

JERVOIS PROJECT TRAFFIC MANAGEMENT PLAN

JULY 12

**CONSONE CONSULTING PTY LTD
CLIENT: KGL RESOURCES**





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Report Prepared By:

Scott Walter
Senior Road Safety Auditor

Level 1 Paspalis Centrepoint
48-50 Smith Street
PO Box 1968
DARWIN NT 0801
M: 0439 414 898

Reviewed By:

Adrian White
Senior Civil Engineer

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1 INTRODUCTION

KGL Resources Pty Ltd (KGL) propose to develop new operations at the Jervois Mine site in the Anayte region of the Northern Territory.

The Traffic Management Plan describes procedures and protocols for site access, traffic routing and management, and company policy with respect to vehicle and employee transportation during the Jervois Mine construction and operations, and forms part of the overall Mine Management Plan (MMP) for the mine authorised by KGL.

Public, employee and contractor safety is the primary goal of KGL and this plan. KGL recognizes that the project traffic generation external to the site along the Plenty and Stuart Highways is on public roads and propose the development of strict policies and procedures that are to be adopted to ensure minimisation of disruption to the public and ensure safety of KGL employees, contractors and the public. The safety of tourists, who may lack local familiarity, are a special consideration.

External road construction and maintenance requirements are currently being developed in conjunction with the Department of Infrastructure Planning and Logistics (DIPL). Internal road layouts and design are currently being developed and will form an integral part of the final TMP.

As part of the approval process KGL have developed a Supplement to the Environmental Impact Statement (EIS), this Supplement provides a detailed outline of traffic volumes for both construction and operations. Section 10 of the Traffic Supplement outlines the premise of the development of the TMP and methodology of how the TMP has been developed. (Noting that the TMP is still in draft and will be finalised as part of the mine design).

This document is the first draft revision of the plan and has been prepared to support the Supplement to the EIS. The document describes the following:

- The consultation undertaken during preparation of this document.
- The legal and other requirements associated with management of traffic-related issues.
- Roles and responsibilities.
- Site access and traffic routes
- Traffic generation for both construction and operations
- Traffic management measures that would be implemented during the construction and life of the Project.
- Contractual obligations of employees and contractors – specifically those utilising the Stuart and Plenty Highways
- Risk Management
- Incident reporting.
- Competence training and awareness and inductions.
- Document review.



2 STAKEHOLDER ENAGEMENT

2.1 General Stakeholder Engagement

Consone Consulting's team have undertaken individual consultation sessions with Key Stakeholders and in conjunction KGL and QUBE (preferred transportation for concentrate) provided a detailed presentation of Road Safety Audit (RSA) for the Plenty Highway findings, proposed transportation procedures and proposed operational procedures for transportation to and from the mine. Consultations undertaken are summarised in the following table

2.2 Central Land Council – Indigenous Communities

The Central Land Council raised a number of concerns that local indigenous communities have raised with respect to the increase in traffic and other additional aspects of the proposed mine development and operations; these are summarized following with responses that the KGL team have provided the CLC.

Item Raised CLC	KGL Response
Operational Times (47 Weeks)	KGL explained that there are no specific times listed for their operations with 47 weeks of transportation of product estimated per year which was adopted post review of possible road closures due to inclement weather. Accordingly, the periods of inactivity will vary from year to year based on weather events. Contractual terms with the transportation provider are being negotiated on a 47-week program and this has been adopted in calculation of estimated traffic volumes.
Concern raised that there may be multiple road trains congesting the road and making it difficult for road users to overtake	QUBE highlighted that vehicles will be staged to a maximum of one road train per hour in each direction. Three vehicles would utilise the road per day with 2 return trips (for product only). This equates to a total of 12 trips per day meaning vehicles can be staged to a maximum of four hours apart in each direction. For construction and transportation



Item Raised CLC	KGL Response
	of consumables the same restrictions will apply.
Concern raised regarding Lucy Creek Intersection	KGL have advised that the intersection will be upgraded and likely sealed.
Concerns regarding Road Safety	Qube highlighted all safety requirements for vehicles and drivers. Presentation of all safety aspects was provided to CLC and accepted as being industry best practice. KGL indicated that all staff and contractors will contractually required to implement safety measures such as a generic journey management plan included in the traffic management plan
Concerns over number of vehicles	Revised numbers presented and accepted
CLC highlighted the desire to see the full section of gravel sealed	Consone noted that they will be working with government to highlight deficiencies in the network – including safety concerns raised with NT Government regarding single lane seal sections. It was accepted that there are budgetary restrictions and a focus should be made on upgrading the sections that will provide the best benefit. Furthermore, it is noted that an additional 26km of unsealed road is currently programmed for design or construction with the expectation that construction for these sections will be completed prior to the operational phase of the project. This will result in a total of approx. 60% sealed road between the mine site and the Stuart Hwy at the time of commencement of operations.



Item Raised CLC	KGL Response
Concern raised regarding alcohol and drivers under the influence	KGL have confirmed previous advice that the mine will be a dry site – alcohol free
Safety Concerns	KGL and Qube provided a presentation on best practice. In addition, Qube have indicated that they and KGL are happy to provide educational presentations and information sessions to road users and local communities.

