Appendix L: Traffic Management Plan

Lilydale Pipeline Project

Traffic Management Plan

Document. No.: 860-PR-PM-006
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Approvals

	Name	Title	Signature	Date*
Prepared by:	Frank Farrell	Civil Engineer		30/05/2011
Reviewed by:	John Paul O'Connor	Project Manager		10/07/2011
Approved by:				

* The date shown is when the document was originally issued. For revision history refer to the last page.

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1.0 Purpose

This document outlines the approach proposed by Diona for management of construction and local traffic during construction of the Lilydale Pipeline Project.

This plan addresses the required controls, mitigating measures, and monitoring and reporting requirements to minimise the potential for an incident involving construction and/or public vehicles in the project area.

This should be read in conjunction with the attached Traffic Control Plans (Appendix A), Safe Work Method Statement (Appendix B) and Traffic Management Procedure (Appendix C).

2.0 Definitions

Vic Roads – Roads & Traffic Authority http://www.vicroads.vic.gov.au/Home/

Coordinating Road Authorities – Vic Roads, Local Councils, Parks Victoria, Department of Sustainability and Environment.

3.0 Overview of Traffic Management Planning

3.1 Description of works area

Diona has been engaged by Jemena to construct the Lilydale Pipeline Construction Project which consists of approximately 10.3km of DN 300 Pipeline stretching from the existing APA owned Yarra Glen City Gate compound at Glenview Rd to the end of the Multinet owned Ringwood to Lilydale branch pipeline off the Inner Ring Main on the corner of Maroondah Highway and Victoria Road in Lilydale.

The pipeline construction will take place predominantly on the eastern side of Victoria Road, within nature strips, road shoulders and bicycle lanes. It will also be constructed through private lands and installed via HDD (Horizontal Directional Drilling) under the Yarra River.

Public use of Victoria Road during business hours is moderately busy, particularly during morning and afternoon peaks in the vicinity of the two local schools with the high school acting as a bus interchange for other schools in the area. The road is mainly used as a thoroughfare for residential traffic, and is also a main route for traffic travelling to the Yarra Valley. Properties in the area and adjacent to construction zones are a mix of urban, semi-rural and rural. Available space for construction is limited and particular care will be required to ensure separation of construction activities from public traffic on Victoria Road.

Victoria Road is a well formed public road managed by Yarra Shire Council, with one lane in each direction and bicycle lanes both sides of the road through urban areas. There are twenty intersecting residential roads and five major intersections along the alignment.

3.2 Plant and Equipment

Construction will require rubber-tyred and tracked excavation equipment, supported by trucks and light weight vehicles. All plant & equipment shall have a plant & equipment hazard identification conducted prior to commencing work.

To the extent practical construction will take place within a 10m corridor which has been defined around the pipe centerline, however it will be necessary for some activities and parking to take place outside of this corridor.

Outside of working hours any equipment not returned to a secured yard will be parked well away from the roadway and where appropriate hazard lights or warning signs will be placed near the parked equipment.

3.3 Traffic Management Objectives

The following summarize the objectives of this Traffic Management Plan:

1. Prevent any accidents or near miss incidents involving construction vehicles and equipment and/or the public in the project area.
2. Allow public access to Victoria Rd with restriction limited to that necessary to allow movement of pipeline construction equipment into and out of the roadway and to pipeline installation to take place safely.
3. Define a separation between construction areas and public access areas where practical.
4. Compliance with applicable legislation.
5. Minimise disturbance to the local community.

3.4 Traffic Management Strategy

The overall strategy will involve the progressive placement of warning signs, barriers, warning lights and other visual indicators of abnormal road conditions during all periods while construction equipment is present.

Diona will regularly review and update the Traffic Management Plan to take into consideration any new information as it arises.

Traffic will operate under stop/go and contra-flow conditions where possible during construction. Where the alignment crosses side streets and intersections, detours and road closures will be adopted to best suit the traffic flow and construction conditions as per the attached Traffic Control Plans (Appendix A).

3.5 Interface with Relevant Road Authorities

The Traffic Management Plan will be submitted to the relevant Coordinating Road Authorities for approval.

Road Type (Classification)		Coordinating Road Authorities responsible for Licensing
1.	Freeway	Vic Roads
2.	Arterial Roads (State roads)	Vic Roads
3.	Sub –arterial roads, collector and distributor roads (Regional roads)	Vic Roads
4.	Secondary Road or Rural Arterial “A” & “B” Road.	Local Councils
5.	Collector Roads or Rural Arterial “C” Road	Local Councils
6.	Local roads (Unclassified)	Local Councils
7.	Non Arterial State Roads eg Roads in National Parks	Parks Victoria, Department of Sustainability and Environment.

4.0 Responsibilities

a) Project Manager and Project Engineer

- Communications with Jemena and relevant authorities as required.
- Ensure that the Traffic Management Plan is implemented as planned, including arrangements for periodic audits.
- Implement emergency response measures if required.

b) Site Supervisor

- Day to day onsite co-ordination of construction crews in accordance with the objectives of this plan.
- Regularly check the integrity of the temporary traffic control and warning measures erected to ensure their continued effectiveness.
- Work with traffic control supervisor to make improvements to the traffic control measures where appropriate.
- Provide daily reports of any issues of concern regarding traffic.

c) Traffic Control Supervisor

- Regularly inspect the placement of temporary traffic control and warning measures for continued effectiveness.
- Move or replace traffic control measures as required by the progress of the works.
- Obtain all relevant approvals from Yarra Shire Council and Vic Roads as required.

d) Sub Contractors

- Comply with all aspects of this Traffic Management Plan and the associated traffic control measures.
- Exercise particular care in movement of any equipment and vehicles into and out of the traffic flows.

5.0 Auditing

Traffic management audits will be conducted on a weekly basis to ensure compliance with State Government, Local Council and Vic Roads conditions and requirements. This will be conducted in conjunction with weekly project OHS&R (Occupational Health, Safety and Rehabilitation) audits and inspections.

6.0 Training and Competencies

Only trained and accredited traffic controllers and supervisors will be permitted to plan traffic arrangements, place and monitor signage, control traffic and conduct required audits. Copies of training and competencies will be kept on file at the site office with project induction records.

Traffic control will be conducted by Diona's internal personnel, who will be accredited to conduct works through Vic Roads. Where required due to works conditions or changes, local traffic control companies may be utilised to assist if additional controls are needed. In this instance, only Vic Roads accredited companies will be used.

7.0 Permit Requirements

Road Opening Permits will be required from Yarra Range's Council and Vic Roads. A permit is required from Yarra Range's Council to operate from Yarraview Road to Maroondah Highway. As works intersect with Maroondah Highway, a secondary permit is required from Vic Roads in order to facilitate signage set up either side of Maroondah Highway.

A load exemption permit is also required from Yarra Ranges Council to operate heavy vehicles and equipment on Victoria Road which has a 6 Tonne limit. Copies of all preliminary permits and correspondence received to date are attached in Appendix D.

