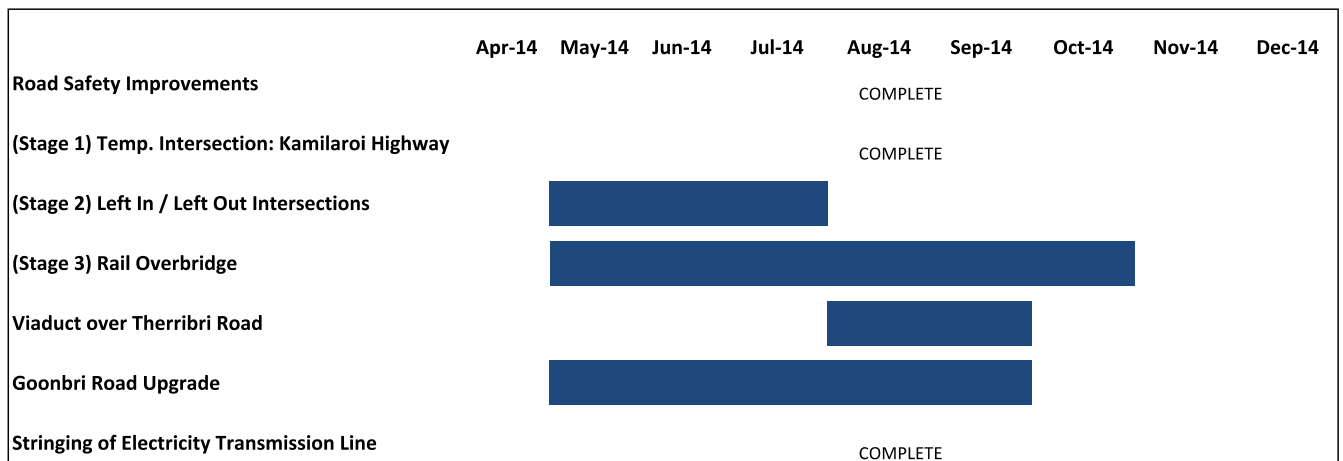


Figure 6 – Schedule of Roadwork Construction Activity

The traffic related impacts for each of the primary construction activities are discussed below.

Review 3 – 31 January 2015
<i>The majority of road safety improvements as indicated in Table 11 have been implemented. Outstanding works are anticipated for completion in 2015.</i>
<i>The construction of the temporary access has been decommissioned following the completion of the two new permanent intersections on the Kamilaroi Highway.</i>
<i>All works associated with the Rail Overpass Bridge over the Kamilaroi Highway were completed on 12 January 2015.</i>
<i>The Rail Spur Line inclusive of the rail balloon loop at Leard Forest Road and the viaduct over Therribri Road were completed December 2014.</i>
<i>The Goonbri Road Upgrade was opened to traffic on 24 September 2014 which included the closure of Leard Forest Road at the same time in accordance with the LFRCS.</i>
<i>Temporary construction access to the Therribri Road and Leard Forest Road will be decommissioned upon the completion rail signalling works, scheduled for March 2015.</i>

6.2.1. Road Safety Improvements

Road safety improvement works shall be undertaken, where necessary, to address some of the higher risk issues associated with the current access.

The Maules Creek Coal Project has committed to rectify issues associated with the Kamilaroi Highway/Manilla Road intersection and seal Manilla Road between Tarrawonga’s private haul road and

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	41

Barbers Lagoon Road. These works will address some of the fundamental safety issues associated with the current access arrangements.

Review 3 – 31 January 2015

Whitehaven have not yet commenced any works associated with the upgrade of the Kamilaroi Highway and Manilla Road intersection.

The upgrade and sealing of Manilla Road between the Tarrawonga private haul road and Barbers Lagoon Road was completed during the third quarter of 2014.

BCP will address remaining matters identified in Table 11 including the completion of a risk assessment of the Manilla Road intersection with the Kamilaroi Highway to identify temporary measures to reduce the impact of additional traffic whilst the interim access arrangements are in place. The temporary measures that are likely to be incorporated include the following:

1. Encourage heavy vehicle access between the hours of 8:35am and 3:20pm to reduce peak traffic and avoid school bus operating hours;
2. Incorporate into the Heavy Vehicle Driver Code of Conduct that convoys are not permissible;
3. Monitor intersection performance on a quarterly basis;
4. Provide advanced warning associated with the increased vehicle movements on the side road
5. Improve delineation and install temporary barriers over the headwalls adjacent to the highway on Manilla Road;
6. Monitor the condition of the linemarking as part of the routine inspections; and
7. Provide Visual Message Signs (VMS) and/or temporary speed limits if there is a known spike in traffic, particularly heavy vehicle deliveries.

Where control measures are proposed at the intersection of Manilla Road with the Kamilaroi Highway, RMS and NSC approval shall be sought prior to implementation.

Other works identified in Table 11, including the installation of traffic control measures, shall be undertaken prior to a significant increase in construction related traffic by BCP.

Review 3 – 31 January 2015

The schedule included in Table 11 has been updated.

6.2.2. Temporary Access with Kamilaroi Highway

The temporary access involves the construction of new pavement to provide a basic intersection with suitable dimensional capacity for over-size and over-mass heavy vehicles to enter and exit the highway. The proposed intersection is shown in Figure 7 below.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	42

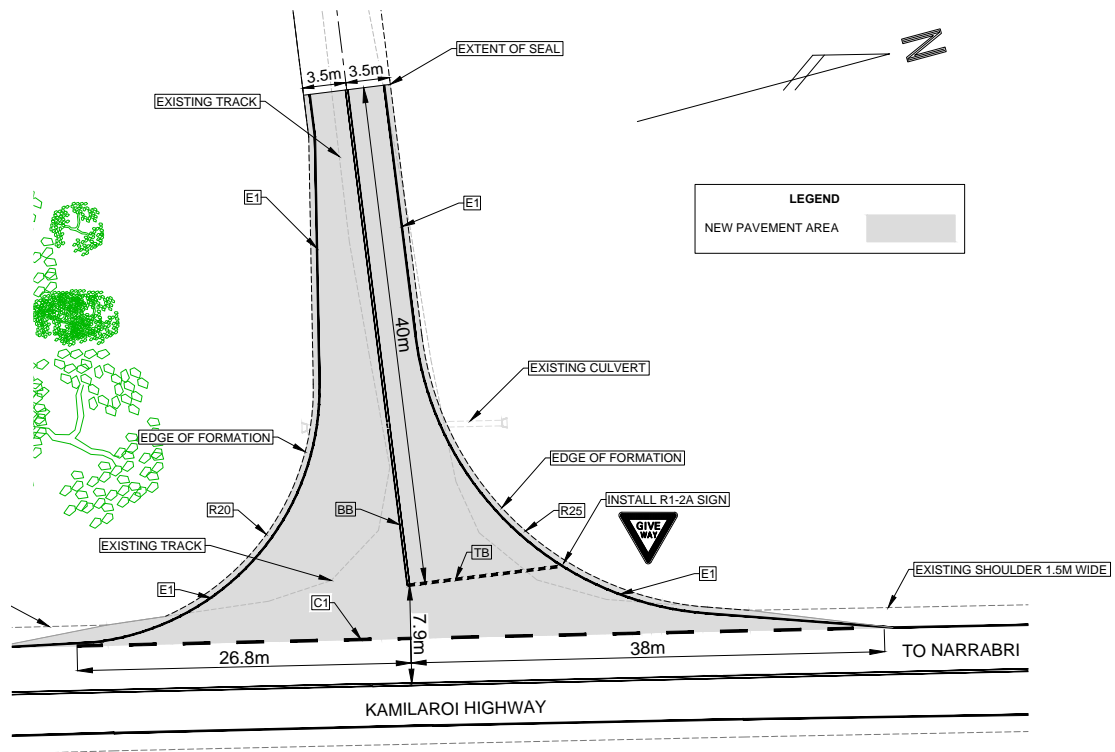


Figure 7 – Temporary Access with Kamilaroi Highway

The contractor for the construction of the temporary access, Keller Civil Engineers is RMS prequalified and shall undertake the works in accordance with RMS Specification G10 – Traffic Management and RMS Traffic Control at Worksites Manual Version 4.

A Works Authorisation Deed (WAD) has been executed which will govern the construction requirements adjacent to the highway. A temporary sealed road between the intersection and the haul road will be constructed to complete the link.

It is envisaged that the construction of the temporary access may involve road work traffic restrictions as appropriate during working hours for one day to enable the construction of new pavement immediately adjacent to the northbound through lane. Once the construction of the pavement adjacent to the highway is complete it is anticipated that the remainder of the works shall be constructed at a suitable distance from the through lane enabling the speed limit on the highway for through traffic to be 80km/hr.

A stand alone construction TMP shall be a requirement of Keller Civil Engineers and will require the approval of RMS prior to the commencement of works pursuant of the WAD. This will include a roadworks TCP to be prepared in accordance with RMS requirements.

The operation of the temporary access shall be undertaken with the primary control measures as agreed with RMS:

- Provide VMS daylight hours with wording: “HEAVY VEHICLES TURNING – POSSIBLE SHORT DELAYS”;
- Restrict access to two hours in the morning avoiding school bus times and shift times (potentially 9:30am - 11:30am) under full two-way traffic control;

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	43

- Provide a one hour window for unladen heavy vehicles to exit provided they are not still over-size and/or over-mass requiring a permit (potentially 1:30pm -2:30pm). No traffic control shall be required when exiting, however, vehicles will require flashing lights; and
- Nominate rest areas on either approach for over-size and over-mass vehicles to wait for nominated access times.

Further consultation with RMS regarding the nominated control measures shall be required prior to implementation which shall include obtaining all necessary approvals including the operation of VMS.

Review 3 – 31 January 2015

The temporary access has now been decommissioned following the completion of the two permanent intersections on the Kamlaroi Highway in October 2014.