2.3 Department of Infrastructure Planning and Logistics

Consultation with DIPL involved meetings with both the Darwin based representatives that manage the road network across the territory and the local Alice Springs representatives that are responsible for maintenance and upgrades to the road network, specifically the Plenty Highway and Lucy Creek Access. The Darwin team's main concerns were around the appropriate upgrades to intersections and safety in general and also requested the development of the TMP. Consultation with the Alice Springs team was centred around current upgrade works for planning and ongoing maintenance.

Item Raised DIPL	KGL Response
DIPL AS – Concerns with heavy vehicles utilising new sections in the first months after a new seal has been placed and oxidation is not at a level to stop stripping of the stone (They noted these issues on the Tanami Road upgrades previously)	KGL indicated options would be explored such as maintaining detours for a period (though this is problematic with dust and traffic control). Another solution was to have temporary speed restrictions added to the journey management plans and TMP limiting the speed of heavy vehicles for a period post construction of the new seal
TMP Required	Agreed and a draft TMP (Subject to final design) is included in the supplement
Concern raised regarding Lucy Creek Intersection	KGL advised intersection will be upgraded and likely sealed. Consone noted appropriate



Item Raised DIPL	KGL Response
	assumptions would be included in this report and conceptual drawings have been provided
Concerns regarding road safety	Qube highlighted all safety requirements for vehicles and drivers. Presentation of all safety aspects was provided to DIPL and accepted as being industry best practice. KGL indicated that all staff and contractors will contractually be required to implement safety measures. In addition, Qube have indicated that they and KGL are happy to provide educational presentation and information sessions to road users and local communities such as a generic journey management plan included in the traffic management plan.
Updated traffic counts	Consone requested and these were received for the Plenty Hwy traffic count station closest the Stuart Hwy.

2.4 Police Fire and Emergency Services

Consultations were undertaken with the local Harts Range police officers and the regional command.

Item Raised PFES	KGL Response
Raised concern around ability of emergency services to respond	KGL and Qube highlighted the staggering of vehicles and that all vehicles would be equipped with satellite communications which would reduce any likely delays in reporting of incidents. In addition, KGL highlighted that the mine will have medical facilities, firefighting facilities and trained staff available 24/7. This will dramatically improve emergency response times from that currently experienced. It was



Item Raised PFES	KGL Response
	noted that due to insurances requirements KGL would only act on the request of PFES.
Concern on Road Condition	KGL indicated the TMP will have restrictions both on weight and wet weather operations – essentially KGL will work with PFES and DIPL in managing operations in wet weather
Concern raised regarding Lucy Creek Intersection	KGL advised intersection will be upgraded and likely sealed. Consone noted appropriate assumptions would be included and conceptual design included in this report
Concerns regarding road safety	Qube highlighted all safety requirements for vehicles and drivers. Presentation of all safety aspects was provided to DIPL and accepted as being industry best practice. KGL indicated that all staff and contractors will contractually be required to implement safety measures. In addition, Qube have indicated that they and KGL are happy to provide educational presentation and information sessions to road users and local communities such as a generic journey management plan included in the traffic management plan.

2.5 KGL

KGL have indicated they are happy to engage with the community to provide information sessions on a regular basis. Consultations with the Bonya Community are exploring the development of a road maintenance team from the community to undertake road maintenance in the region with KGL supporting this strategy.

2.6 Lucy Creek Station / Jervois Station

KGL have ongoing consultation with both the stations owners and are working to develop joint water supplies, road material supply and road maintenance.



3 LEGAL AND OTHER RESPONSIBILITIES

It is noted that this draft document has been prepared to support the Supplement to the EIS. As such no conditions for approval have been received at this stage. The following table outlines anticipated conditions of approval with respect to traffic. These requirements will be revised, and omissions included on receipt of approvals and development of the overall MMP.

- Intersection upgrades to be undertaken in accordance with the Traffic Supplement
- Monitoring and recording of concentrate transportation including reporting of product transported on a quarterly basis
- Details of approved transportation routes
- Procedures and requirements for transportation of oversized vehicles
- Provision and maintenance of Traffic Management Plan including:
 - Statutory requirements
 - Performance criteria
 - Program to monitor and report on incidents, complaints, non-compliance and improvement measures
 - Details of roles and responsibilities
 - Protocols for periodic review of the overall plan



4 ROLES AND RESPONSIBILITIES

ROLES	RESPONSIBILITIES
General Manager	Must ensure adequate resources are available to enable implementation of the plan
Mining Manager	Accountable for the overall environmental performance of the project including the outcomes of this plan
Mine OH&S Supervisor	Ensure implementation of the plan. Ensure employees and contractors are competent through training and awareness programs

DRAFT



5 SITE ACCESS AND TRAFFIC ROUTES

5.1 External Traffic Routes

The proposed transport routes for construction and operations will include the following:

5.1.1 Route 1: Accommodation Village/Operations to Airstrip

The airstrip is located approximately 20km due north of the mine site. Access to the strip is via a 27km road trip along the Lucy Creek Access (Road 194). The route from site to the Lucy Creek Airstrip is shown following:

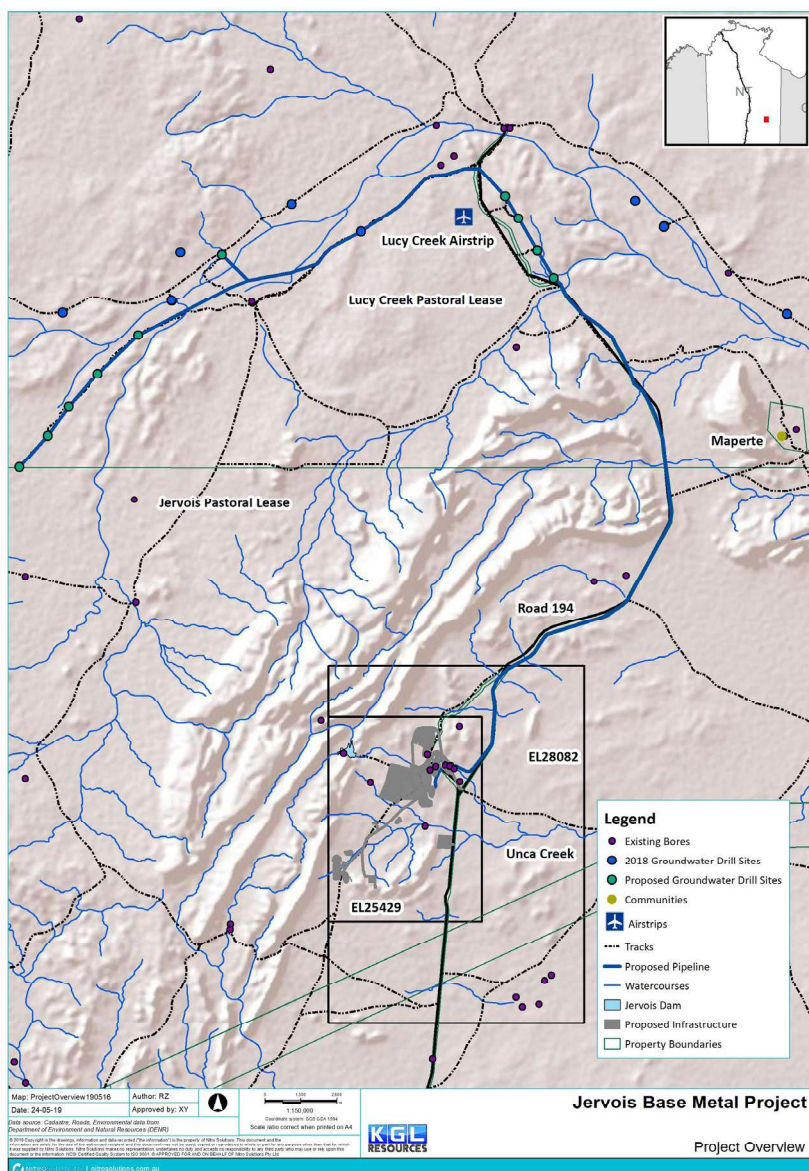


Figure 1 – Mine Access and Access to Lucy Creek Airstrip



5.1.2 Route 2: Accommodation Village to Mine Site

The proposed accommodation village will be located approximately 2.5km south of the mine site. Access to the mine site is via the Lucy Creek Access (Road 194) to its proposed intersection with the new camp access road. Refer Figure 2 for Location of Accommodation Village.