8.0 Appendix A - Traffic Control Plans

SEE MULTINETGAS.COM.AU
LILYDALE GAS PIPELINE
TRAFFIC MANAGEMENT

9.0 Appendix B - Safe Work Method Statements

Diona Pty Ltd
Unit 5, 322 Annangrove Road
Rouse Hill NSW 2155
ABN 48 001 904 258
Tel.: 02 9679 2111

Safe Work Method Statement

Traffic & Pedestrian Management

Project Name:	Lilydale Pipeline Construction Project
Project Number:	11.0001
Jemena Document Number	860-PR-PM-017
SWMS Document No:	11.0001 Jem-SWMS 09
SWMS Rev Date:	29/06/2011
SWMS Document Rev. No:	0

Approvals

	Name	Title	Signature	Date*
Prepared by:	Seamus Hickey	OHS Manager		29/06/2011
Approved by:	John Paul O Connor	Project Manager		29/06/2011

* The date shown is when the document was originally issued. For revision history refer to the last page.

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1 Introduction

The Person authorising this Safe Work Method Statement on behalf of Diona Pty Ltd believes that this SWMS is compliant with the OH&S Act 2004, OHS Regulations 2007, National and State approved Codes of Practice, relevant Australian Standards and applicable statutory requirements, subject to:

a) ongoing processes of consultation with the review, monitoring and amendment by relevant stake holders in the development of SWMS's;
b) amendments to the OH&S Act 2004, OHS Regulations 2007, National and State approved Codes of Practice and relevant Australian Standards and applicable statutory requirements; and
c) lawful requirements of various stakeholders including authorities

2 Project Specific Details

2.1 General Details

Principal Contractor:	Diona Pty Ltd
Project Manager:	John Paul O Connor
Project Engineer:	Tom Ryan
Site Supervisor:	To Be Advised
Leading Hand:	To Be Advised
Employees OHS Representative:	To Be Advised
Proposed Commencement Date:	To Be Advised
Duration of Work:	To Be Advised
Maximum Number of Employees:	To Be Advised
Minimum Number of Employees:	To Be Advised

2.2 Project Scope of Works

Diona has been engaged by Jemena to construct the Lilydale Pipeline Construction Project which consists of approximately 10.3km of DN 300 Pipeline stretching from the existing APA owned Yarra Glen City Gate compound at Glenview Rd to the end of the Multinet owned Ringwood to Lilydale branch pipeline off the Inner Ring Main on the corner of Maroondah Highway and Victoria Road in Lilydale.

The pipeline construction will take place predominantly on the eastern side of Victoria Road, within nature strips, road shoulders and bicycle lanes. It will also be constructed through private lands and installed via HDD (Horizontal Directional Drilling) under the Yarra River.

Public use of Victoria Road during business hours is moderately busy, particularly during morning and afternoon peaks in the vicinity of the two local schools with the high school acting as a bus interchange for other schools in the area. The road is mainly used as a thoroughfare for residential traffic, and is also a main route for traffic travelling to the Yarra Valley. Properties in the area and adjacent to construction zones are a mix of urban, semi-rural and rural. Available space for construction is limited and particular care will be required to ensure separation of construction activities from public traffic on Victoria Road.

Victoria Road is a well formed public road managed by Yarra Shire Council, with one lane in each direction and bicycle lanes both sides of the road through urban areas. There are twenty intersecting residential roads and five major intersections along the alignment.

2.3 Mobile Plant, Static Plant, and Equipment Required

Assess the following mobile plant, static plant & equipment requirements prior to commencing work.

NOTE: All plant & equipment shall have a plant & equipment hazard identification conducted prior to commencing work.

Mobile Plant and Equipment Required	Plant Required	No.
	Back Hoe	TBA
	Excavator – 13 T	TBA
	Excavator – 22 T	TBA
	Hiab with Crane	TBA
	Tipper – 2T	TBA
	Truck and dog	TBA
	Bob cat	TBA

Static Plant and Equipment	Plant Required	No.
	Jumping Jacks	TBA
	Shovels	TBA
	Brooms	TBA
	Star picket driver/Remover	TBA
	Insulated Crow Bar	TBA
	Lifting Chains	TBA
	Lifting Slings	TBA

2.4 Trades, Skills & Training Required

Assess the following trades, skills & training requirements prior to commencing work:

Trades & Skills Required	Personnel Required	No.
	Back Hoe Excavator Operator	TBA
	Excavator – 13 T Operator	TBA
	Excavator – 22 T Operator	TBA
	Trencher Vermeer Operator	TBA
	Hiab with Crane Operator	TBA
	Tipper – 2T Operator	TBA
	Truck and dog Operator	TBA
	Bob cat Operator	TBA
	Rollers Asphalt works Operator	TBA
	Profiler Operator	TBA
	Traffic Controller (Stop/Slow)	TBA
	Traffic Controller (Erect Signs)	TBA
	Traffic Controller (Amend TCP)	TBA

Training Required	Training Required	No.
	General OHS Induction (White, Blue, Green)	All
	Site-specific Induction (All personnel)	All
	SWMS Training	All
	Competent First Aider	2
	Back Hoe Excavator Competency	TBA
	Excavator – 13 T Competency	TBA
	Excavator – 22 T Competency	TBA
	Hiab with Crane Competency	TBA
	Tipper – 2T License	TBA
	Truck and dog License	TBA
	Bob cat Competency	TBA
	Traffic Controller (Stop/Slow) Competency	TBA
	Traffic Controller (Erect Signs) Competency	TBA
	Traffic Controller (Amend TCP) Competency	TBA

2.5 Maintenance Checks, Permits & Licenses' Required

Assess the following maintenance checks, permits & licenses requirements prior to commencing work

Maintenance Checks to be completed
Documented daily inspections
Pre-Starts on all Vehicles
Faults Reported and Recorded in Pre-Start & Daily Diary

Permits & Licenses Required
Memorandum of Authorisation to Erect, Display, Place, Remove, or Alter Traffic Control Devices;
Works in the Road Reserve
Construction Notification Completed

2.6 Documents & Personal Protective Equipment Required on Site

Assess the following documentation & personal protective requirements prior to commencing work

Required Documentation	
	OHS&R Management Plan including current SWMS
	MSDS Register, MSDS's & Risk Assessments
	Emergency Contact Numbers Prepared & Available
	Daily Safe Work Method Statement

Personal Protective Equipment Required on Site	
	First Aid Kits
	Spill Kits
	Fire extinguishers accessible/stamped 6 months
	Hard Hats, Hi-Viz Vests, Fluro Shirts, Steel Toe Capped Boots, full cover from wrists to ankles (Mandatory)
	Gloves
	Glasses