6.2.3. Left In / Left Out Intersections with Kamlaroi Highway

The proposed left in / left out intersections with the Kamlaroi Highway involve the construction of new pavement adjacent to the highway, potentially new surfacing treatments and the installation of wire rope safety barrier along the new centreline to prevent right turn manoeuvres into and out of the intersections. The general arrangements for the intersections are shown in Figure 8 and Figure 9 below.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	44

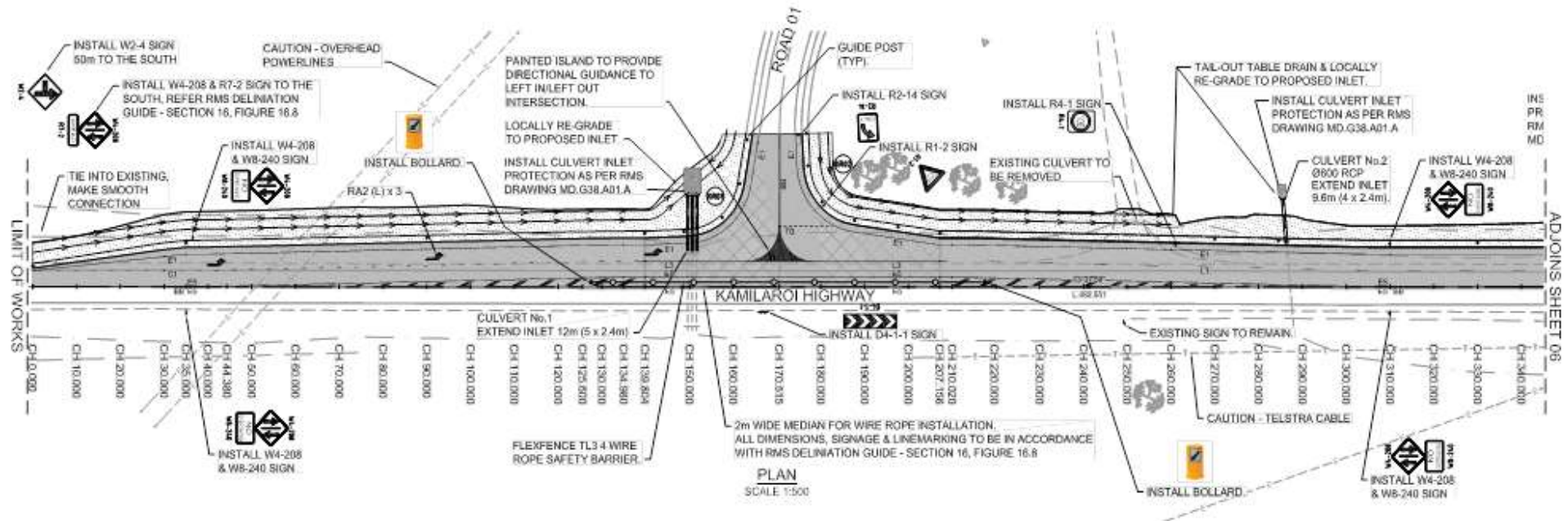


Figure 8 – Configuration of Southern Left In / Left out Intersection

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	45

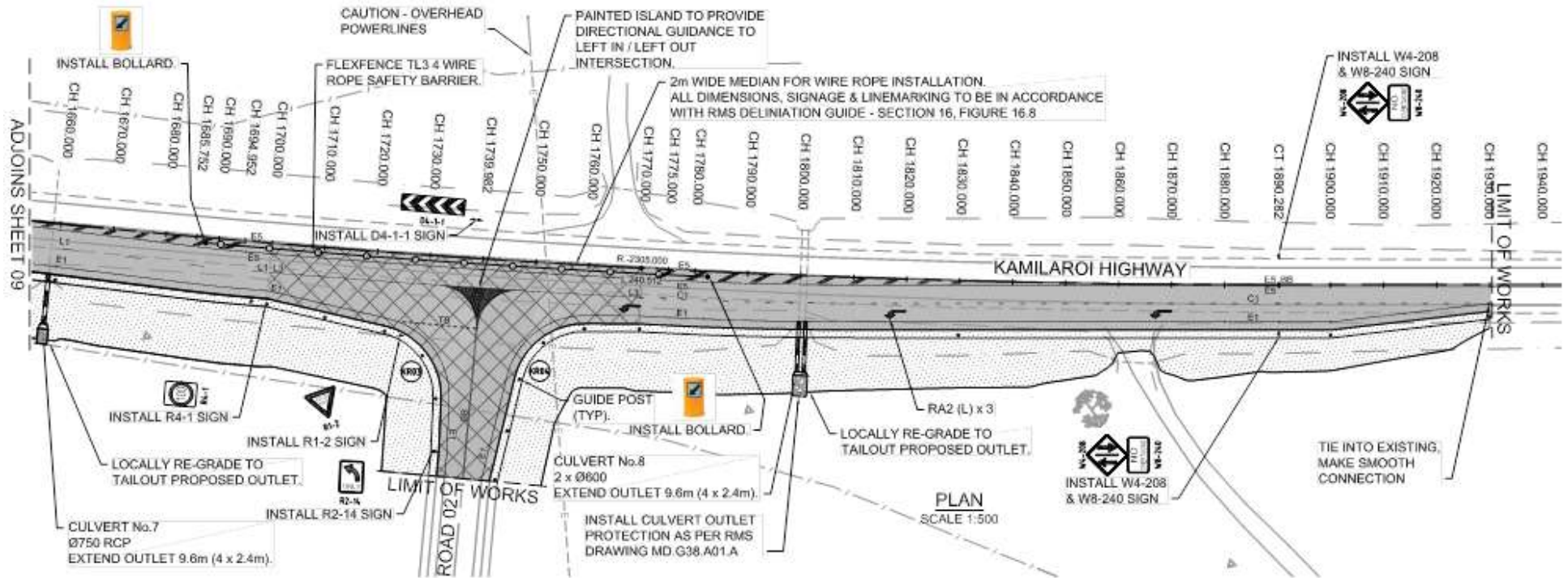


Figure 9 – Configuration of Northern Left In / Left Out Intersection

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	46

Widening for the construction of the intersections has been contained to one side of the highway, however there will still be a requirement to undertake a considerable amount of the construction works under traffic. This will require a low speed environment and restricting traffic to a single lane for a period of 1 to 2 weeks depending on the construction methodology chosen. The activities that are likely to require a one lane closure during working hours include:

- Laying of asphalt and bituminous sealing; and
- Installation of wire rope along the new centreline.

The contractor for the construction of the intersections has not yet been determined however they will be required to be RMS prequalified and shall undertake the works in accordance with RMS Specification G10 – Traffic Management and RMS Traffic Control at Worksites Manual Version 4. This will require the development and implementation of roadwork TCPs.

A stand-alone construction TMP shall be a requirement of the construction contractor and will require the approval of RMS, pursuant of the WAD prior to the commencement of works. The aim will be to minimise disruption to through traffic on the highway.

The WAD also requires road safety audits of the completed intersections prior to opening.

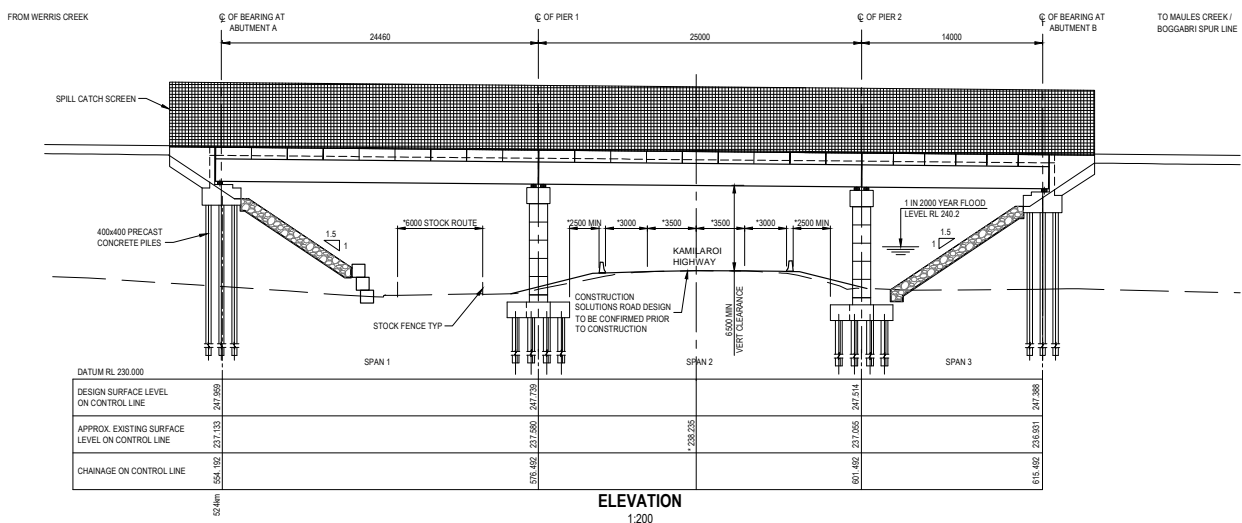
Review 3– 31 January 2015

All works associated with the construction of the two new permanent intersections with the Kamilaroi Highway were completed on 10 October 2014.

6.2.4. Rail Overpass Bridge over the Kamilaroi Highway

The rail overpass bridge forms part of the rail spur and will be constructed by Leightons.

The rail overpass bridge has undergone design amendments to enable the piles and pile caps to be located outside the existing through lanes, preventing the need for lane closures during the construction of the sub structure. Figure 10 below shows the position of the bridge relative to the highway.



Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	47

Figure 10 – Rail Overpass Bridge

The centre span is now wider therefore the construction should be able to be undertaken at least 3m away from the through lane behind a traffic barrier.

It should be noted that Leightons have been advised not to cross the highway or impede traffic flow as part of the construction of the rail overpass bridge or the rail spur with the exception of the following activities:

- Placement of steel bridge girders and precast deck elements which is estimated to be undertaken over two sessions at night; and
- Connecting the anti-spill screens onto the side of the bridge which shall be undertaken in one night session.

It is also anticipated that a short term closure may be required to transport major plant such as the piling rig across the highway. All other access to each side of the highway shall be via the existing Coal Haul Road bridge.

Review 3 – 31 January 2015

All works associated with the Rail Overpass Bridge including the safety barrier s on the Kamilaroi Highway adjacent to the bridge piers were completed on 12 January 2015.

6.2.5. Viaduct over Therribri Road

Leightons will also be responsible for the construction of the viaduct over Therribri Road. The methodology for the construction of the viaduct has not been determined as yet, however, specific consideration of the traffic control through the work site shall be required. It will also be paramount that the proposed traffic management measures and traffic control arrangements specifically address the operation of the existing Coal Haul Road intersection given its proximity to the work site. Specific consultation between the BCP Traffic Coordinator and NSC will be undertaken.

Review 3– 31 January 2015

**All works associated with the construction of the viaduct over Therribri Road have been completed.
The installation of the permanent safety barrier adjacent to the viaduct piers is currently in progress with completion scheduled for February 2015.**

6.2.6. Rail Balloon Loop (at Grade) with Leard Forest Road

The rail balloon loop is scheduled to be completed after the closure of Leard Forest Road and as a result there will be no impact on the public road network. Should the closure of the road be delayed or the construction of the balloon loop brought forward, suitable arrangements shall be developed and submitted to NSC for their approval.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	48

Review 3 – 31 January 2015

All works associated with the rail balloon loop at Leard Forest Road have been completed and Leard Forest Road has been closed in accordance with the LFRCS.