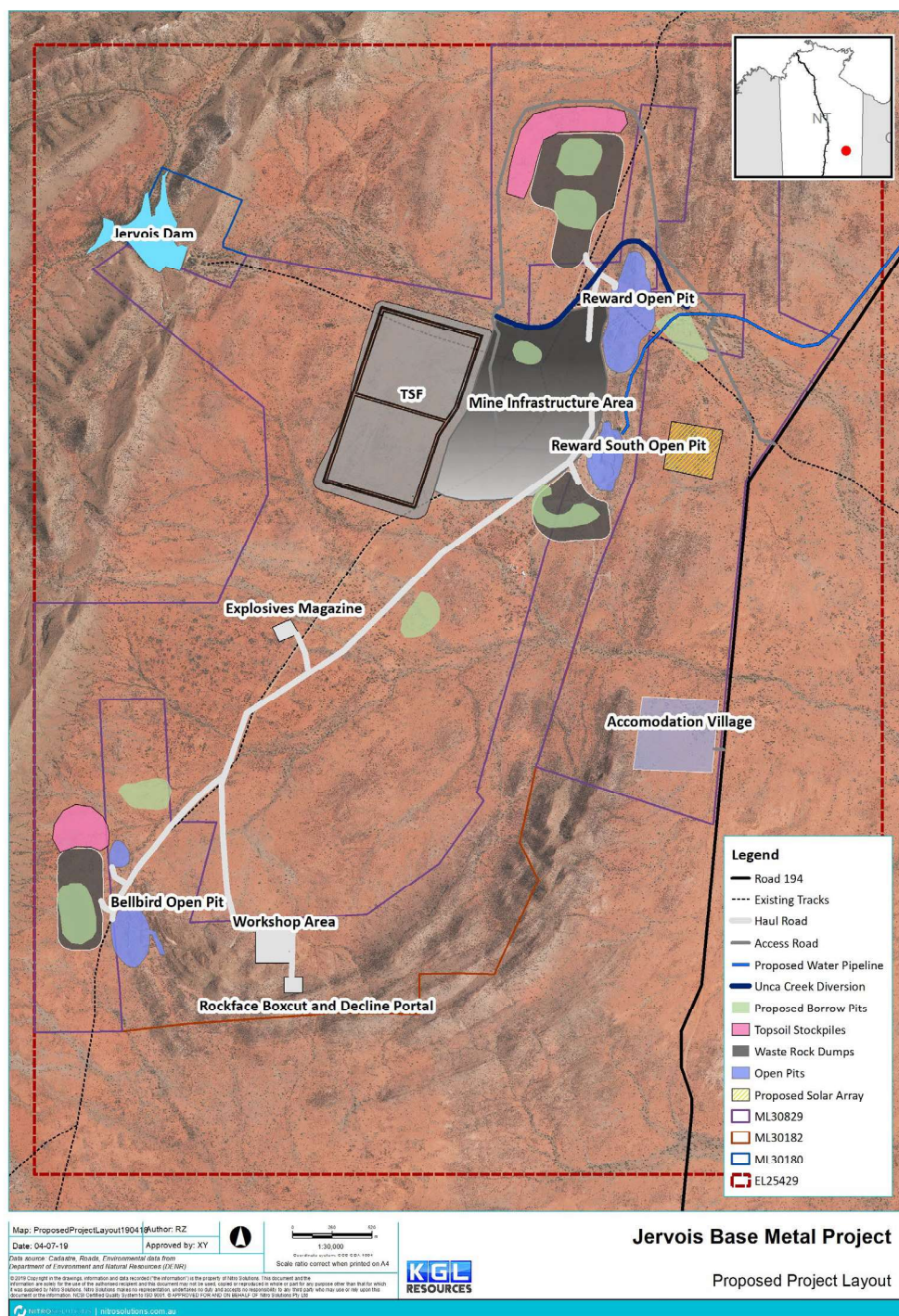


Figure 2 – Proposed Project Layout – Location Accommodation Village



5.1.3 Route 3: Alice Springs to Mine Site

The main transportation route is from the mine site to the rail storage facility in Alice Springs. This includes a leg which runs along the site access road before turning south onto Lucy Creek Access (Road 194). The route then travels in a southerly direction for a distance of 18.2km where it intersects with the Plenty Highway. Vehicles will then travel west along the Plenty Highway until meeting the intersection with the Stuart Highway, approximately 296km from the Lucy Creek Access turnoff. The final leg of the route encompasses travelling 67km south along the Stuart Highway before turning onto Smith Street and travelling a short distance to the railway yard. Movements upon entry to the Alice Springs township to the rail facility follow the NT Government approved Road Train Route – A copy of this is included in the Traffic Supplement.

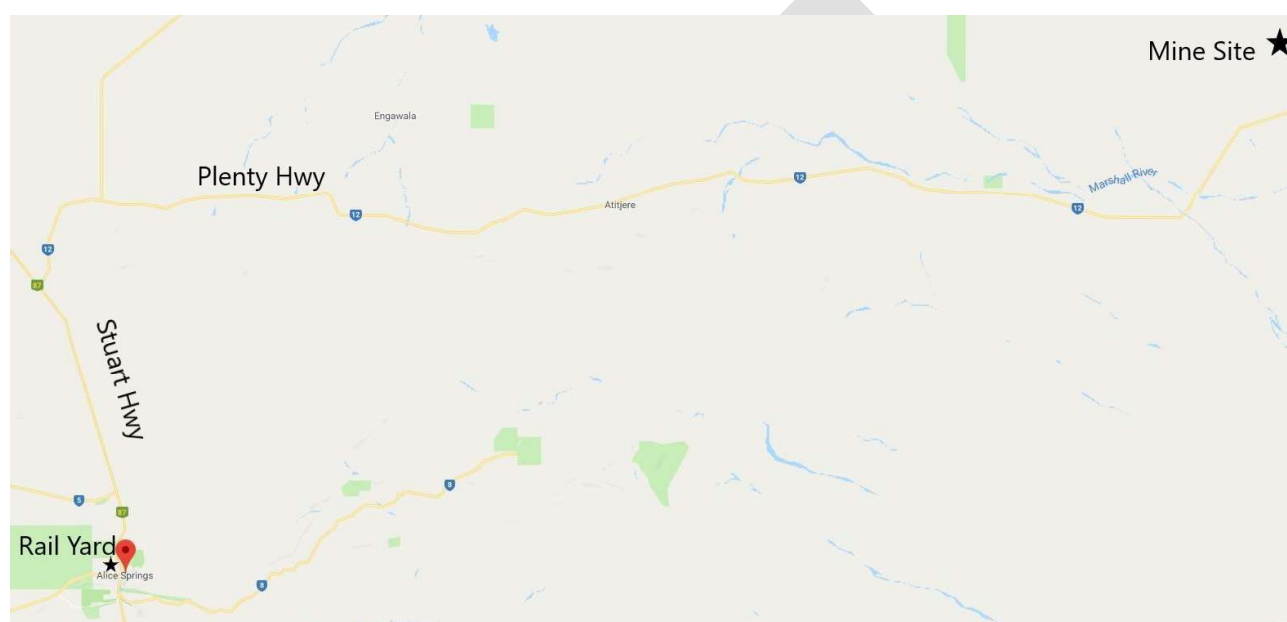


Figure 3 – Concentrate Transport Route

'Image Landsat / Copernicus © 2018 Google'