2.7 Hazardous Substance & Dangerous Goods Risk Assessment

	List Hazardous Substances and/or Dangerous Goods			
Hazardous Substances and/or Dangerous Goods - List	1. N/A	2. N/A	3. N/A	4. N/A
Elimination of the use of the Chemical	☐	☐	☐	☐
Substitute the chemical with a less hazardous/dangerous chemical	☐	☐	☐	☐
Engineering Controls				
Isolation of the Work Area	☐	☐	☐	☐
General Ventilation Sufficient	☐	☐	☐	☐
Local Exhaust Sufficient	☐	☐	☐	☐
Remove Ignition Source while working with chemical (if applicable)	☐	☐	☐	☐
Is Blast Protection Required	☐	☐	☐	☐
Is Air Monitoring Required	☐	☐	☐	☐
Is Segregation Required	☐	☐	☐	☐
Personal Protective Equipment				
Gloves	☐	☐	☐	☐
Respirators	☐	☐	☐	☐
Boots	☐	☐	☐	☐
Eye Protection	☐	☐	☐	☐
Coat/Apron	☐	☐	☐	☐
Method of Storage				
Bunded in Ventilated Site Container (Bund 110%)	☐	☐	☐	☐

Bunded Outside (110%)	☐	☐	☐	☐
1.8 Meter High Fencing	☐	☐	☐	☐
Signage Required (List)	☐	☐	☐	☐
Administrative Controls				
Specify training required before carrying out process if applicable	☐ Induction Training ☐ Risk Assessment	☐ Induction Training ☐ Risk Assessment	☐ Induction Training ☐ Risk assessment	☐ Induction Training ☐ Risk Assessment
Other Controls				
	☐	☐	☐	☐
	☐	☐	☐	☐

2.8 Additional Controls identified in Plant & Equipment Hazard Identification

Plant & Equipment Type & Identification Number	Identify the hazards associated with each step. Examine each to find possibilities that could lead to an incident	Assess the Risk 1 – 6	1 Elimination 2 Substitution 3 Engineering 4 Admin/Training 5 PPE	Specify what action/procedures will be taken to eliminate or minimise the hazards, the risk of injury/damage, and/or potential severity factors. Including the measure to be taken to ensure the proposed controls will be maintained.	Assess the Risk 1 – 6	Specify Person Responsible

3 Risk Assessment

3.1 Assigning a Risk Score

Use the following Risk Ranking Matrix to assign a risk score once you have identified the basic Job Step and associated Hazards.

RISK RANKING MATRIX												
CONSEQUENCE	**PERSONAL IMPACT**	**CORPORATE IMPACT**	**FINANCIAL IMPACT**	**ENVIRONMENTAL IMPACT**	**COMMUNITY IMPACT**	**Probability**	**PROBABILITY**					
						Consequence	Almost Certain	Certain	Likely	Possible	Unlikely	Rare
Category 1	Multiple fatalities	Will threaten the effective operation of Diona Pty Ltd's business	➢ $ 500,000	Irreversible and irrecoverable changes to soil and/or water quality in the affected area. Loss of bio-diversity on a regional scale. Loss of ecological or land-use function with little prospect of recovery to pre-incident condition.	Widespread outrage – National Impact	Category 1	1	1	2	2	3	3
Category 2	Fatality or more than 1 total permanent disability	Will threaten the effective operation of Diona Pty Ltd business, or have a significant effect on how it will operate in the future	$100,000 To $500,000	Substantial changes to existing soil and/or water quality in the affected are with significant change to bio-diversity and/or change of ecological or land-use function. Eventual recovery of ecosystem or land-use possible.	Widespread outrage – State Wide Impact	Category 2	1	2	2	3	3	4
Category 3	Total Permanent Disability	May threaten the effective operation of Diona Pty Ltd, but exposes Diona Pty Ltd to regulatory investigations	$50,000 To $100,000	Changes to existing soil and/or water quality in the affected area, with local changes to bio-diversity, but no loss of ecological or land-use function.	Widespread complaints and anger - regional impact	Category 3	2	2	3	3	4	4
Category 4	Partial disability or LTI	No threat to the effective operation of Diona Pty Ltd, but exposes the company to internal operational scrutiny	$10,000 To $50,000	Changes to existing soil and/or water quality in the affected area, but no changes to bio-diversity or ecological or land use function.	Widespread complaints and anger - community impact	Category 4	2	3	3	4	4	5
Category 5	Medical Treatment	No significant impact, dealt with internally.	$1,000 To $10,000	Possible incident impacts to soil, water, flora and fauna in a locally affected area, but without adverse ecological or land-use consequences.	Limited complaints with local impact	Category 5	3	3	4	4	5	5
Category 6	First Aid injury	No significant impact, routinely dealt with on a Project basis.	< $ 1,000	Minor incident resulting in negligible impacts to soil, water, flora and fauna in the immediate work area.	No impact	Category 6	3	4	4	4	5	6

	PROBABILITY					
	Almost Certain	Certain	Likely	Possible	Unlikely	Rare
Likelihood	Event is expected to occur in most circumstances	Event will probably occur in most circumstances	Event should occur at some time	Event could occur at some time	Event could occur at some time	Event may occur only in exceptional circumstances
Examples	Will almost certainly occur once or more within 12 months.	Will probably (>50%) occur once (or more) within 12 months.	Could occur once in every 3 - 10 years	Could occur once (or more) every 10 years	Could occur once every 10 years	May occur in exceptional circumstances (i.e. will occur once in every 10-100 years)

	RISK MANAGEMENT ACTION
Category 1	Implement identified controls to ensure the Risk Ranking is reduced to a Category 6 (or as low as reasonably practicable) through immediate planning in the form of Risk Workshops etc
Category 2	Implement identified controls to ensure the Risk Ranking is reduced to a Category 6 through immediate planning in the form of Safety Management Plans, Procedures and Safe Work Method Statements
Category 3	Implement identified controls to ensure the Risk Ranking is reduced to a Category 6 (or as low as reasonably practicable) through immediate planning in the form of Safety Management Plans, Procedures, Safe Work Method Statements and Daily Safe Work Method Statements
Category 4	Implement identified controls to ensure the Risk Ranking is reduced to a Category 6 (or as low as reasonably practicable) through immediate planning in the form of Safety Management Plans, Procedures, Safe Work Method Statements and Daily Safe Work Method Statements
Category 5	Implement identified controls to ensure the Risk Ranking is reduced to a Category 6 (or as low as reasonably practicable) through immediate planning in the form of Safety Management Plans, Procedures, Safe Work Method Statements and Daily Safe Work Method Statements
Category 6	Implement identified controls to ensure the Risk Ranking is maintained

3.2 Hierarchy of Control:

Hierarchy of Control

a) Each Hazard Should be Considered/Examined having regard for the Hierarchy of Control
b) Controls closer to the top of the Hierarchy are preferable to those lower down the Hierarchy.