6.2.7. Relocation of Leard Forest Road

A section of Leard Forest Road shall be closed once Goonbri Road Upgrade is constructed and opened to the public. The re-alignment of Leard Forest Road is subject to Part 5 (EP&A Act) planning approval by NSC as the roads authority. Constructive Solutions prepared the report “Goonbri Road Upgrade (Leard Forest Road Realignment)” submitted to NSC in May 2013. The recommendations of this were approved in-principle by NSC in July 2013.

The alternative route that shall be upgraded to provide a similar level of service for road users is shown in Figure 11 below.

The Maules Creek Coal Project may still need to use Leard Forest Road for interim heavy vehicle access if it has not completed construction of its Mine Access Road by this time. Consultation with the Maules Creek Coal Project regarding this timing will need to occur to ensure they are not disadvantaged by the Leard Forest Road closure and BCP is not disadvantaged by its delay.



Figure 11 – Existing Alignment of Leard Forest Road and New Alternative Alignment

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	49

The construction of the new alignment is primarily over ‘greenfield’ areas. Only a small existing portion of Goonbri Road shall be utilised as part of the alternative route. The construction contractor has not yet been determined, however, they will be required to develop a ‘stand-alone’ construction TMP. The TMP shall consider construction interfaces with other public roads, of which there are few, and more importantly consider the haulage of pavement materials over the public road network, particularly the school bus route operating on this section of road. Dust generation may be an issue and will need to be considered by the construction contractor with suitable monitoring and control measures put in place.

The construction TMP shall be submitted to NSC for approval prior to the commencement of works. The road shall not be opened to the public until the construction of the road is complete and a Road Safety Risk Assessment undertaken. The risk assessment shall ensure that the ‘as built’ road alignment is appropriate and that there are appropriate controls in place for public road users for a road of this standard.

Review 3 – 31 January 2015

The LFRCS was prepared to satisfy the Schedule 3, Condition 61 of the Project Approval and has subsequently been approved by DoPI. The LFRCS includes the proposed Goonbri Road Upgrade to address the required closure of Leard Forest Road to accommodate the Rail Balloon Loop. A copy of the LFRSC is included as Appendix E.

The Goonbri Road Upgrade was completed on 19 September 2014 and following consultation with Narrabri Shire Council, the road was opened to traffic on 24 September 2014. Leard Forest Road was subsequently closed in accordance with the LFRCS.

6.2.8. Electricity Transmission Line

New 132kVA/11kVA electricity transmission lines will be constructed across the following public roads:

- Kamilaroi Highway (RMS);
- Therribri Road (NSC); and
- Leard Forest Road (NSC).

Specific traffic management measures (possibly including TCPs) will be required for the construction of these transmission lines which will primarily involve stringing over the roads listed with minimal traffic impacts. RMS and NSC occupation certificates will be sought.

Review 3– 31 January 2015

Works associated with the electricity transmission lines have been completed.

6.3. Road Closures, Road Openings & Restricted Local Road Access

As detailed in Section 6.2.7, Leard Forest Road shall be closed (subject to separate approval from NSC) north of Mine Access Road Intersection to the Northern Lease Boundary (see Figure 11). It is anticipated that the revised alignment, referred to as the Goonbri Road Upgrade, shall be open to the public by July 2014. Once the alignment is complete the existing section of Leard Forest Road between the mine site access and the Northern Lease Boundary shall be closed.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	50

Review 3 – 31 January 2015

The Goonbri Road Upgrade was completed on 19 September 2014 and following consultation with Narrabri Shire Council, the road was opened to traffic on 24 September 2014. Leard Forest Road was subsequently closed in accordance with the LFRCS.

Although the existing use of the road is minimal, road users will be informed for at least one month prior to the closure / opening.

The appropriate road closures and gazettal's shall be managed by the BCP Site Manager in conjunction with NSC and the Crown Lands Office.

Restricted access on the following public roads is required to ensure the use of the following sections of road is discouraged to avoid unnecessary traffic impacts on the surrounding road network:

- **Therribri Road**

Although it is proposed to utilise Therribri Road for some deliveries associated with the rail viaduct construction, other road use will be discouraged. It is recognised that some local employees may utilise the road, however, this use will be minimal. The primary control measure to prevent the use of Therribri Road is to prevent access to the Coal Haul Road (and later as the new site access) from Therribri Road. Signage to this effect will be placed on the approaches to the Coal Haul Road intersection and will be emphasised in employee and contractor induction.

Review 3 – 31 January 2015

The installation of the signage included in Appendix 3 was completed in November 2013.

- **Leard Forest Road (north of the Mine Access Road)**

Use of Leard Forest Road, north of the Mine Access Road, will be kept to a minimum for construction and operations. The construction of Goonbri Road (Leard Forest Road realignment) shall predominantly be undertaken via Goonbri Road between Leard Forest Road and Dripping Rock Road. There may be a period where the use of this section of road is required to construct the northern tie in of the realignment prior to the closure of the road. This period of use shall be kept to a minimum and considered as part of the construction TMP for the realignment.

Review 3 – 31 January 2015

Following the completion of the Goonbri Road Upgrade:-

- *Leard Forest Road between the Mine Access Road and the rail balloon loop has been signposted as a 'No Through Road' as per the LFRCS;*
- *Leard Forest Road has been closed at the points of intersection of Leard Forest Road and the southern and northern boundaries of the coal lease CL386 in accordance with the LFRCS;*
- *Leard Forest Road between the northern boundary of the coal lease CL386 and the intersection with the new Goonbri Road alignment shall be transferred to Forests NSW in accordance with the LFRCS.*

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	51

- **Leard Forest Road (south of the Mine Access Road)**

Once the left in / left out intersections from the Kamilaroi Highway are established and utilised, use of Leard Forest Road will decrease significantly. However, it is recognised that it will still be utilised by employees living in the general proximity to the south or east of the mine site and employees travelling between the adjacent mine sites.

Review 3 – 31 January 2015

The change of access to the mine utilising the new permanent intersections on the Kamilaroi Highway will occur upon the cessation of coal haulage activity, currently scheduled for April 2015.

- **Barbers Lagoon Road / Braymont Road**

This road is proposed as the Heavy Vehicle Alternate Access route. Use by other construction and light vehicles will be discouraged. The demand for its use will diminish when the access arrangements via the Tarrawonga private haul road are resolved and direct access via the left in / left out intersections from Kamilaroi Highway are made available. Some employee use is likely however this is considered to be minimal.

Restricted use of the local roads shall be encouraged through monitoring and associated road signage (see section 6.3.1).

Review 3– 31 January 2015

All works associated with the construction of the two new permanent intersections with the Kamilaroi Highway were completed on 10 October 2014.

The use of Barbers Lagoon Road & Braymont Road is no longer required as a Heavy Vehicle Alternate Access Route.

6.3.1. Road Signage

As detailed above, BCP will have designated access routes and aims to minimise Project traffic on the surrounding road network, particularly heavy vehicles. BCP will install signage at appropriate locations to reinforce these access routes and discourage any use of restricted road. BCP will work closely with RMS and NSC to develop a final design for a signage scheme, with regards to sign types and locations, and seek all relevant regulatory approvals. This road signage arrangement will consider the locations of similar signage that may be required for nearby projects such as the Maules Creek Coal Project, and maximise the potential for integration.

Draft signage is provided as Appendix C.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	52

Signage shall reinforce the provisions of the Code of Conduct and be directly linked with the relevant training to be provided.

Review 3 – 31 January 2015

The installation of the signage included in Appendix C was completed in November 2013.

6.4. Construction Traffic on Coal Haul Road

The Coal Haul Road shall be used for the duration of the construction phase for the haulage of coal to the existing rail siding and for pre-approved construction traffic. A review of safe work procedures for managing traffic on the Coal Haul Road will be undertaken to ensure:

- There are appropriate controls to manage the interaction between coal haulage vehicles and construction vehicles. As a minimum this will include:
 - All other vehicles give way to coal haulage vehicles: NO EXCEPTIONS.
 - Suitable haul road communication procedures are developed across all contractors.
 - The existing speed limits are adhered to by all other vehicles.
 - Monitoring be undertaken to establish that all vehicles have been pre-approved to access the Coal Haul Road.
- There are appropriate controls at construction access intersections with the Coal Haul Road particularly given the stopping distances of the mine haulage vehicles; This shall include:
 - A risk assessment of all construction access intersections prior to establishment and use.
 - Associated temporary control measures be installed particularly given the braking distance of the coal haulage vehicles.
- That a specific TMP be developed at the rail bifurcation point and associated level crossings.
- That construction vehicles are aware of the traffic arrangements at the existing intersections with Leard Forest Road and Therribri Road and adhere to the speed limits imposed; and
- Suitable inspection and maintenance protocols are in place to ensure the Coal Haul Road is maintained in a suitable condition given the increase in haulage volumes and construction traffic.

The interface between the Coal Haul Road and the two public roads is considered a high risk area particularly when construction traffic is introduced. The BCP Site Manager shall ensure that there are suitable controls and procedures in place prior to the utilisation of the Coal Haul Road by construction traffic.

The existing Coal Haul Road intersections with the public road network are not to be used as entry and exit points to and from the site. Specific induction and training measures will be implemented regarding this restriction.

6.5. Public Transport / Pedestrians and Cyclists

As previously stated there is limited pedestrian and cyclist activity on the road network affected. Therefore no management or mitigation for pedestrians or cyclists is proposed.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	53

As there is a school bus service operating along the current Mine access route mitigation measures are required to minimise Project traffic generation during school bus operating times on this route between the hours of 7:30am to 8:35am and 3:20pm to 4:40pm. The primary measure is to ensure the staggered start and finish times for both construction and operations do not overlap the school bus operating time periods. The secondary measures include;

- Encouraging heavy vehicle deliveries between the hours of 8:35am and 3:20pm;
- Ensure that advanced school bus warning signs are installed at the nominated school bus pick up and drop off times;
- Establish the left In / left Out intersections off the Kamilaroi Highway as soon as is practicable; and
- Ensure the Code of Conduct for Vehicle Drivers is adequately disseminated and adhered to.

Routine checks will ensure that the school bus routes and school bus stops are appropriately sign posted. Specific consideration will also be required when the Leard Forest Road relocation is being undertaken to ensure the use of Goonbri Road by Project traffic is minimised during the times of school bus operations along the associated stretch of Goonbri Road between Leard Forest Road and Dripping Rock Road.