5.2 Internal Road Layout

The internal road layouts are shown in Figure 2 – Proposed Project Layout



6 TRAFFIC GENERATION

6.1 Construction Traffic Generation

Estimates of construction traffic have been prepared by KGL by undertaking consultation with tenderers for the various components of the construction of the mine. These consultations have been undertaken with the suppliers / contractors for the following work packages:

- Process Plant and Infrastructure
- Mining Contractor
- Power Station
- Accommodation Village
- KGL Personnel and Equipment
- Fuel Supply
- Allowance for Miscellaneous Transport

A detailed program for each work package has been prepared and estimated vehicle trips over the 63-week construction period have been prepared from this. Suppliers / contractors were also requested to break down the type and size of vehicles into the following categories:

- Light Vehicle
- Semi-trailer truck
- Double Trailer Road-Train
- Triple Trailer Road-Train
- Oversize Load / Low Loader (No Pilot)
- Oversize Load / Low Loader (Pilot)
- Oversize Load / Low Loader (Police Escort)

The overall program and estimate of vehicles per trip on a weekly basis over the period of construction is nominated and this is included in the Supplement. A summary of the estimates is included in the following table.

Table 1 - Summary of Construction Traffic

Type of Vehicle	Return Trips Construction	Average V/Wk	Peak V/Wk	Peak V/Day	Length Peak (wk)	Period Peak
Light Vehicle	676	10.7	29	4.1	5	W55-W59
Semi-trailer truck	68	1.1	12	1.7	3	W57-W59
Double trailer road train	287	4.6	15	2.1	5	W46-W51
Triple trailer road train	6	0.1	3	0.4	2	W54-W55
Oversize Load/ Low Loader (No Pilot)	206	3.3	20	2.9	9	W3-W9
Oversize Load (Requiring Pilot)	50	0.8	8	1.1	2	W58-W59
Oversize Load (Requiring Police Escort)	24	0.4	7	1.0	2	W58-W59
Total Vehicles	1317	20.9	34-61	5-9	12	W47-W59



From the above table and review of the overall program it is clear that whilst the average of vehicles movements is relatively low (20 per week) there is a peak period of construction of approximately 12 weeks (Process Plant and Infrastructure) where the average number is 75% - 300% higher and there are other periods where the level of traffic is significantly lower. KGL are currently working with suppliers and contractors to ascertain if these vehicle movements can be spread out over an extended period. This is specifically the case for oversized vehicles where staggering of trips will reduce the impact to other traffic users.

6.1.1 Traffic Generation Operations

Mining operations are expected to ramp up early 2021 with nameplate capacity occurring in the second half of 2021. At this stage the mine site will be operational 24 hours a day, seven days a week with estimated production and transportation of 150 000 tonnes of product annually. The mine is expected to be operational for up to 52 weeks a year with transport of product occurring over 47 weeks annually. Transportation times are based on production estimates and historical climate data and subject to change dependent on weather events and production scenarios.

Operational traffic generation is summarised in the following Table - noting that these are a total of all movements i.e. in each direction.

Table 2 - Summary of Traffic Generation

USE	VEHICLE TYPE	VPW	VPD
Operations Phase			
Output - Concentrates	Triple Road Train	84	12
Input - Diesel	Double Road Train	16	2
Input - Consumables Other	Double Road Train	6	1
Transport Operations, Admin & Contractors Staff	40-Seater Road Coach	2	1
Transport Management	Light Vehicle	6	1
Transport Contractors	Light Vehicle	12	1
Operations Phase Total		126	18



7 TRAFFIC MANAGEMENT MEASURES

7.1 Journey Management Plans

All Qube cyclic transport routes across Australia have a safety management system that includes a journey management plan. This plan includes a detailed assessment of the transport route specifically centred around road safety and interaction with other road users. An example of a Journey Management Plan (JMP) has been provided in the Traffic Supplement. Qube propose to develop a JMP specific to the Jervois project and this will be developed taking into account the issues raised in the Traffic Supplement. This will be used as the basis of a generic JMP being developed as part of the final Traffic Management Plan.

It is anticipated that the JMP will include the following:

- Details of the proposed route
- Pre-start checklist for drivers in both directions
- Areas of concern for road safety as highlighted in the RSA
- Speed restriction zones including those specific to KGL personnel and contractors highlighted in Table Speed Restrictions
- Areas of concern with pavement wearing coarse especially in wet weather
- Emergency procedures
- Emergency Contact Details
- Procedures around dealing with oncoming traffic
- Location of all intersections and relevant point on the proposed route

7.2 Safety Policies

Qube have a number of overriding policies around road safety that KGL intend to replicate for all KGL operations relative to the operations at Jervois including:

- Zero tolerance to illicit drugs and alcohol – Qube drivers have instant dismissal for registration with any level of illicit drugs or alcohol within driver's bloodstream
- Instant dismissal for drivers who make hand contact with mobile phone
- Implementation of induction procedures to educate operators on all safety policies

7.3 Driver Education Seminars

Qube have had significant success previously with information and training sessions with regard to road safety and heavy vehicles. These sessions are undertaken at rest stops for caravan users in communities and schools to make people aware how to interact with road trains. Qube propose to undertake such seminars in Alice Springs, Gem Tree Park and at the communities of Bonya and Harts Range.