In many Circumstances control solutions will incorporate a combination of controls. For a Combination of Controls - Controls closest to the top of the Hierarchy will receive priority. In this instance please ensure the controls closer to the top of the Hierarchy are listed first and subsequence lesser effective

PREVENTATIVE ACTION SEQUENCE		
Most Effective Control ↓ Least Effective Control	**1st Priority**	**Try to Eliminate the Hazard -** Controlling the hazard at source by elimination If this is not practical, then:
	2nd Priority	**Substitute the Hazards with Lesser Risks -** Replacing one substance or activity with a less hazardous one If this is not practical, then:
	3rd Priority	**Isolate the Hazards -** Place out of Service locks and tags on Hazardous Plant If this is not practical, then:
	4th Priority	**Use Engineering Controls or Redesign Equipment or Work Processes -** Install guards on machinery, scaffold rather than ladders If this is not practical, then:
	5th Priority	**Use Administrative and Training Controls –** Training Staff with appropriate accreditations and training (induction training, safe work method statement training, policies and procedures for safe work practices etc) , If this is not practical, then:
	6th Priority	**Use Personal Protective Equipment -** Eg. Hearing, eye protection, safety harnesses. Utilizing all available PPE for a task will contribute to the process of managing risk.

3.3 Assigning a Responsible Person:

Ensure a responsible person is assigned the responsibility to implement the control. The abbreviations stand for
PM = Project Manager, SS = Site Supervisor, PE = Project Engineer, OP = Operator, BM = Banks-Man, AP = All Personnel, Other – Please Specify

4 Safe Work Method Statement

Item No.	Break the job down into steps. Each step should accomplish some major task and be in a logical sequence	Identify the hazards associated with each step. Examine each to find possibilities that could lead to an incident	Assess the Risk 1 – 6	1-Elimination 2-Substitution 3-Isolate 4- Engineering 5- Admin/ Training 6- PPE	Specify what action/procedures will be taken to eliminate or minimise the hazards, the risk of injury/damage, and/or potential severity factors. Including the measure to be taken to ensure the proposed controls will be maintained.	Assess the Risk 1 – 6	Specify Person Responsible – PM = Project Manager, SS = Site Supervisor, PE = Project Engineer, OP = Operator, BM = Banks-Man, AP = All Personnel, Other – Please Specify
1.	Determining the work site hazard rating	Worker injury due to incorrect hazard rating and insufficient controls being identified	2	4	1. For the purpose of this exercise the risk matrix identified in table 1 (page 20) of Road Management Act 2004 Code of Practice will be utilized.	6	OHS Manger
				4	2. Victoria Road between Spadonis Reserve and Macintyre Lane will be classified as a Low Worksite Hazard Rating.		OHS Manger
				4	3. Victoria Road between Macintyre Lane and Maroondah Highway will be classified as a High Worksite Hazard Rating.		OHS Manger

Item No.	Break the job down into steps. Each step should accomplish some major task and be in a logical sequence	Identify the hazards associated with each step. Examine each to find possibilities that could lead to an incident	Assess the Risk 1 – 6	1-Elimination 2-Substitution 3-Isolate 4- Engineering 5- Admin/ Training 6- PPE	Specify what action/procedures will be taken to eliminate or minimise the hazards, the risk of injury/damage, and/or potential severity factors. Including the measure to be taken to ensure the proposed controls will be maintained.	Assess the Risk 1 – 6	Specify Person Responsible – PM = Project Manager, SS = Site Supervisor, PE = Project Engineer, OP = Operator, BM = Banks-Man, AP = All Personnel, Other – Please Specify
				4	4. Glenview Road will be classified as a Low Worksite Hazard Rating.	6	OHS Manager
2.	Arriving on site to conduct Traffic Management Duties.	Personal Injury due to being unfamiliar with site conditions	2	4	5. All personnel arriving on site to have completed a "White card" training course, Site Specific Induction and Safe Work Method Statement Training.	6	AP
3.	Disruption to businesses, residents, traffic flow etc.	Irate Residents	5	4	1. Liaise with Vic Roads and/or local council (as required) to determine traffic volumes and impact on surrounding areas	6	PE
				4	2. A drive through assessment of the work area will be conducted to determine site specific requirements.	6	PE
				4	3. Include special requirements for bus routes, traffic light sequence, pedestrian crossings etc	6	PE
4.	Preparation of Traffic Management Plans.	Traffic Incidents due to inappropriate TMP's. =	2	5	1. Plans to be prepared by personnel trained in designing and preparing TMP's	6	PM
5.	Impact on Community	Access roads / Driveways / Footpath impacts	4	5	2. Traffic Management Plans will be submitted to the Coordinating Road Authorities	6	PE
				5	3. The following will also be applied for prior to commencing work • Works Within Road Reserves Application and • Memorandum of Authorisation to Erect, Display,	6	PE

Item No.	Break the job down into steps. Each step should accomplish some major task and be in a logical sequence	Identify the hazards associated with each step. Examine each to find possibilities that could lead to an incident	Assess the Risk 1 – 6	1-Elimination 2-Substitution 3-Isolate 4- Engineering 5- Admin/ Training 6- PPE	Specify what action/procedures will be taken to eliminate or minimise the hazards, the risk of injury/damage, and/or potential severity factors. Including the measure to be taken to ensure the proposed controls will be maintained.	Assess the Risk 1 – 6	Specify Person Responsible – PM = Project Manager, SS = Site Supervisor, PE = Project Engineer, OP = Operator, BM = Banks-Man, AP = All Personnel, Other – Please Specify
					Place, Remove, or Alter Traffic Control Devices		
				5	4. Access to driveways and pedestrians will be maintained at all times.	6	PE
				5	5. Should access point for pedestrians be temporarily moved, the change will be clearly signed	6	PE
				5	6. If in proximity to shopping centers, churches etc, liaise with managers of centers to ensure staff and residents are notified of pending works and/or temporary disruption and delays.	6	PE
				1	7. Works will be conducted during school holidays in the vicinity of schools	6	PE
6.	Disruption of emergency services ie Police, fire brigade, ambulance	Access disrupted / impacted to residents and businesses.	2	5	1. Notify emergency services of pending works.	6	PE
				5	2. Address any issues raised by the emergency services.	6	PE
7.	Alterations to TMP	Personal Injury due to inappropriate TMP	2	5	1. Only trained personnel will make minor alterations to a TMP	6	PE
			2	5	2. Alterations to be approved by Site Supervisor prior to implementing.	6	PE
8.	Set up Traffic Control Signage	Personal Injury due to inappropriate TMP	2	5	1. Site Supervisor and Traffic Control Supervisor will review TMP and determine any additional requirements or minor alterations to TMP.	6	TRAFFIC CONTROLLER (TC)