School bus routes, stops and times may be subject to change over the duration of combined construction and operational phases of the project. Ongoing consultation with CD & CA Baldwin is essential for BCP to be aware of any such changes and to communicate these to contractors. This should occur at least quarterly, and just prior to commencement of the school year as this is when any changes are most likely to be confirmed.

Review 3 – 31 January 2015

The bus operators, CD & BA Baldwin, were contacted as part of Review 3 and they advised that they had no concerns with traffic or the condition of the road during the review period.

CD & BA Baldwin advised that as of 28 January 2015, the bus service had changed hands and the new operator is Greg Hair. Mr Hair shall be contacted for subsequent reviews of this TMP.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	54

7. Control Measures and Safeguards

7.1. Management Requirements

Traffic and transport shall be coordinated by the BCPL Operations General Manager and the Construction Site Manager as required. The Construction Site Manager or their delegate shall be responsible for the review and update of the TMP as necessary and ensure that all of the requirements of the plan are being met including all aspects of the contractor TMPs. The Construction Site Manager shall also be responsible for the direct liaison with the respective road authorities for the approval of roadworks, and associated traffic management measures including TCPs. Where work permits, WADs, road occupancy licenses and the like are required they shall be sought via the Construction Site Manager.

Regular communication between the Construction Site Manager, others in the Project delivery team, operations management, contractors and other major projects such as the Maules Creek Coal Project is also required to coordinate major deliveries. This is particularly important where there is an interface between the major contractors and the public road network.

A specific monitoring program shall also be implemented by the Construction Site Manager to determine actual vehicle movements throughout various stages of the project and make comparisons with the initial estimates and subsequently review the control measures and safeguards.

7.1.1. Road Inspections

The Construction Site Manager will also ensure that road inspections are undertaken on a quarterly basis or after a rain event exceeding 20mm in 24 hours to ensure the roads are 'fit for purpose' and liaise with NSC regarding relevant maintenance matters. The Construction Site Manager shall also notify NSC and contractors if access to the Site becomes limited. The road inspections will be compared against a baseline survey prior to the commencement of the construction period. The inspections and the baseline survey shall as a minimum cover:

- Pot holes;
- Edge break;
- Rutting;
- Pavement Deformation;
- Loose Aggregate;
- Linemarking; and
- Sign Condition.

An assessment for the potential for dust generation will also be undertaken in consultation with NSC depending on unsealed road use proposed by BCP.

BCP have a VPA with NSC. As part of this agreement, contributions are made to roadworks including the provision of suitable gravel that is utilised on various roadworks throughout the NSC local government area.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	55

Review 3 – 31 January 2015

A base line video survey and subsequent video surveys were undertaken on 12 September 2013, 29 January 2014, 24 March 2014, 7 May 2014, 18 July 2014 and 5 September 2014. One video inspection and two informal inspections were undertaken after a rain event.

Safety issues arising from the above inspections have been raised during a joint inspection with NSC undertaken on the 6 May 2014. Works completed by NSC include outer wheel path and full width heavy patching, reseals and other miscellaneous works.

A road safety audit has also been undertaken on the existing access route from the Kamilaroi Highway with the findings presented to NSC.

Additional video surveys were undertaken on 9 December 2014 and 12 January 2015 and from observations, Narrabri Shire Council have been undertaking routine maintenance on Leard Forest Road, Goonbri Road, Manilla Road and Therribri Road since 1 October 2014.

7.2. Contractor Requirements

7.2.1. Contractor TMP's

Contractors will be required to provide details regarding their vehicle traffic movements for each activity they are involved in including:

- Types of vehicles;
- Numbers of each vehicle type;
- Load types and masses;
- Period of time vehicles require access to site; and
- Specific access points required for each type of construction activity.

They will also be required to develop and implement specific traffic management measures in accordance with the traffic impacts caused by their work in line with the broader measures proposed in the TMP and the CEMP. Key requirements include:

- Appropriate speed limits and communication about these with vehicle operators;
- Advance warning to all others involved in the Project of changed traffic conditions that may have impacts;
- Mitigation measures for all activities with impacts on public roads;
- Planning start and finish times to minimise any impacts on school bus services; and
- Individual TCPs for temporary construction works associated with each public road interface.

A summary of all traffic management and traffic control measures shall be contained in contractor TMPs.

The TMP's shall be developed in accordance with RMS Specification G10 Traffic Management.

The Construction Site Manager shall be responsible for the ongoing consultation and approval of the associated traffic management and traffic control measures with the appropriate road authorities.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	56

Review 3 – 31 January 2015

To date, contractor TMPs have been received as follows:-

- *Leighton’s for the rail project as described in Section 6.2.4, 6.2.5 and 6.2.6 - this TMP remains active;*
- *TSJV for the construction and commissioning of the CHPP – this TMP remains active;*
- *UGL for the electricity transmission line – this TMP is no longer required and has been closed out*
- *Keller Civil Engineers for the construction of the permanent intersections with the Kamilaroi Highway – this TMP is no longer required and has been closed out;*
- *The Daracon Group for the construction of Goonbri Road Upgrade – this TMP is no longer required and has been closed out;*
- *The Daracon Group for the installation of the safety barriers on the Kamilaroi Highway adjacent to the Rail Overpass Bridge piers – this TMP is no longer required and has been closed out;*
- *The Daracon Group for the installation of the safety barrier on Therribri Road adjacent to the viaduct piers – this TMP remains active.*

7.2.2. Contractor Vehicle Movement Plans

All of the primary contractors working on projects on, over or adjacent to the Kamilaroi Highway shall require Vehicle Movement Plans (VMPs).

The VMPs shall be reviewed and approved by the Construction Site Manager. Careful consideration and coordination will be required to ensure that significant deliveries by one or more contractors do not exacerbate traffic impacts. Specific consideration of the primary deliveries as detailed in Table 6 (Section 5.4) is required.

A specific emphasis on fatigue management is required in the VMP’s.

Review 3 – 31 January 2015

VMP’s are required from Leighton’s for the construction of the rail overpass bridge over the Kamilaroi Highway, Keller Civil Engineers for the construction of the permanent intersections with the Kamilaroi Highway and the Daracon Group for the installation of the safety barriers on the Kamilaroi Highway adjacent to the Rail Overpass Bridge piers.

Keller Civil Engineer’s process for the development of their VMP for the various stages of the works associated with the permanent intersections are included in their TMP – this TMP is no longer required and has been closed out;

The Daracon Group’s process for the development of their VMP for works associated with the safety barrier installation are included in their TMP. – this TMP is no longer required and has been closed out;

Leighton’s submitted a TCP associated with the installation of the bridge girders, deck and safety screen. No VMP is required for RMS approval as there are no vehicles entering or exiting traffic streams (except for traffic control vehicles) however Leighton’s prepare a VMP for their own works as per their system requirements – this TCP and associated VMP is no longer required and has been closed out.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	57

7.3. Code of Conduct for Vehicle Drivers

BCPL will develop a *Code of Conduct for Vehicle Drivers*. This shall apply to all drivers of all light and heavy vehicles accessing the BCP during both construction and operational phases. The *Code of Conduct for Vehicle Drivers* will be included as a transport contractual arrangement for contracts BCP enters into.

Provisions of the *Code of Conduct for Vehicle Drivers* that drivers must adhere to include:

- Obeying all laws, rules and regulations that apply to vehicle use on public and private roads;
- Respect the rights of all road users, including pedestrians and cyclists, to share the road;
- Ensure vehicles are roadworthy, in good mechanical condition and clean;
- Follow designated access routes;
- Avoid restricted access routes unless explicitly permitted to do so;
- Avoid travel during school bus operating times where possible, particularly over-size and over-mass heavy vehicles;
- Not travel in convoy unless under approved escort;
- Adhere to specified procedures for using causeways when water present and
- Minimise noise and dust emissions (primarily by minimising the use of unsealed roads) to the greatest practicable extent.

BCP will inform employees and contractors of the provisions of the *Code of Conduct for Vehicle Drivers* and provide training and information (such as school bus operating times) as appropriate.

Review 3 – 31 January 2015

The Code of Conduct for Vehicle Drivers has been developed and implemented. All employees and contractors have been made aware of the Code of Conduct for Vehicle Drivers via contract documentation, site inductions and toolbox talks. A copy of the Code of Conduct for Vehicle Drivers is provided in Appendix G.

7.4. Summary of Control Measures and Safeguards

A summary of all control measures and safeguards proposed by the TMP are contained in Appendix A. Appendix A shall be updated whenever there are additional control measures and safeguards proposed.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	58

8. Training

BCPL and its construction contractors shall implement appropriate training and site induction relevant to this TMP.

All site attendees during both construction and operational phases are required to attend the BCPL site induction which shall cover:

- Emergency response procedures;
- Incident / Accident management and reporting;
- *Code of Conduct for Vehicle Drivers* (detailed in Section 7.3 above); and
- General traffic management arrangements, in and out.

The procedures for reporting an emergency shall be detailed in the site induction as will the incident and accident management procedures.

All records shall be kept and maintained by BCPL and contractors based on their respective record management plans.

All construction and operational employees and contractors shall provide inductions and training including:

- Traffic restrictions that apply to public roads (for example B-Double routes, load limited bridges and nominated access points);
- Construction and operational hours;
- Site access locations, including those restricted for certain vehicle types;
- Subcontractors to be informed of existence of TMP and requirements relevant to their particular operations;
- Procedures for reporting incidents, route deficiencies, hazards, etc.;
- *Code of Conduct for Vehicle Drivers*;
- Designated access routes;
- Avoidance of certain roads e.g. unsealed; and
- Flood access.

All contractors on site shall be responsible for keeping records of their employees, and those of their sub-contractors, to ensure they have the appropriate license respective to the vehicles they are operating.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	59

9. Inspections, Monitoring, Reporting and Auditing

BCP and the primary contractors will be responsible for ensuring the following:

- That periodic public road inspections are undertaken at least quarterly;

Review 3 – 31 January 2015

A base line video survey and subsequent video surveys were undertaken on 12 September 2013, 29 January 2014, 24 March 2014, 7 May 2014, 18 July 2014, 5 September 2014, 9 December 2014 and 12 January 2015. One video inspection and three informal inspections were undertaken after a rain event.

- All contractors have a suitably experienced and qualified person overseeing traffic arrangements and their associated TMPs;
- All contractors conduct periodic inspections to ensure compliance with their specific TMPs and the overall TMP;
- That regular independent (non-BCPL) inspections/audits are undertaken to ensure compliance with contractors TMPs/TCPs; and
- That all incidents are reported in accordance with Emergency Preparedness and Response Plan and Incident Notification, Reporting and Investigation Procedure. In the first instance these must be reported directly to BCPLs Environmental Superintendent and/or BCPL Safety Manager as applicable.