7.4 Specific Operational Requirements

7.4.1 Emergency Response Requirements

The NTPFES have indicated in the responses to the EIS that there are limited resources in the region to respond to emergencies along the Plenty Highway and Lucy Creek Access in a timely manner. KGL are preparing an Emergency Response Plan, this will be a formal controlled document as part of the Mine Management Plan and will cover operations other than traffic incidents such as establishment of a mine rescue team to be located in the vicinity of the administration area on the mine. Key aspects of the Emergency Response Plan are outlined following.

7.4.1.1 Emergency Response - Physical Infrastructure

As part of the Emergency Response Plan significant physical infrastructure will be developed at the mine early in the construction phase. This will include the following physical infrastructure:

- Mine Clinic – A fully equipped clinic will be established at the mine staffed by qualified paramedics; these staff will be contactable 24/7 on all days of operation of the mine. The clinic will be located at the administration area of the accommodation village.
- Ambulance building – A full equipped ambulance will be situated adjacent the clinic
- Firefighting Equipment – A fully equipped fire fighting vehicle with appropriately trained mine personnel
- Airstrip Upgrade – Either of the Bonya Community or the Lucy Creek Station airstrips is to be upgraded to enable FIFO operations from Alice Springs. As part of any upgrade the airstrips will be upgraded to enable night-time operations for the Royal Flying Doctor Service
- Mine Recovery Unit Infrastructure – Within the mine industrial area there will be an area for the storage of Emergency Mine Recovery unit equipment. This will include recovery vehicle and equipment. This will be staffed by appropriately trained mine staff.
- It will be a contractual requirement for all staff and contractors utilising the route to site to only utilise vehicles that are equipped with GPS tracking equipment, satellite communications, and first aid equipment.

7.4.1.2 Emergency Response Policies and Procedures

As part of consultation process KGL have undertaken several meetings with both the Regional Management of NTPFES and the local command at Harts Range. From these discussions an informal agreement has been reached that KGL would provide a supplement for regional emergency services through the facilities established at the mine. A specific requirement (for KGL Insurance) for KGL to provide additional emergency services to the region is that they would not provide services unless specifically requested by NTPFES. It is anticipated that a formal agreement be established with the following procedural requirements:



In the Event of Incident Reported to Police by the Public

Should an incident be reported to NTPFES by the public in the region of the Jervois mine Police may choose to contact KGL for assistance. In this event the contact for KGL will be the Mine OH&S Supervisor or in their absence the Mine Manager. Police may indicate the type and extent of assistance required and KGL would confirm availability and where appropriate mobilise personnel and equipment accordingly until such time as NTPFES can replace KGL personnel on-site. KGL may have the ability to mobilise the following (though this will need to be confirmed by KGL at the time of request – KGL do not guarantee availability)

- Ambulance and paramedic
- Mine rescue team in the event of trapped persons in vehicles
- Fire Services vehicle in the event of spilt fuel and/or fire
- Traffic control vehicles at appropriate locations to ensure other road users are aware of an incident and to prevent subsequent accidents occurring

In this event it is not anticipated that KGL will be required to contact pastoralist(s) or communities as this role will be undertaken by NTPFES.

Should medivac be required and requested by NTPFES, KGL will ensure airstrip is operational for RFDS.

In the Event of Incident being discovered or Involve KGL Personnel or Contractors

Should a traffic incident involve or be discovered by KGL staff or a KGL contractor, contact will be made with police and the Mine OH&S Supervisor (or Mine Manager should the Mine OH&S Supervisor not be available). Mine Management will contact the Harts Range Police in the first instance and procedures as listed above will be implemented.

7.4.2 Wet Weather Restrictions

In the event of moderate level of rainfall in the region (defined by the presence of standing water) KGL contractors and staff will be restricted from using heavy vehicles on the Lucy Creek Access Road and the Plenty Highway until such time as the routes are inspected and cleared for use by either the NTPFES or DIPL. It is expected that in the case of major rainfall events this will be for an extended period of time to enable maintenance plant to undertake repairs to the roads. It is likely that roads will be closed to the public by NTG during these events.

KGL in preparing the EIS have taken this into account for estimation of production and planning for deliveries and transportation of product to Alice Springs. Construction and mining operations are estimated to occur for 47 weeks each year, with an estimated 5 weeks of the year having access to the site being restricted.



7.4.3 Vehicle Speed Restrictions

KGL resources have implemented strict guidelines with respect to road safety for personnel and contractors utilising roads as part of the operations for the mine. This applies to speed of vehicles operating both internally within the mine and operating to and from the site. Speed restrictions will form part of the traffic management plan and are introduced to improve both safety to the public and those associated with the mine.