Item No.	Break the job down into steps. Each step should accomplish some major task and be in a logical sequence	Identify the hazards associated with each step. Examine each to find possibilities that could lead to an incident	Assess the Risk 1 – 6	1-Elimination 2-Substitution 3-Isolate 4- Engineering 5- Admin/ Training 6- PPE	Specify what action/procedures will be taken to eliminate or minimise the hazards, the risk of injury/damage, and/or potential severity factors. Including the measure to be taken to ensure the proposed controls will be maintained.	Assess the Risk 1 – 6	Specify Person Responsible – PM = Project Manager, SS = Site Supervisor, PE = Project Engineer, OP = Operator, BM = Banks-Man, AP = All Personnel, Other – Please Specify
		Personnel run over by motor vehicle	2	5	1. Ensure that traffic control plans (TCP's) are submitted to Local council and relevant traffic authority.	6	TC
				4	2. Commence set up of first sign on extremity of the works so that tapers and merges are established to protect personnel	6	TC
				4	3. Ensure that vehicles establishing traffic control signage are fitted with amber flashing lights and electronic chevron and signs are erected in traffic flow direction.	6	TC
				5	4. Vehicle is to remain on the traffic approach side (10m or >) and to be used as protection from oncoming traffic.	6	TC
				5	5. Use trained competent personnel.	6	TC
				6	6. Unload signage from non-traffic side of vehicle.	6	TC
				5	7. All personnel to wear hi-vis clothing at all times.	6	TC
				5	8. Avoid carrying out the work in wet conditions	6	TC
		Manual handling injury whilst setting up traffic control signage	4	5	1. Minimise the distance to carry signs ensuring area is checked and cleared of trip hazards.	6	TC
				5	2. 2 people will lift the large signs	6	TC

Item No.	Break the job down into steps. Each step should accomplish some major task and be in a logical sequence	Identify the hazards associated with each step. Examine each to find possibilities that could lead to an incident	Assess the Risk 1 – 6	1-Elimination 2-Substitution 3-Isolate 4- Engineering 5- Admin/ Training 6- PPE	Specify what action/procedures will be taken to eliminate or minimise the hazards, the risk of injury/damage, and/or potential severity factors. Including the measure to be taken to ensure the proposed controls will be maintained.	Assess the Risk 1 – 6	Specify Person Responsible – PM = Project Manager, SS = Site Supervisor, PE = Project Engineer, OP = Operator, BM = Banks-Man, AP = All Personnel, Other – Please Specify
				5	3. Apply the following Manual Handling techniques when handling signs &sand bags. • Assess the task/load • area (size of load) • load. (weight of load) • Bend knees • Broad stable base • Back straight – but not necessarily vertical • Firm grip • Arms close to trunk • Weight close to centre of gravity • Point/pivot feet in direction of movement ***AND REMEMBER "LIFT WITH LEGS"***		TC
				5	4. Workers must take regular breaks from activities which may cause repetitive strain injuries.		TC
		Traffic accidents (General)	2	5	1. Carry out routine checks (1 every 3 hours) to ensure traffic control signs are being maintained as per the approved TCP.		TC
				5	2. Carry out formal weeklyy audits of the temporary traffic control arrangements	6	TC
				4	3. Trained personnel drive through site set up to ensure compliance to TCP & monitor traffic flow & impacts	6	TC
				5	4. Set up graduated taper.	6	TC

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9.	Installation of advance warning signs	Traffic hazard i.e. possible collision - vehicle collision - struck by passing vehicle - struck by item	2	4	1. Review TCP	6	TC
				4	2. Activate roof mounted warning lights	6	TC
				5	3. Set out signs in accordance with the Traffic Management Plan	6	TC
				5	4. Slow lane advance warning signs erected to give warning to motorist	6	TC
				5	5. Signs erected in same direction as flow of traffic	6	TC
				5	6. Signs to be unloaded from kerbside	6	TC
				5	7. Two TCs must be present	6	TC
				5	8. High speed roads may require a shadow, truck mounted attenuator. This vehicle must act as advance warning of crew erecting signage. Position vehicle and activate arrow board and warning lights to warn approaching traffic of signage crew.	6	TC
				5	9. Anything over 60km/h double the signs where possible	6	TC
				5	10. Traffic Management Plan to be in possession of traffic controllers at all times	6	TC

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				5	11. Conduct drive through and erect advance warning signage from opposing direction with the traffic flow	6	TC
				5	12. Conduct complete drive around and repeat sequence to erect fast lane signage for dual carriageway with the traffic flow	6	TC
				5	13. Extreme care is to be taken during the erection of advance warning signage. Ensure there is enough room for the signage vehicle to be parked on the shoulder or activate arrow-board.	6	TC
				5	14. Cover any conflicting signage throughout the work site	6	TC
				5	15. Crossing a road with 70 kmh speed limit or higher is strictly prohibited	6	TC
				5	16. Installation of Traffic Controller Ahead sign: In accordance with the Approved Traffic Control Plan	6	TC
		Signage positioning and security i.e. windy conditions, signage striking persons or vehicles	5	5	1. Advance warning signage to be positioned as per TCP	6	TC
				5	2. Sandbags must be used in windy conditions	6	TC
				5	3. Signage not to be positioned to obscure other items i.e. visibility from driveways etc	6	TC
				5	4. Signage not to be positioned as to be a hazard to workers, pedestrians or vehicles.	6	TC

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				5	5. Signage shall be erected clear of the vehicle travel path.	6	TC
				5	6. Signage and delineation to be checked periodically (Min 3 times per day)	6	TC
10.	Installation of taper	Traffic hazard i.e. possible collision - vehicle collision - struck by passing vehicle - struck by item	4	5	1. Activate roof mounted arrow-board to hazard lights for stop go operations	6	TC
				5	2. Position TC vehicle to warn approaching traffic of work area ahead	6	TC
				5	3. To commence stop go operations, TC to stop traffic on lane where work is to be completed. TC 2 to erect taper and delineate work area using appropriate traffic cones	6	TC
				5	4. TC vehicle may be positioned between TCs and approaching traffic to provide protection	6	TC
				5	5. To commence lane closure operations, TC vehicle to be positioned in the lane to be closed with the appropriate flashing arrow illuminated and directing traffic into the open lane	6	TC
				5	6. TC vehicle to be positioned prior to work area to provide protection to TC erecting taper and work area delineation.	6	TC
				5	7. TC vehicle to moved forward to maintain protection for TC erecting delineation of longer work area	6	TC
				5	8. Traffic cones with reflective sleeves to be utilised at all times	6	TC

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11.	Protection of workers, public and traffic controllers	Traffic hazard i.e. possible collision - vehicle collision - struck by passing vehicle - struck by item	4	5	1. Monitor traffic movement through the work site to ensure safe regulation of traffic and safety of personnel	6	TC
				5	2. Be mindful that travelling public and pedestrians may be confused by the works. Ensure your hand signals are clear and concise.	6	TC
				5	3. Ensure traffic travelling on the incorrect lane is directed back to the correct travel lane on leaving the work area.	6	TC
				5	4. TC vehicle with warning lights or arrowboard activated to be positioned as per TCP from end of taper to provide a buffer zone and protection for workers and TCs	6	TC
				5	5. Standing in the taper area is prohibited	6	TC
				5	6. Always be aware of your surroundings and location of traffic. Always look before stepping onto the road.	6	TC
		Poor Visibility i.e. low light, wet weather	4	5	1. Ensure high visibility reflective clothing is worn at all times	6	TC
				5	2. Allow time and room for vehicles in low light and wet weather to observe traffic controllers and directions i.e. increased braking distances	6	TC
				5	3. Use of reflective red wands and reflective overalls will be required during times of poor visibility	6	TC
				5	4. Special lighting such as day makers are advise for night works or low light conditions.	6	TC