Traffic counts shall be undertaken at six monthly intervals during the construction phase and 12 monthly intervals for operations (post construction) to ensure that the actual traffic volumes are consistent with the TMP. Where there are significant discrepancies in the traffic volumes on a given road, amendments to the TMP shall be considered. Records in relation to the traffic counts shall be maintained within the TMP as they are received.

Review 3 – 31 January 2015

Traffic counts on Manilla Road, Therribri Road, Leard Forest Road and Goonbri Road have been undertaken during November 2013, May 2014, September 2014 and January 2015. Refer to Section 5.4.1 for further details

Traffic counts shall be assessed in conjunction with information about employee usage of shuttle buses and private vehicles to assess actual performance against EA forecasts.

Where possible the traffic counts shall be coordinated with NSC, Maules Creek Coal Project and the Tarrawonga Coal Project ensuring that the counts are undertaken in a manner that enables the traffic volumes from each mine site to be determined.

9.1. Reporting

Contractors will be required to provide monthly reporting of all incidents, inspections, monitoring, complaints and status of TMPs to BCPL.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	60

BCPL has developed a procedure for managing any complaints from the public. All complaints are to be formally recorded and responded to as appropriate, with full records of all actions taken in response and communications with complainants to be maintained. Further detail is provided in Section 6.7 of the CEMP in relation to this process.

Annual Environmental Management Reports (annual reporting) shall be completed by BCP detailing the following for traffic related matters during the construction and operational phases over the mine life:

- Traffic Incidents;
- Road Inspections;
- Complaints from public;
- Response / action taken;
- Communications regarding complaint; and
- Contractor / visitor vehicle volumes and types.

9.2. Auditing

Both internal and external audits will be conducted periodically to ensure:

- Compliance with statutory obligations;
- Compliance with TMP and Contractor TMPs/TCPs;
- Adequacy of all types of records; and
- Implementation of actions required by previous audits.

An audit schedule shall be developed that covers the implementation of the TMP and all contractor TMPs at quarterly intervals during construction. Post construction audits will be scheduled every 12 months.

Review 3 – 31 January 2015

Various traffic assessments have been undertaken over the life of the project.

Formal audits of Contractor TMPs were not undertaken however informal monitoring and observations were completed by team members and any non-compliances communicated as necessary to the relevant Contractor(s).

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	61

10. Review & Improvement

All of the TMPs/TCPs for this Project shall be reviewed at regular intervals. This TMP shall be reviewed on a quarterly basis during construction and annually during operations (post construction).

The BCPL Environmental Superintendent shall ensure that the TMP is updated to reflect the contractor TMPs, TCPs and VMPs. Other triggers that will require a review of the TMP include significant changes to access arrangements such as the opening of the left in / left out intersections with the Kamilaroi Highway.

Review 3 – 31 January 2015

The change of access to the mine utilising the new permanent intersections on the Kamilaroi Highway will occur upon the cessation of coal haulage activity, currently scheduled for April 2015.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	62

11. Roles and Responsibilities

Table 13 – Roles and Responsibilities

Role	Responsibilities
BCPL General Manager Operations	<ul style="list-style-type: none"> provide sufficient resources to ensure the effective implementation of this management plan ensure all mitigation measures outlined in this management plan are achieved on site negotiate with affected parties to resolve ongoing complaints coordinate traffic and transport ensure all employees and contractors understand their responsibilities with respect to traffic management and safe driving Take on the responsibilities of the Construction Site Manager post construction
Construction Site Manager	<ul style="list-style-type: none"> provide sufficient resources to ensure the effective implementation of this management plan ensure all mitigation measures outlined in this management plan are achieved on site ensure all employees and contractors understand their responsibilities with respect to traffic management and safe driving manage road closures and gazettal's shall ensure that there are suitable controls and procedures in place prior to the utilisation of the Coal Haul Road responsible for the direct liaison with the respective road authorities for the approval of road works, and associated traffic management measures including traffic control plans responsible for procuring work permits, works authorisation deeds, occupancy licenses ensure that road inspections are undertaken on a quarterly basis or after a rain event exceeding 20mm in 24 hours implement a specific monitoring program to determine actual vehicle movements throughout various stages of the project and make comparisons with the initial estimates and subsequently review the control measures and safeguards responsible for the ongoing consultation and approval of the associated traffic management and traffic control measures with the appropriate road authorities proposed reviewed and approve VMPs coordinate with primary contractors, operations and other major projects to stagger start and finish times and avoid school bus operating hours

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	63

Role	Responsibilities
	<ul style="list-style-type: none"> • develop operational TMP for temporary intersection • ensure traffic counts are undertaken six monthly and periodic inspection of intersections to determine performance • establish procedure for notification to all relevant contractors and Council if access to site is limited i.e. flooding • instigates the revision of the TMP by BCPL Environmental Superintendent TMP as required • responsible for ensuring line marking is provided as detailed • responsible for ensuring all guideposts and advanced warning signage is provided as detailed • ensure adequate communication with public in relation to road closure and alternative alignment • ensure the one school bus pick up and drop off location is adequately sign posted • ensure appropriate signage is installed to direct traffic to the appropriate access roads and discourage use of other roads that are not proposed for use • coordinate traffic and transport • ensuring contractors provide required specific TCPs, VMPs and onsite traffic management plans
BCPL Environment Superintendent	<ul style="list-style-type: none"> • authorise the TMP and any future amendments • ensure all training relevant to the TMP is provided and completed as necessary • enforce compliance with the <i>Code of Conduct for Vehicle Drivers</i> • enforce appropriate usage of the nominated and restricted access routes • ensure all monitoring is undertaken according to the requirements of this management plan and relevant Australian standards • maintain traffic awareness amongst mine personnel and contractors via inductions and tool box talks • respond to community complaints • liaise with regulatory authorities regarding traffic management • schedule additional traffic monitoring if required • implement traffic management measures in accordance with this management plan at least annually as per section 10 • review and amend this management plan • ensure all employees and contractors are aware of their obligations under this management plan
Mining	<ul style="list-style-type: none"> • implement any traffic management measures in accordance with this plan.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	64

Role	Responsibilities
contractor	<ul style="list-style-type: none"> • develop and implement specific procedures for the employees and subcontractors under their responsibility to facilitate compliance with this management plan • ensure all employees and subcontractors under their control are aware of their obligations under this management plan • provide relevant data to assist BCPL with any reporting requirements, as detailed in this plan
Coal haulage contractor	<ul style="list-style-type: none"> • implement any traffic management measures in accordance with this plan • develop and implement specific procedures for the employees and subcontractors under their responsibility to facilitate compliance with this management plan • ensure all employees and subcontractors under their control are aware of their obligations under this management plan • provide relevant data to assist BCP with any reporting requirements, in accordance with this plan
Contract Supervisors and all BCP employees and other contractors	<ul style="list-style-type: none"> • implement traffic management measures in accordance with this plan • ensure the BCP CEMP (including subordinate documents) is implemented to facilitate compliance with this management plan • ensure all employees and subcontractors working under their control are aware of their obligations under this management plan • undertake activities, as required, in accordance with this management plan under instruction from their supervisor • drive safely at all times in accordance with the Code of Conduct, including driving to and from BCP • ensure that they are fit to drive in accordance with the requirements of this plan and laws and relevant regulations • inform the Construction Site Manager of any traffic related issues as they arise • provide relevant data to assist BCPL with any reporting requirements, in accordance with this plan • provide required specific TCPs, VMPs and TMPs • utilise the shuttle bus service to the greatest extent possible

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	65

12. References

Constructive Solutions Pty Ltd. 2013 *Goonbri Road Upgrade (Leard Forest Road Realignment) – Report to Narrabri Shire Council*. Tamworth.

Constructive Solutions Pty Ltd. 2013 *Idemitsu Boggabri Coal Expansion Project 75W Modification – Traffic Assessment Boggabri NSW*. Tamworth.

Halcrow Pacific Pty Ltd. 2011. *Tarrawonga Coal Project Environment Assessment – Road Transport Assessment* Sydney.

Hyder Consulting Pty Ltd. 2010. *Traffic and Transport Impact - Aston Resources Maules Creek Coal Project*. Sydney.

Parson Brinkerhoff. 2010. *Continuation of Boggabri Coal – Traffic Impact Assessment*. Sydney

Whitehaven Coal. April 2013. *Maules Creek Coal Project Traffic Management Plan*.

RTA *Traffic Volume Data for Western Region*

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	66

Appendix A – Control Measures and Safeguards

Review 3 – 31 January 2015

The compliance column for Appendix A has been updated.

Road	Activity / Location	Contractor	Issue	Proposed Mitigation Measure	Section Ref.	Responsibility	Compliance (Date)
All Local Roads Utilised by BCP	Road Condition	BCP	Roads may deteriorate causing safety risks including potholes, edge break, loose gravel, damage to existing traffic signage etc.	Road shall be inspected by Construction Site Manager on a quarterly basis or after significant rainfall. Where necessary concerns will be communicated to NSC and/or RMS and close out sought	7.1.1	Construction Site Manager or delegate	Baseline video survey September 2013 Subsequent surveys February 2014, March 2014, May 2014, July 2014, September 2014, December 2014 and January 2015.
All Local Roads Utilised by BCP	Flooding	BCP	Roads, causeways, culverts may be flooded preventing site access.	Construction Site Manager shall establish procedure for notification to all relevant contractors	7.1.1 7.3 8	Construction Site Manager or delegate	No flooding

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix A

Road	Activity / Location	Contractor	Issue	Proposed Mitigation Measure	Section Ref.	Responsibility	Compliance (Date)
				and NSC if access to site is limited. Procedure should also outline use of causeways when there is water present. Findings shall be incorporated into general site induction.			
All Local Roads Utilised by BCP	Traffic Volumes	BCP	Traffic Volumes significantly exceeding estimates resulting in safety issues particularly at intersections.	Traffic counts undertaken six monthly during construction and 12 months post construction and periodic inspection of intersections to determine performance.	9	Construction Site Manager or delegate	Undertaken in November 2013, May 2014, September 2014 and January 2015.
All Local Roads Utilised by BCP	Shift Changes	BCP	Shift changes are currently congested around standard working hours of 7am to 6pm.	Coordinate with primary contractors, operations and other major projects to stagger start and	5.6 7.2.1	General Manager or delegate	Review ongoing. Inspection suggest condensed peak access periods spread over 2 hours