External Speed Restrictions

Speed restrictions are to be implemented for all KGL staff and contractors, these will apply to all roads being utilised to and from the site in accordance with the following table:

Table 3 – Operating Speed Restrictions

Road Section	Speed Restrictions		
	Public Vehicle	Heavy Vehicle	Light Vehicle
Whittacker St (Rail Yard to Smith St)	50km/hr	50km/hr	50km/hr
Smith St (Whittaker St to Stuart Highway)	50km/hr	50km/hr	50km/hr
Stuart Highway (Smith St to Dixon Rd)	60km/hr	60km/hr	60km/hr
Stuart Highway (Dixon Rd to Ch. 7.0)	70km/hr	70km/hr	70km/hr
Stuart Highway (Ch. 7.0 to 10.0)	80km/hr	80km/hr	80km/hr
Stuart Highway (Ch. 10.0 to 12.0)	100km/hr	90km/hr	100km/hr
Stuart Highway (Ch. 12.0 to 30.0)	110km/hr	90km/hr	110km/hr
Stuart Highway (Ch. 30.0 to – Ch. Plenty Highway)	130km/hr	90km/hr	130km/hr
Plenty Highway Ch. 0.00 to Ch. 295.77 - Lucy Creek Access	110km/hr	90km/hr	110km/hr
Lucy Creek Access Road	110km/hr	90km/hr	90km/hr

Additional restrictions to speed for KGL staff and contractors operating heavy vehicles along the Plenty Highway and the Lucy Creek Access Road are to be implemented at sections where the sight distances do not meet the required level. This occurs at certain intersections and at locations such as crests and horizontal curves. At these locations the speed will be limited to 80km/hr for 500m in both directions of the location. The nominated chainages that restriction occur are as follows:

Plenty Highway

- Ch 45.90km – Crest with poor Sight Distance
- Ch 51.30km – Crest with limited Sight Distance
- Ch 170.60km – Horizontal curve with limited Sight Distance
- Ch 174.20km – Mt Eaglebeak Intersection, insufficient Sight Distance
- Ch 229.09km – Crest with limited Sight Distance
- Ch 240.08km – Crest with limited Sight Distance



- Ch 273.20km – Crest with limited Sight Distance
- Ch 273.95km – Crest with limited Sight Distance
- Ch 277.92km – Crest with limited Sight Distance
- Ch 278.08km – Jervois Intersection, insufficient Sight Distance
- Ch 285.03km – Crest with limited Sight Distance
- Ch 295.44km – Crest with limited Sight Distance
- Ch 295.60km – Horizontal curve with sub-standard radius
- Ch 295.77km – The Lucy Creek Access Road and Plenty Highway Intersection

Lucy Creek Access

- Ch 5.90km – Crest with limited Sight Distance
- Ch 14.50km – Crest with limited Sight Distance
- Ch 18.21km – Horizontal curve with sub-standard radius

All restrictions to speed are to be included in the Journey Management Plans required for KGL staff, contractors and transportation companies. Refer Section 10 of the Traffic Supplement for details of the implementation of Journey Management Plans and Section 10 for contractual requirements. Modification to the Journey Management Plan and removal of restrictions will occur after defects have been rectified.

Internal Mine Roads Speed Restrictions

Internal roads within the mine site for operations will have posted speed limits and operational requirements to increase safety within the mine. The internal road layout for the mine is shown in Figure 2. These will typically be as follows:

- Internal Access Road to mine 60km/hr (Lucy Creek Road to Mine Infrastructure Area)
- Internal Haul Roads 60km/hr all vehicles (Reward Pit, Explosive Magazine Access, Bellbird Open Pit, Southern Workshop, Rockface decline portal, Reward South)
- A restriction to 20km/hr with 100m of specific mine infrastructure will apply including the southern workshop area, mine Infrastructure area, administration area and explosive magazine
- With regard to light vehicles utilising internal haul roads, access will be restricted to mine department management and mine department service light vehicles operating in areas where the mine haulage and operating equipment operate. To do so those personnel will undergo an additional level of training/induction specifically targeted at protocols for interacting with different equipment, as will be the case for operating light vehicles in the underground areas.

7.4.4 Oversized Vehicles

As listed in the traffic generation summary for the construction of the site it is anticipated that there will be a requirement for oversized vehicles to transport equipment to the site. Oversized Vehicles will require a Permit from the Northern Territory Government Department of Transport in accordance with the document “Permit Guidelines for Oversize and Overmass Vehicles – Version 6 February 2018” from



the Vehicles Standards Section. Permit applications are to be made to the Department of Transport on the appropriate application form and payment of the nominated permit fee. A copy of the Guideline is included in Supplement

The following table highlights the type and number of oversize vehicles predicted over the estimated 64-week construction program.

Table 4 – Oversize Vehicles

Vehicle Type	Total No Over 64 Weeks	Weekly Peak Over Period	Period That Peak Occurs
Oversize Load / Low Loader (No Pilot) ****	195	20	5
Oversize Load / Low Loader (Requiring Pilot)	50	10	1
Oversize Load / Low Loader (Requiring Police)	24	8	1

**** Note: Peak demand for oversized vehicle is for initial transportation for village construction and may be mobilised from Queensland. All other oversized vehicles are mobilised from South Australia via Alice Springs via a combination of rail and road.