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12.	Placing Jersey Kerbs to Protect Worksite	Traffic accident caused by delivery trucks waiting to or entering site.	2	5	1. Ensure temporary traffic control arrangements are in place and in accordance with TCP.	6	TC
				5	2. Use stop/slow signs as necessary to stop or slow the traffic.	6	TC
				5	3. Ensure that the delivery truck does not block or impede the traffic line whilst waiting to be unloaded.	6	TC
		Personnel being struck by motor vehicle whilst unloading or placing jersey kerbs	2	5	1. Implement appropriate TCP for stop / slow and / or Lane closure and pedestrian control.	6	TC
				5	2. Always stop the traffic at the front of the truck.	6	TC
				5	3. Personnel are to wear hi-vis clothing at all times.	6	TC
				5	4. Work from traffic free side whenever possible.	6	TC
				5	5. Reversing trucks to be guided back.	6	TC
		Travelling public, persons or vehicles, being struck by jersey kerbs or crane when placing in position	2	5	1. Implement appropriate TCP for stop / slow and / or lane closure and pedestrian control to maintain clear area for work.	6	TC
				5	2. Use ticketed and experienced crane operator and dogman.	6	TC
				5	3. Dogman to control load at all times.	6	TC

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		Personnel being struck / crushed by jersey kerbs whilst unloading / positioning	2	5	1. Employees to stand clear of jersey kerbs once prepared for lifting and truck during unloading.	6	TC
				5	2. Employees to keep body parts clear of crush points when placing jersey kerbs.	6	TC
		Hiab or crane roll-over whilst unloading jersey kerbs	2	5	▪ Hiab / Crane operators are to ensure that the crane is set-up in accordance with operators manual.	6	TC
				5	▪ Hiab / Crane operators are to ensure the lift is within the parameters of the crane. De-rate lift capacity where work is not on level surface – refer to operator's manual as necessary. Prepare lift study for difficult conditions.	6	TC
				5	▪ Dogman to control the load at all times.	6	TC
				5	▪ Do not stand closer than required.	6	TC
		Employee crushed by falling jersey kerbs because of lifting device / point failing	2	5	1. Use correct lifting devices.	6	TC
				5	2. Only use correctly tagged lifting gear and inspect prior to commencing lift.	6	TC
				5	3. Check all lift pins in jersey kerbs for damage (pull out) sling as mass load where lift point is suspect.	6	TC
				5	4. All personnel to stand clear of load during lifting.	6	TC

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13.	Removal of Jersey Kerbs	Personnel being struck by motor vehicles whilst removing jersey kerbs	2	5	1. Ensure temporary traffic control arrangements are in place and in accordance with TCP.	6	TC
				5	2. Use ticketed flagmen as necessary to slow / stop traffic.	6	TC
				5	3. Employees to work behind the previous jersey kerb to provide protection (remove towards the traffic working in an upstream direction).	6	TC
				5	4. Personnel are to wear hi-vis clothing at all time.	6	TC
				5	5. Trucks and cranes to be fitted with motion alarms.	6	TC
		Travelling public, persons or vehicles, being struck by jersey kerbs or crane during removal	2	5	1. Lane closure to be used to provide clear work area and where trucks cannot be positioned behind the jersey kerbs.	6	TC
				5	2. Use ticketed and experienced crane operator and dogman.	6	TC
				5	3. Dogman to control jersey kerbs during lift.	6	TC
		Personnel being struck / crushed by jersey kerbs whilst lifting / loading onto trucks	2	5	1. Employees to keep body parts clear of crush points when lifting and placing jersey kerbs from position and on to truck.	6	TC
				5	2. Employees not to position themselves between the truck and the jersey kerb being unloaded.	6	TC
		Hiab or crane roll-over whilst loading jersey kerbs	2	5	1. Hiab / Crane operators are to ensure that the lift is within the parameters of the crane.	6	TC

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				5	2. De-rate lift capacity where work is not on level surface – refer to operator's manual as necessary.	6	TC
		Employee crushed by falling jersey kerbs because of lifting device / point failing when loading onto the truck		5	1. Use correct lifting devices.	6	TC
				5	2. Only use correctly tagged lifting gear and inspect prior to commencing lift.	6	TC
				5	3. Check all lift pins in jersey kerbs for damage (pull out) sling as mass load where lift point is suspect.	6	TC
		Traffic accident caused by trucks exiting site		5	1. Ensure TCP and temporary traffic control arrangements are in place.	6	TC
				5	2. Use flagmen as necessary to slow / stop traffic.	6	TC
		Person being run over by trucks reversing into position or existing site		5	1. All trucks are to be fitted with reversing alarms.	6	TC
				5	2. Ensure TCP and temporary traffic control arrangements are in place.	6	TC
				5	3. Use flagmen as necessary to slow / stop traffic Personnel are to wear hi-vis clothing at all times.	6	TC
14.	Controlling traffic	Vehicle collision or struck by passing vehicle		5	1. Traffic Controllers to be competent.	6	TC
				5	2. TC only to operate where maximum speed is **60 km/h**	6	TC

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				5	3. Positioning of traffic control to consider visibility, distance, geographical features	6	TC
				5	4. TC must always have a clear escape path to the shoulder, footpath etc.	6	TC
				5	5. Always face the traffic. Never turn your back to approaching traffic.	6	TC
				5	6. Give approaching vehicles enough distance to stop safely	6	TC
				5	7. Use clear and definite signals (bat and hand signals)	6	TC
				5	8. **Stand outside the projected travel path of vehicles**	6	TC
				5	9. Be aware of traffic movements – LOOK BEFORE MOVING – BE ALERT	6	TC
		Traffic control situations		5	1. Long queue lengths require additional advance warning signage	6	TC
				5	2. Check if alternative routes are available and satisfactory for the small and heavy vehicles	6	TC
				5	3. Inform in advance the proposed works by letter drops or VMS boards	6	TC
				5	4. Always remain calm when talking to an upset driver	6	TC