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix A

Road	Activity / Location	Contractor	Issue	Proposed Mitigation Measure	Section Ref.	Responsibility	Compliance (Date)
				finish times and avoid school bus operating hours			
All Local Roads Utilised by BCP	Signage	BCP	Inappropriate or inefficient road usage	Appropriate signage be installed to direct traffic to the appropriate access roads and discourage use of other roads that are not proposed for use.	6.3 6.3.1	Construction Site Manager or delegate	All identified signage has been installed.
All unsealed roads utilised by BCP	Use of unsealed roads for construction and/or operations	BCP	Generation of dust from dry unsealed pavements	Unsealed road use to be minimised and monitored. Use of top coat materials with minimal dust characteristics. If excessive dust is being generated by BCP traffic dust shall be controlled by utilising water cart(s).	7.3 9	Construction Site Manager	Ongoing Consultation with Maules Creek Coal Project. MCC have dust suppression measures on Therribri Road, Leard Forest Road and Goonbri Road
Kamilaroi Hwy	Use of Manilla Boggabri Road	All	CHR lane too short, significant drop offs over	Maules Creek Coal Project responsible for	5.7.1	Construction Site Manager or delegate	Consultation with RMS ongoing.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix A

Road	Activity / Location	Contractor	Issue	Proposed Mitigation Measure	Section Ref.	Responsibility	Compliance (Date)
(South)	Intersection for general access to site		stormwater drainage and insufficient dimensional capacity for larger articulated vehicles.	upgrades to intersection including a CHR to Austroads standards. Safety barrier to be installed over culverts. Alternative measures may be required where the works have not been commenced including temporary barriers and advanced warning			Insufficient room for temporary barriers. Measures to address short CHR being considered by RMS.
Kamilaroi Hwy (North)	Construction of Temporary Access	Keller Civil Engineers	Construction of temporary access adjacent to Kamilaroi Highway through lanes.	Construction TMP shall be developed by prequalified construction contractor. Interruptions to through traffic to be avoided during construction. Construction TMP to be approved by RMS prior to works	6.2.2	Construction Contractor / Contract Superintendent	Temporary access has been decommissioned.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix A

Road	Activity / Location	Contractor	Issue	Proposed Mitigation Measure	Section Ref.	Responsibility	Compliance (Date)
				commencing.			
Kamilaroi Hwy (North)	Use of temporary access for over-size and over-mass vehicles prior to permanent intersections being constructed	All	Potential safety risks associated with operation of intersection and traffic delays.	Operational TMP developed for temporary intersection and as a minimum shall include: VMS, restricted hours of operation, two way traffic control, nominated rest areas at either approach to the site for over-size and over-mass vehicles to wait for nominated access times.	6.2.2	Construction Site Manager or delegate	The temporary access is decommissioned and the new permanent intersections are used for over-size and over-mass vehicles.
Kamilaroi Hwy (North)	Construction of Left In / Left Out Intersections	TBA	Construction of intersection adjacent to Kamilaroi Highway through lanes.	Construction TMP shall be developed by prequalified construction contractor. Interruptions to through traffic to be	6.2.3	Construction Contractor / Construction Site Manager / Contract Superintendent	Construction of the two new permanent intersections were completed on 10 October 2014.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix A

Road	Activity / Location	Contractor	Issue	Proposed Mitigation Measure	Section Ref.	Responsibility	Compliance (Date)
				minimised during construction. Construction TMP to be approved by RMS prior to works commencing. Road Safety Audit required prior to opening as part of WAD.			
Kamilaroi Hwy (North)	Construction of Rail Overpass Bridge	Leighton	Construction of bridge components adjacent and over the existing through lanes.	Construction TMP shall be developed. Interruptions to through traffic to be minimised and coordinated with construction of left in / left out intersections where applicable. Construction TMP to be approved by RMS prior to works. Road Safety Audit required prior to opening as part of WAD.	6.2.4	Rail construction contractor / Construction Site Manager/ Contract Superintendent	Construction of all works associated with the Rail Overpass Bridge including the safety barriers on the Kamilaroi Highway adjacent to the bridge piers were completed on 12 January 2015.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix A

Road	Activity / Location	Contractor	Issue	Proposed Mitigation Measure	Section Ref.	Responsibility	Compliance (Date)
Kamilaroi Hwy (North)	132kVA/11kVA Overhead Power Line	UGL	Stringing of overhead power lines across highway.	Specific TCPs to be developed. Significant delays to traffic need to be avoided where possible.	6.2.8	UGL / Construction Site Manager / Contract Superintendent	Completed March 2014.
Manilla Road	Road alignment & Travel Speed	Maules Creek Coal Project // BCP	Lack of delineation / advanced warning.	Review guideposts and advanced warning signage particularly on approach to curves. Consider regulatory speed reduction which would require the approval of the NSC Local Traffic Committee.	11	Construction Site Manager or delegate	Installation of guide posts and line marking complete after consultation with NSC. Reinstatement of some guide posts and sections of linemarking are required.
Manilla Road	School Bus Pick Up & Drop Off Areas	BCP	Insufficient advanced warning.	Ensure the one school bus pick up and drop off location is adequately sign posted. School bus route signs to be installed/maintained.	6.5 11	Construction Site Manager or delegate	School bus signs have been installed.
Manilla	Iron Bridge	BCP	Iron bridge is narrow and	Install temporary		Construction Site	Relatively high traffic

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix A

Road	Activity / Location	Contractor	Issue	Proposed Mitigation Measure	Section Ref.	Responsibility	Compliance (Date)
Road			there is limited sight distance on each approach.	traffic signals		Manager or delegate	numbers at peak times however flow of traffic is predominantly one way in each of the periods. Temporary traffic signals have not been used due to concern over traffic delays during peak times. Speed limit on the bridge has been reduced to 10km/hr.
Manilla Road	Manilla Road & Therribri Road Intersection	Maules Creek Coal Project // BCP	Lack of delineation and controls.	Redo linemarking, and incorporate hold line, move give way closer to intersection and duplicate. Also see school bus requirements	6.1.1	Construction Site Manager or delegate	Completed however linemarking has worn and needs redoing.
Manilla Road	Leard Forest Road Intersection	Maules Creek Coal	Insufficient delineation and controls.	Provide centre lines on all approaches.	6.1.1	Construction Site Manager or delegate	Completed in November 2013

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix A

Road	Activity / Location	Contractor	Issue	Proposed Mitigation Measure	Section Ref.	Responsibility	Compliance (Date)
		Project // BCP		Provide hold line and duplicated give way signs on Leard Forest Road approach.			however linemarking is worn and needs redoing.
Leard Forest Road	Road alignment & Travel Speed	Maules Creek Coal Project // BCP	Lack of delineation / advanced warning.	Review guideposts and advanced warning signage particularly on approach to curves. Consider regulatory speed reduction which would require the approval of the NSC Local Traffic Committee.	11	Construction Site Manager or delegate	Completed in November 2013.
Leard Forest Road	132kVA/11kVA Overhead Power Line	UGL	Stringing of overhead power lines across highway.	Specific TCPs to be developed. Significant delays to traffic need to be avoided where possible.	6.2.8	UGL / Construction Site Manager / Contract Superintendent	All works associated with the Overhead Power Line have been completed.
Leard Forest Road	Road Closure	BCP	Inadequate public awareness / potential traffic confusion.	Ensure adequate communication with public in relation to road closure and alternative alignment.	6.2.7 6.3	Construction Site Manager or delegate	Road closed on 24 September 2014 following consultation with NSC and in

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix A

Road	Activity / Location	Contractor	Issue	Proposed Mitigation Measure	Section Ref.	Responsibility	Compliance (Date)
				Consult with Maules Creek Coal Project			accordance with the LFRCS.
Leard Forest Road	Leard Forest Road intersection with Goonbri Road	BCP	Lack of delineation and controls.	Provide linemarking including hold line, provide Give Way signs closer to intersection and replicate on both sides. Provide advanced warning of intersection signage.	6.1.1	Construction Site Manager or delegate	Completed in November 2013.
Leard Forest Road	Leard Forest Road intersection with Mine Access Road	BCP	Tight approach angle and limited dimensional capacity	Install advanced warning, over-size and over-mass access along Coal Haul Road. Access to be realigned when Leard Forest Road closed.	6.1.1	Construction Site Manager or delegate	Signage not installed as access via Coal Haul Road. Review of the alignment of the mine access with Leard Forest Road scheduled for the second half of 2015.
Therribri Road	Temporary use for construction of viaduct	Leightons	Delivery / construction / placement of viaduct components adjacent and over the existing	Construction TMP shall be developed. Interruptions to through traffic to be	6.2.5	Rail construction contractor / Construction Site Manager/ Contract	All works associated with the construction of the viaduct and Rail Spur Line

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix A

Road	Activity / Location	Contractor	Issue	Proposed Mitigation Measure	Section Ref.	Responsibility	Compliance (Date)
			roadway.	minimised. Construction TMP to be approved by NSC prior to works.		Superintendent	completed in December 2014.
Therribri Road	132kVA/11kVA Overhead Power Line	UGL	Stringing of overhead power lines across highway.	Specific TCPs to be developed. Significant delays to traffic need to be avoided where possible.	6.2.8	UGL / Construction Site Manager / Contract Superintendent	Completed in March 2014.
Goonbri Road	Construction access for Leard Forest Road Relocation	TBA	Additional traffic on Goonbri Road between Leard Forest Road and Dripping Rock Road	Construction contractor to develop construction TMP with specific consideration of school bus, Tarrawonga haul road intersection and haulage of road base.	6.2.7	Construction. Contractor / Construction Site Manager / Contract Superintendent	Goonbri Road Upgrade opened to traffic on 24 September 2014.
Goonbri Road Upgrade (Revised Alignment)	Road opening to public use	BCP	Alternative traffic arrangements and potential road hazards as road not previously utilised.	Goonbri Road Upgrade to be inspected by Traffic Coordinator and NSC to undertake a road safety risk assessment. The	6.2.7	Construction Site Manager or delegate	Goonbri Road Upgrade opened to traffic on 24 September 2014.

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix A



Road	Activity / Location	Contractor	Issue	Proposed Mitigation Measure	Section Ref.	Responsibility	Compliance (Date)
				findings shall be addressed prior to road opening.			

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix A

Appendix B – Presumed Construction Traffic Volumes

Review 3– 31 January 2015

Actual counts now provided in Section 5.5. Traffic volumes have tapered off and are likely to continue to do so throughout the remainder of the construction period.