7.4.5 Staggering of Heavy Vehicles Movements

During both the construction phase and the operations phase there will be a requirement to stage/stagger heavy vehicles movements to and from the site. This will require careful planning across the various different transport operators. Staggering vehicles will be required to ensure that disruption to public traffic through delays behind heavy vehicles by managing the distance between each heavy vehicle on the route. Thus, ensuring maximum passing opportunities.

Peak periods for oversize vehicles during construction are shown in the previous section (also in Appendix A of the Traffic Supplement) and total a maximum of 3-4 oversized vehicles a day over a period of 5 weeks. It is proposed that these be staggered with a period of three hours minimum between each vehicle.

Construction Peaks Heavy Vehicles

Analysis of the construction traffic generation was completed in section 6 and a detailed program and assessment is tabulated in the appendices of the Supplement. This showed a peak in heavy vehicle traffic between weeks 47 to week 59. It is anticipated that the peaks shown will be smoothed slightly to have a peak of heavy vehicles per week being in the order of 20 – 25 with approximately 50% being



over-sized vehicles. It will be policy of KGL that no more than 6 heavy vehicle movements are allowed each way per day.

It will be a requirement that these heavy vehicle movement be staggered at a minimum of 1.5 hours between each movement and that these movements occur only in daylight hours

Construction Peaks – Operational Phase

Construction peaks for the operational phase are simpler to predict with the operations being cyclic in nature. The estimated transportation of concentrate by Qube is 3 vehicles operating in two shifts per day. This equates to 6 vehicle movements in each direction for 47 weeks of the year. Qube Journey Management Plan will have scheduled times for each shift and each trip. Whilst the JMP is still being developed it is the intention that Qube vehicles will operate on a minimum 3-hour stagger in each direction.

The Qube timetable for vehicle movements will be distributed to other transportation contractors such that those contractors can schedule trips to ensure a 1.5-hour stagger between all heavy vehicles. Thus, an overall schedule of daily movements in each week will be developed and this schedule will be distributed to all companies and reviewed regularly by the KGL Mine OH&S Supervisor. Audits will be undertaken of the schedule as part of the audit process in the TMP.

7.4.6 Induction of Drivers and Pilots

All staff working for KGL or any of the transportation companies will be required to undergo a detailed induction course that will outline the following to any proposed driver or pilot:

- Overview of JMP
- Safety rules and procedures
- Requirement for mandatory drug and alcohol testing
- Internal mine safety requirements
- Emergency response procedures
- Speed restrictions and monitoring
- KGL internal policies and requirements



8 CONTRACTUAL REQUIREMENTS – TRANSPORT COMPANIES

All companies that will be involved in transporting materials to or from the mine will have specific contractual requirements to comply with as part of their contract. This will include but not be limited to the following:

- Strict compliance with zero drug and alcohol policy
- Strict compliance with speed restrictions outlined in the final TMP
- Induction of all personnel
- Vehicle safety requirements and equipment
- Requirement for compliance with generic JMP or operate under an approved KGL JMP
- Requirements for staggering of heavy vehicle movements and record keeping
- Incident reporting and corrective measures

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9 INCIDENT REPORTING

In the event of a traffic accident, incident or reported near miss or complaint in relation to a breach of the Driver's Code of Conduct, KGL- will initiate an investigation. The investigation will seek to determine:

- What occurred at the time of the incident;
- The root cause of the incident;
- Any contributing factors which led to the incident
- Whether appropriate controls were implemented to prevent the incident.

Corrective and/or preventative actions will be assigned to relevant responsibilities as a result of the investigation. Actions will be communicated through planning meetings and toolbox talks. If required, the Driver's Code of Conduct will be amended, and all drivers required to review the amended code. Outstanding actions will be monitored for their effectiveness upon completion.

All reports associated with complaints or incidents will be provided to DIPL and other agencies as required and will be retained for a period of no less than four years.

10 COMPETENCE TRAINING AND AWARENESS

All personnel shall undergo traffic awareness training. Traffic awareness training shall be a component of the competency-based site induction program. The following areas shall be covered in the induction:

- Driver's Code of Conduct.
- Operating hours for all vehicles.
- Approved routes for heavy vehicle site access.
- Speed limits on public and Project Site roads.
- Use of Journey Management Plans
- Incident response and reporting procedures in the event of a traffic accident or near miss.
- Expectations of behaviour on public roads.
- Contact phone number in the event of a complaint.

The Mine OH&S Supervisor shall be responsible for ensuring the appropriate Traffic Awareness training is included in the induction.



11 Document review.

11.1 Management and Auditing of TMP

The management of the KGL Traffic Management Plan for both construction and operational phases will be the responsibility of the Mine OH&S Supervisor and approval of the TMP will be the responsibility of the General Manager.

An audit of the TMP will be undertaken at minimum 6 monthly interval. The audit will review the following as a minimum

- Incident reporting including near misses
- Safety improvement measures to be implemented
- Programmed scheduling against actual trips undertaken
- Future programmed schedule
- Road condition update
- Programmed road upgrades
- Update to JMP where applicable