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				5	5. Where threaten speak politely, apologize for the delay	6	TC
				5	6. Take the vehicles number plate down and report it to the supervisor	6	TC
				5	7. Seek police assistance for difficult work site	6	TC
				5	**Stopping Traffic:** 1. Turn bat to STOP and raise the free hand into stop signal with palm facing the traffic	6	TC
				5	2. Ensure you stand outside the projected travel path of the vehicles	6	TC
				5	3. Allow 2-3 vehicles to stop before moving in front of stationary lane of traffic (avoid stopping large vehicles at the front of the queue)	6	TC
				5	4. Keep facing stationary vehicles	6	TC
				5	5. Move position so you are clearly visible to approaching traffic eg 10 metres in front of stationary lane of traffic in line with drivers side headlight. Ensure your clear escape path is available	6	TC
				5	6. When conducting stop slow operations - Turn side on to stationary lane of traffic to allow you to view stationary lane and traffic approaching from the opposite direction	6	TC
				5	7. Ensure STOP sign is facing the stationary traffic	6	TC

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				5	8. DO NOT PUT YOURSELF IN AN UNSAFE POSITION	6	TC
				5	**Allowing Traffic To Proceed:** 1. Wait until all traffic from the opposite direction is clear of the work site.	6	TC
				5	2. Check the work site and traffic lane are completely clear of vehicles, mobile plant, workers, pedestrians etc – USE YOUR EYES	6	TC
				5	3. Confirm (by radio) with your TC partner that the work site and traffic lanes are clear and it is safe to send traffic i.e. “Am I clear to send traffic?”	6	TC
				5	4. Move to side of the road or shoulder and stand clear of traffic	6	TC
				5	5. Turn side on to traffic, turn your bat to SLOW and use your free hand to give the GO hand signal	6	TC
				5	**Slowing Traffic:** 1. Stand on the side of the road or shoulder – outside the projected travel path	6	TC
				5	2. SLOW sign facing the traffic	6	TC
				5	**3.** Extend your free arm and wave it up and down but not above shoulder height	6	TC
				5	**Detouring Traffic:** 1. Stand on the side of the road or shoulder – outside the projected travel path	6	TC

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				5	2. SLOW sign facing the traffic	6	TC
				5	3. Extend your free arm and give the GO hand signal and indicate the intended direction of travel	6	TC
				5	**Multiple Lanes of Traffic:** 1. Generally, traffic controllers are only to control one lane of traffic at any given time	6	TC
				5	4. Multiple traffic lanes require one traffic controller for each lane	6	TC
				5	5. One traffic controller can stop two lanes travelling in the same direction on a divided road however this is not recommended and is only to be conducted after a specific on site risk assessment and consultation with the work supervisor	6	TC
		Motor bikes and or bicycles at work sites		5	1. Where a traffic controller is on duty cyclists can share the available road space through the work site	6	TC
				5	2. Less than 3000 vehicles cyclists can share the road space with other motorist	6	TC
				5	3. Where there is no traffic controller cyclists must be separated from vehicles.	6	TC
				5	4. Cyclists must have a least 1.2m wide of a one way flow and 2.0m wide for two way flow	6	TC
				5	5. Using clear and correct signage for bicycles	6	TC

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				5	6. Separate motorist and cyclists with either concrete barriers or A frames	6	TC
				5	7. Where re-surfacing roads motor bikes and cyclists must be warned with the display of **CYCLE HAZARD GROOVED ROAD** sign on all approaches.	6	TC
8.	On-site safety	Personal injury due to being struck by mobile plant and machinery		5	1. Keep 5 metres from all mobile plant and machinery in case it moves or reverses unexpectedly – maintain eye contact or radio contact prior to entering work area	6	TC
				5	2. Keep out of radius of swinging parts of all mobile plant and machinery eg excavator booms	6	TC
				5	3. Always ensure the operator can see you. Keep eye contact.	6	TC
				5	4. UHF radio communications to be utilised to communicate between controllers, plant operators and works personnel	6	TC
9.	Radio Procedures	Confusion leading to unsafe situations or collisions		5	1. All personnel to be trained	6	TC
				5	2. Ensure your communications over the radio are clear and concise.	6	TC
				5	3. Always check the safety of the work area before sending traffic or stating it is clear to send traffic	6	TC
				5	4. Always ask your partner is it clear to send traffic	6	TC
				5	5. Ensure radios are fully charged prior to commencing.	6	TC

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10.	Removal of taper and advance warning signage	Traffic hazard i.e. possible collision - vehicle collision - struck by passing vehicle - struck by item		5	1. Traffic guidance system is to be removed in the reverse order to erection i.e. remove cones of work area, remove taper, remove fast lane signage and finally remove slow lane signage	6	TC
				5	2. TC vehicle is to be positioned to provide protection to TCs removing equipment i.e. always position vehicle between TCs and approaching traffic	6	TC
				5	3. Vehicle mounted warning lights to be activated during removal of temporary traffic guidance scheme	6	TC
					4. Remove all traffic control signage	6	TC
					5. A final drive through will be conducted to ensure all signs have been removed and the site is safe and secure.	6	TC Supervisor/SS
11.	Vehicles speeding	Collision resulting in injury to traffic controller or sire personnel	2	4	1. Variable message boards will be utilized advising approaching vehicles of upcoming works	6	Site Supervisor
				5	2. Variable message boards used will also advise approaching vehicles of their approach speed.	6	Site Supervisor
				5	3. Notify police of speeding vehicles.	6	Site Supervisor
12.	Set-up Trailer Mounted Arrow Board/Variable Message Boards	Damage to personnel / equipment by out of control trailer	4	5	1. Locate trailer as per TMP requirements.	6	TC

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				5	2. Ensure wheel stops are used when disconnecting trailer from towing vehicle and maintain control at all times during release.	6	TC
				5	3. Ensure stabilizing legs are fully engaged and secured prior to leaving unattended. Secure trailer to fixed object if possible.	6	TC
				5	4. Chock all wheels	6	TC
				5	5. Flashing warning lights to be activated during activities coupling/uncoupling	6	TC
13.	Personal Protective Equipment	Traffic hazard i.e. possible collision - vehicle collision - struck by passing vehicle - struck by item	2	5	1. High Visibility Clothing and appropriate headwear to be worn at all times on site. Eye Protection to be worn subject to a specific onsite risk assessment.	6	TC
				5	2. High Visibility Traffic Control Vest to be worn at all times whilst control or monitoring traffic.	6	TC
				5	3. Night works & low light conditions – in addition to above reflective overalls will be worn and red wands to be used in conjunction with stop slow bat.	6	TC
14.	Personal Health and Well Being	Dehydration		5	1. TCs to drink water regularly during shift to ensure an acceptable hydration level	6	TC
		Sunburn		5	1. Sunscreen to be worn by all personnel and applied every 2 hours.	6	TC

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				5	2. Long sleeve shirt, long trousers and hat with wide brim or hard hat to be worn at all times	6	TC
		Trips, slips and falls		5	1. TCs to ensure secure footing when moving about the worksite	6	TC
		Manual Handling	2	5	2. 2 Man lifts to be used for loads greater than 20kg. Assess the task/load - area (size of load) - Load. (weight of load) Bend knees Broad stable base Back straight – but not necessarily vertical Firm palmar grip Arms close to trunk Weight close to centre of gravity Point/pivot feet in direction of movement ***AND REMEMBER*** ***"LIFT WITH LEGS"*** • Mechanical handling equipment must be used wherever possible to eliminate the risk of manual handling injuries. (Use of hyab) • Keep access and work areas free from slip, trip and fall hazards. • Workers must take regular breaks from activities which may cause repetitive strain injuries. • Personnel when handling sharp, jagged materials must wear gloves. • All persons involved in the manual handling must wear steel top-capped boots.	6	TC
		Fatigue	3	5	1. Rest pauses and meal breaks to be co-ordinated and rotated.	6	TC