Activity	Start	Finish	TOTAL CONST. TRAFFIC (one way movements per day)	
			LV	HV
Leighton				
Establishing workers to site	Sep-13	Apr-15		4
Site Establishment	Sep-13	Dec-13	6	3
Clearing	Nov-13	Feb-14	4	4
Imported Fill	Feb-14	Apr-14		4
Viaduct & Bridges	Dec-13	Nov-14	34	6
- Girder Delivery	Jul-14	Sep-14		4
Ballast				
- Delivery	Feb-14	Jul-14		20
- Install	Aug-14	Dec-14	12	4
Track Works				
- Delivery (Sleepers / Rail)	Jun-14	Aug-14		8
- Common Installation	Sep-14	Sep-14	8	2
- Boggabri Installation	Sep-14	Nov-14	8	2
Commissioning				
- Track	Nov-14	Jan-14	12	
- Signalling	Nov-14	Feb-15	12	
Handover / Demobilisation	Jan-15	Apr-15	10	5
UGL				
General + Sub Contractors	Oct-13	Sep-14	4	2
Mini Bus Workers to Site	Oct-13	Sep-14	0	2
Site Offices Delivered to Site	Oct-13	Nov-13		0
Site Offices Removed from Site	Sep-14	Sep-14		8
Earthworks Machinery Delivered and Removal from Site	Nov-13	Nov-13		6
Structural Steel Delivered to Site	Jan-14	Jan-14		5
HV Equipment Delivered to Site	Feb-14	Feb-14		6
Modular Control Building Delevered to Site	Feb-14	Feb-14		2
Craneage Use on Site	Oct-13	Apr-14		1

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix B

Activity	Start	Finish	TOTAL CONST. TRAFFIC (one way movements per day)	
			LV	HV
General Materials Delivered to Site	Oct-13	Sep-14	2	
TSJV				
Establishing workers to site	Apr-14	Apr-15		4
Other General Movements (inc. Electrical and Earthworks)	Apr-14	Apr-15	10	1
Site Establishment	Apr-14	Apr-14	5	4
Steelwork	Jul-14	Apr-15		2
Mechanical Equipment	Jun-14	Jan-15		2
Uniculvert Deliveries	Jul-14	Apr-15		3
Dis-establishment	Jun-15	Jul-15	6	5
GENERAL				
Contract Supervision + Administration	Sep-13	Apr-15	10	
Independent Certifier + Consultants	Sep-13	Apr-15	1	
Other ancillary works	Dec-13	Apr-15	5	1
Construction Employees	Sep-13	Apr-15	20	

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix B

Appendix C – Boggabri Coal Road Signage

ROAD SIGNAGE DURING CONSTRUCTION PHASE

Signage shall be incorporated with the Maules Creek Coal Project signage where possible
Kamilaroi Highway Left In / Left Out Intersection Approach Signage from South



Kamilaroi Highway Left In / Left Out Intersection Approach Signage from North



Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix C

General Directional Signage (with associated arrows) for:

- Manilla Road Intersection with Kamilaroi Highway;
- Manilla Road Intersection with Therribri Road; and
- Manilla Road Intersection with Leard Forest Road.



Therribri Road Approaches (also at Manilla Road / Therribri Road Intersection)



Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix C

Leard Forest Road Approaches



Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix C

OPERATIONAL PHASE

After rail spur has been commissioned.

Kamilaroi Highway Left In / Left Out Intersection Approach Signage



Kamilaroi Highway / Manilla Road intersection Southern Approach (temporary sign)



Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix C

Appendix D – Consultation

Stakeholder	Comments on Draft TMP	TMP Section(s) Comments Addressed
Department of Planning and Infrastructure	The TMP focuses only on construction traffic with little to no information on operational traffic management. For example – what operational HV movements – eg. fuel delivery access routes are there, and how is this proposed to be managed given limitations over Namoi iron bridge. Currently there are HV movements through the unsealed road network south of Manilla Road (Blue Vale/ Braymont/ Barbers Lagoon Road) and also operational staff movements via this route. A section / chapter is required on operational traffic – including baseline and current & predicted traffic movements including peak hour traffic movements.	1.2 1.3 5.1 5.3 5.6
	It is not clear what the relationship of this document is to the previous TMP submitted for staged approval last December authored by PB with a focus on operational traffic.	1.3
	A table of roles and responsibilities needs to be included as per previous version of the TMP – Table 13-1 identified both operational and construction responsibilities. If this is one MP to cover both – versions need to be updated and integrated.	11
	Scope of TMP states includes existing operational traffic from BC and traffic generated by BCEP – however there is limited discussion on operational traffic and focus predominantly on construction traffic.	1.3
	In addition to s138 Roads Act – closure of roads is covered under s34 of the Roads Act with application by the roads authority.	2.1
	Traffic network map needs to be extended to the south showing access from Barbers Lagoon / Braymont Rd as these local roads are currently being utilised by Boggabri personnel and is currently a heavy vehicle route used by BC. Discussion is required on this route. The section of road then needs to include discussion on road condition and safety concerns along this route.	3.1 Figure 2 3.8 3.9
	The 2005 pre-mining background figure of 175 AADT for Manilla Road needs to be included in the table.	3.1 Table 3

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix D

Stakeholder	Comments on Draft TMP	TMP Section(s) Comments Addressed
	Should show the locations of these AADT figures – for example is the figure for Leard Forest Road is for the section up to the Boggabri mine access road. AADT to the north of this point would be significantly lower.	3.1
Department of Planning and Infrastructure	Further explanation is needed here. The 2010 AADT figures includes mine operational traffic at that time and does not reflect pre-mining background traffic which is the 2005 figures.	3.1
	Sections 3.1 to 3.5 should be reviewed and ensure the discussion reflects the information in Table 3. For example s3.5 Goonbri Road states that traffic volumes are unknown – however AADT figure of 57 is provided in Table 5. s3.3 refers to the pre-mining AADT of 175 (which needs to be included in the table) and should also reference the 2010 increase with existing mine traffic to 459 AADT.	3.1– 3.9 Table 3
	Additional section on traffic access from the south along Barbers Lagoon/ Braymont roads is needed including back road access from Boggabri. This is currently being used and needs to be considered in the TMP and initiatives identified to restrict access by operational staff along this unsealed route. Concerns have been raised by landowners along this route on dust and safety issues. In addition it is currently being used as a route for HV that exceed the Namoi Bridge load limit of 42.5 tonnes.	3.8 3.9
	Is the option of using the Whitehaven private haul road viable for operational HV that exceed Namoi load limit, at least to the Manilla Road intersection – it is understood that Whitehaven has reached agreement for acquisition with the landowner? Please advise if this is an option as it was identified in the EA (additional responses to submissions) as a viable alternative.	5.1 5.3
	Section should include what traffic movements for LV and HV for both construction and operational stages were assumed in the EA vs. what is now proposed. In particular now that construction stage has been shortened and construction workforce substantially increased this has implications for traffic movements to and from the site. Further discussion on this aspect is needed.	5.3 5.4 0 6.1.1 6.1.2
	Public road Intersections with haul road – references a boom gate on the haul road. It is not clear what procedures are in place for the operation of this boom gate. Recent inspections indicate that this boom gate stays open to allow continuous through traffic along the private haul road. What was agreed in the safety audits for the operation of these boom gates? There is a risk that a member of the public could gain entry onto the private haul road.	3.6.1 Figure 3

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix D

Stakeholder	Comments on Draft TMP	TMP Section(s) Comments Addressed
Department of Planning and Infrastructure	Should state that there is to be no access for construction or operational mine traffic from the northern direction of Therribri Road – only exception would be for any mine workers living locally along this road or for any environmental monitoring purposes.	6.3
	Further details are required on how traffic impacts will be minimised during school pick up times. Condition states “measures to minimise impacts at school bus pick and drop off times.” There is insufficient information provided on what school bus routes and times overlap with peak traffic movements. Without this information it is not clear how the proposed construction shift times are targeted to avoid impacts – particularly reference to staggered shift starts as stated on page 24 / s5.3.	5.6 6.5
	Focus of chapter is only on construction traffic – there is no discussion on operational traffic. If this is a combined construction and operational MP then need to ensure that operational staff have had input into the MP. In particular: <ul style="list-style-type: none"> - How are operational HV accessing the mine site and what is proposed in regards the temporary and permanent Kamilaroi H’wy access. - What is proposed for HV that are >42.5 tonne loads, such as B-Doubles therefore will be restricted during temporary access and cannot access via Namoi River bridge Management / restrictions of operational (and local residing construction staff using unsealed ‘rat-runs’ along Braymont / Barbers Lagoon Road/ Blue Vale roads from Gunnedah and Boggabri directions)	5.1 5.3 6.1 6.3
	States no B-Double Access to site by public roads - Is it proposed to use any B-Doubles for either construction or operational traffic to access the site? What approvals are required to permit access. Are there any restrictions on public road network for the proposed use of Truck and super dog for ballast and imported fill delivery – will this configuration be below 42.5 T?	5.1 5.2 Table 6
	States that as an interim measure all deliveries, service vehicles and employees shall access the site via the existing road network via Kamilaroi Hwy, Manilla Road, Leard Forest Road. Is this correct given Namoi Bridge load restrictions? Some existing mine employees also reside in Manilla / Tamworth and access east from Manilla Road.	5.1
Department of Planning and Infrastructure	Timing for construction of permanent Kamilaroi Hwy intersections is stated as from Dec 2013 and that only oversize and overmass vehicles will access via temporary intersection. How is it proposed that HV that are >42.5 T but not overmass/ oversize access the site?	5.2

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix D



Stakeholder	Comments on Draft TMP	TMP Section(s) Comments Addressed
	Change “overmass and overweight” to “overmass and oversize”	5.2
	It is not clear the relationship between chart 1 and chart 2 and 3. Are charts 2 and 3 a subset of chart 1 – given that it is assumed that all construction vehicles access the site via Kamilaroi Hwy and then some of these will either access via temporary and permanent Kamilaroi access and some via Manilla/ Leard. For example taking Dec 2013 – there are an additional 52 HV on Kamilaroi Hwy, 80 on Manilla road between Kamilaroi and Leard and 76 on Leard Forest Road. It is not clear where the additional vehicles on Manilla Road are accessing this section of road? Is this a total of 132 HV accessing the project site (52 via Kamilaroi Hwy access, 76 via Leard Forest Road and 4 via Therribri Road??) It is not clear.	5.4 Chart 1 Chart 2 Chart 3
	In charts 2 and 3 – no HV access of construction traffic is via Manilla Road with assumption that there will be access via Kamilaroi Hwy only at new constructed intersections – there does not appear to be a subsequent substantive increase in HV traffic in chart 1? Eg in Dec 2013 there were 80 movements down to 0 movements in Jan 2014 in chart 2) Manilla road – with chart 1 changing from additional 52 to 58 movements?	5.4 Chart 1 Chart 2 Chart 3
	It is not clear how the LV movements were derived. Appendix B does not appear to have identified the peak LV movements identified in these charts - up to around additional 112 LV movements (construction only?) on Kamilaroi and 156 on Manilla/ Leard. Is this construction and operational? If so needs further explanation. Does Appendix B assume shuttle bus access for employees and included in HV numbers – eg. Leighton Appendix B states 10 HV for establishing workers to site – assume this is shuttle bus from the MAC villages? It is not clear what if any construction workforce is assumed to be locally employed and how LV trips are accounted for compared to FIFO/ DIDO workers at MAC villages.	5.4 0 Appendix B – Presumed Construction Traffic Volumes
	Chart 4 – should include existing coal haulage movements to compare increase – particularly from consideration of safety issues along the private haul road and public road intersections.	Chart 2
Department of Planning and Infrastructure	Ballast is main HV numbers of 1200 loads. Appendix B states that loads will be delivered from Oct 2013 to Mar 2014 and that site access will be via Kamilaroi Hwy permanent access. Loads are Truck and Super-Dog therefore is option of access via Namoi River bridge possible? Given that permanent access is not likely till Dec 2013 – what is proposed for period from Oct 2013 to transport	5.4 6 Appendix B –

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix D

Stakeholder	Comments on Draft TMP	TMP Section(s) Comments Addressed
	ballast to the site? Similarly for imported fill (delivery Oct-Dec 2013) with truck and super dog – what is proposed access route?	Presumed Construction Traffic Volumes
	UGL should be added to the table.	5.4 Table 6
	Further explanation is needed on inconsistency between rail spur construction hours of 0700 to 1800 hrs M-F; 0800 to 1300 hrs Sat, No Sun/ PH – and the Leighton proposed shift hours of 0600 to 1700 hrs. State the proposed standard shift for Leightons is a 10 day on 4 day off cycle – therefore seeking OOW for these periods and that OOWP has been submitted.	5.6 Table 6 7
	Staggered roster – inconsistent with avoiding impacts during school pick up and drop off times – further clarification is needed here as to what is proposed.	5.6
	Statement that all employees associated with construction will be accommodated at MAC villages and will travel by shuttle buses needs to be reviewed. The draft workforce accommodation strategy has assumed that the peak construction workforce of 363 with 299 non-local and 63 local. TMP needs to reconcile assumptions concerning workforce with the accommodation strategy. Statement that shift change times will not occur during school bus operation needs further clarification – given comments on staggered shift start times.	0 5.6
	Again only identifies construction traffic impacts and proposed mitigation measures – not operational traffic.	6.1.1 6.1.2
Department of Planning and Infrastructure	States oversize and over-mass vehicles will access via temporary intersection access – what is proposed with B-Doubles until permanent access arrangements are installed in December. As above – will the Namoi Bridge load limit cause issues with proposed use of Truck and Super dog combination?	5.1 6.1.1
	A number of road safety issues have been identified on page 28 – what mitigation measures are proposed – should reference where this is addressed.	6.1.1 Table 911

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix D

Stakeholder	Comments on Draft TMP	TMP Section(s) Comments Addressed
	Is it proposed to use the permanent Kamilaroi Highway access for operational HV – seems to imply this in the last para? If so no details have been provided, what are the implications of this in regards safety on the haul road route – are there any issues with DRE in relation to mine safety aspects eg. haul road covered by ML? Employee Access and service access via this route would not appear likely based on safety concerns with oversize coal haul trucks on the haul road. This needs to be clarified or removed. Further details should be provided of how safety aspects for sharing of the haul route will be made – e.g. escort vehicles, flashing lights, radio controls, boom gates to prevent access.	5.1 6.1.2
	State that the re-alignment of Leard Forest Road is subject to Part 5 planning approval by NSC as the roads authority.	6.2.7
	See comments above under 6.1.2	6.2.7
	Additional information should be included here – the information on school pickup and drop off times and locations should be included here and proposed mitigation measures clearly identified. At this stage there is insufficient information to assess how impacts will be minimised and when mitigation measures will be implemented.	6.5
	Roles and responsibilities – who is the site manager – is this operational or construction or both?	11
Department of Planning and Infrastructure	Regular road inspections – it is not clear what is proposed here to assess that public roads are fit for purpose and under what baseline condition assessment is available to assess deterioration. It is not clear what is proposed here for undertaking road maintenance in liaison with NSC and what process/ obligations under VPA contributions so that NSC undertakes any maintenance works.	7.1 7.1.1
	“Specific emphasis will be required” It is not clear what is meant or intended by this paragraph.	7.1
	Approval of the TMP by RMS, NSC or GSC is not required – consultation needs to be undertaken and responses (or advice that no comments to be provided with evidence of consultation) need to be provided DP&I prior to approval.	2.3
	Monitoring program – does this cover construction and operational – who has responsibility to cover both components?	9

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix D

Stakeholder	Comments on Draft TMP	TMP Section(s) Comments Addressed
	Section 6.1.1 has identified a number of safety issues – there is no discussion in this section on mitigation of these – although some discussion in Appendix A.	5.7.1 6.1.1 Table 11 Appendix A
	Only refers to training for construction contractors – how about operational, particularly HV code of conduct. December version of the TMP had further details of driver code of conduct in s5.1.6.	7.3 8
	Employee education and initiatives to avoid accessing mine site via unsealed roads needs to be included. The approval conditions include “ consideration of measures to minimise dust from unsealed roads that may be used for access to the mine site.”	7.3 8
	It is not clear what is meant by periodic public road inspections entails and what is proposed if safety concerns are identified – see comments above. References periodic inspections / regular independent inspections – what is proposed frequency? What is meant by independent – is this independent audit? <<Noted that s9.2 refers to inspections no less than every 6 mths>>	9
Department of Planning and Infrastructure	Monitoring – there needs to be a comprehensive road traffic count undertaken at least once per year during operations (more frequently during construction – noting that 6 mthly proposed on page 42) that covers the road network to provide information on traffic counts and directions that allow interrogation of cumulative impacts – eg. Maules/ Tarrawonga and Boggabri and validate movements and direction of movements across all mines – HV and LV. This should be in conjunction with information on employee workforce location/ local vs. non-local workforce./ use of shuttle buses/ use of car pooling to assess performance against EA predictions as required “monitoring program to audit vehicle movements against those predicted in the EA.”	9
	Road condition – need baseline survey to compare against , what roads will condition inspection be undertaken on; what is proposed process for ensuring road safety issues identified are addressed	Appendix A
	Shift changes – see comments above regarding school bus operating hours, routes and mitigation measures – further information needed to address this	Appendix A

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix D

Stakeholder	Comments on Draft TMP	TMP Section(s) Comments Addressed
	Kamilaroi Hwy upgrade CHR into Manilla Road – when is this upgrade going to occur, the Boggabri conditions also include that intersections be upgraded to meet the requirements of the RMS as per condition 58 – what is agreement for this upgrade between the RMS, BC and MCC. Road alignment and Speed Travel safety issues on all routes/ intersections– not clear timing on these proposed upgrades and who will undertake these safety upgrade works? Should be undertaken prior to substantive increase in traffic. Further clarification needed.	Appendix A
	School Drop off pick up areas for all routes – not clear the timing of these upgrades and who will be undertaking the works – needs to be undertaken as a priority. Further clarification needed.	Appendix A
	Road closure – road authority responsible for road closure – clarify that this is NSC and process to be followed as per Roads Act requirements for formal application, exhibition and gazettal.	Appendix A
	For clarity include units – assume it is average daily movements or is it loads eg. is establishing workers to site = 10 HV for the whole period – is this 5 each way making 10 movements or 10 HV to site and 10 making 20 movements in all?	Appendix B
Department of Planning and Infrastructure	RMS comments have been provided – need to ensure these comments are addressed including code of conduct and schedule for intersection upgrades and referred back to RMS for final review as they have requested. Please forward comments from NSC when received and confirm that GSC will not be providing any comments.	2.3 7.3
Roads and Maritime Services (RMS)	Confirm which type of vehicles will use “temporary access” as TMP states overweight / overdimensional construction vehicles will use this, whereas RMS thought only “articulated vehicles delivering fuel” would use this	5.2 6.1.1
	No section 6.2.1 exists – no traffic control & traffic management measures for operation of the temporary intersection are in TMP	6.1.1 6.2.2
	Previous TCP referred to is inconsistent with this TMP. RMS not agreed to TCP as stated in 6.1.1	1.3 6.1.1

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix D

Stakeholder	Comments on Draft TMP	TMP Section(s) Comments Addressed
	VMS warning motorists of delays at temporary access could read “Heavy Vehicles Turning – Possible Short Delays”	6.2.2
	Southern/northern left in/left out intersection treatments require “environmental consent”. Treatments are satisfactory, yet cannot be approved until these consents are given.	5.1 5.2
	Section 5.1.1 states left in/left out intersection treatments are only for large heavy vehicle deliveries during construction, whereas 6.1.2 states these will be used by employees during construction phase. Section 5.1.1 also states these intersections are proposed as permanent accesses to the mine site. Use of these intersections (vehicle types?) and whether temporary or permanent needs to be clarified and consistent in TMP and any “environmental consent” Previously RMS advised these accesses were temporary treatments	5.1 5.2 6.1.2
Roads and Maritime Services (RMS)	Kamilaroi Highway lane closures for construction of the temporary intersections “is questioned”. Alternatives that keep both lanes open for the entire construction period should be implemented.	6.2.2
	TMP to provide specific actions where cumulative traffic impacts of Boggabri and Maules Creek mines increase safety risks at intersections	5.7.1 5.7.2 Table 11
	Code of conduct for heavy vehicle drivers not included	7.3
	Appropriate program and schedule of works for intersection upgrades not provided	6.2
Roads and Maritime Services (RMS) – 13/09/13	RMS reiterates that the temporary construction access will only be used by traffic related to the Boggabri Coal Project construction. Section 5.1, paragraph 4, second sentence should be amended to reflect this.	5.1 (sentence deleted)
	VMS and/or temporary speed zones shall not be implemented/positioned in a public road reserve without the prior approval of RMS and/or the relevant roads authority.	6.2.2

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix D



Stakeholder	Comments on Draft TMP	TMP Section(s) Comments Addressed
	Road safety improvements identified by Boggabri Coal (Section 6.2,) on the state road network will require consultation with and approval from RMS.	6.2.1

Title	Date Effective	Revision Status	Set Review	Planned Review	Page
TMP	31 Jan 2015	Review 3	Quarterly	April 2015	Appendix D