Item No.	Break the job down into steps. Each step should accomplish some major task and be in a logical sequence	Identify the hazards associated with each step. Examine each to find possibilities that could lead to an incident	Assess the Risk 1 – 6	1-Elimination 2-Substitution 3-Isolate 4- Engineering 5- Admin/ Training 6- PPE	Specify what action/procedures will be taken to eliminate or minimise the hazards, the risk of injury/damage, and/or potential severity factors. Including the measure to be taken to ensure the proposed controls will be maintained.	Assess the Risk 1 – 6	Specify Person Responsible – PM = Project Manager, SS = Site Supervisor, PE = Project Engineer, OP = Operator, BM = Banks-Man, AP = All Personnel, Other – Please Specify
				5	2. Sufficient traffic control will be available to allow for task rotation, meal breaks etc	6	SS
		Noise		5	1. Positions should be rotated to negate lengthy exposure to excessive noise. Hearing protection is not a desirable control measure for TCs.	6	TC
15.	Incident Management	Traffic hazard i.e. possible collision - vehicle collision - struck by passing vehicle - struck by item		5	1. TCs to maintain positioning and direct traffic to avoid the incident and maintain access for emergency vehicles	6	TC
				5	2. TCs to assist incident if practical and no further hazards or danger exists	6	TC
			2	5	3. TC to notify work supervisor of the incident ASAP	6	TC
				5	2. TC to notify any emergency services if required	6	TC

5 Reference Documents

State Acts	OH&S Act 2004;	☑	**State Codes of Practice Relating to First Aid**	First Aid in the Workplace	☑	**National Standards Relating to Asbestos**	National Occupational Health and Safety Commission "code of Practice for the Safe Removal of Asbestos 2nd Edition [NOHSC:2002 (2005)] April 2005	☑
State Legislation	OH&S Regulation 2007	☑						
State Codes of Practice Relating to Amenities	Workplace Amenities & Work Environment	☑	**State Codes of Practice Relating to Confined Spaces**	Confined Spaces	☑	**Australian Standards Relating to Confined Spaces**	AS 2865-2009 Confined Spaces	☑
State Codes of Practice Relating to Trenches	Safety Precautions in Trench Operations	☑	**State Codes of Practice Relating to Manual Handling**	Manual Handling	☑	**Australian Standards Relating to Electrical Equipment**	AS/NZS 3017 Electrical installations – Testing and inspection guidelines	☑
							AS/NZS 3000 – Wiring Rules	☑
State Codes of Practice Relating to Building	Building & Construction Workplace	☑	**State Codes of Practice Relating to Fall**	Prevention of Falls in General Construction	☑		AS 3760 In-service safety inspection and testing of electrical equipment	☑
			State Codes of Practice Relating to Traffic	Worksite Safety – Traffic Management	☑		AS/NZS 3199 – Cord Extension Sets	☑
State Codes of Practice Relating to Plant	Plant	☑	**State Acts Relating to Traffic**	Road Management Act 2004	☑	**Australian Standards Relating to Hazardous Substances & Dangerous Goods**	AS1940 The Storage & Handling of Flammable & Combustible Liquids.	☑
	Plant (Amendment No.1)	☑	**State Guides Relating to Traffic**	A Guide to Working in Road Reserves	☑			
State Codes of Practice Relating to Asbestos	Managing Asbestos in Workplaces	☑	**State Guides Relating to Traffic**	Companion to A Guide to Working in Road Reserves	☑		AS1596 The Storage and handling of LP Gas.	☑
	Removing Asbestos in Workplace	☑					AS3780 The storage and handling of corrosive substances	☑
							AS4332 Storage and handling of gas in cylinders	☑

Australian Standards Relating to Mechanical Lifting	AS 2550:5 - Cranes Hoists & Winches – Safe Use – Mobile Cranes	☑	**Australian Standards Relating to Personal Protective Equipment**	AS/NZS 1801 – Occupational protective helmets	☑	Australian Standards Relating to Personal Protective Equipment	AS/NZS 2161 – Occupational protective gloves	☑
	AS 1418.8 - Cranes Hoists & Winches – Special Purpose Appliances	☑		AS/NZS 1337 – Eye protectors for industrial applications	☑	Australian Standards Relating to Site Security & Project Signage	AS1319 – Safety signs for the occupational environment	☑
	AS 1418:5 - Cranes, Hoists & Winches – Mobile Cranes	☑		AS/NZS 1269.3: – Occupational noise management – Hearing protector program	☑	Australian Standards Relating to Underground Services	AS 4799 Installation of underground utility services and pipelines	☑
	ISO/TR 19961 - Cranes – Safety Code on Mobile Cranes	☑		AS/NZS 2604 – Sunscreen products	☑	Other Standards	The Building Code of Australia	☑
	AS3775.2 - Chain Slings	☑		AS1067.2 – Sunglasses and fashion spectacles	☑			☐
	AS1666.2 - Wire ropes	☑		AS/NZS 1336 – Recommended practices for occupational eye protection	☑	Other Standards		☐
	AS4497.1 - Synthetic Slings	☑		AS/NZS 1337 – Eye protectors for industrial applications	☑			☐
	AS4991-2004 - Lifting Jigs & Gripping Devices	☑		AS/NZS 1338.2 – Filters for eye protectors	☑			☐
	AS2741 - Shackles	☑		AS/NZS 4602 – High visibility safety garments	☑			☐
Australian Standards Relating to Management Systems	AS/NZ 4804: Occupational Health & Safety Management Systems	☑		AS 3795 – Clothing for protection against hazardous chemicals	☑			☐
	AS/NZS ISO 9001: Quality Management Systems	☑		AS/NZS 1716 – Respiratory protective devices	☑			☐
	AS/NZ ISO 14001: Environmental Management Systems	☑		AS/NZS 1715 – Selection, use and maintenance of respiratory protective devices	☑			☐

6 Consultation & Communication

CONSULTATION AND COMMUNICATION PROCESS:

a) Additional comments raised by Diona personnel during the consultation and communication process will be recorded in the following section.
b) These comments will then be added to the Safe Work method Statements and a subsequent revision will be prepare

Item No.	Break the job down into steps. Each step should accomplish some major task and be in a logical sequence	Identify the hazards associated with each step. Examine each to find possibilities that could lead to an incident	Assess the Risk 1 – 6	1-Elimination 2-Substitution 3-Engineering 4-Admin/ Training 5-PPE	Specify what action/procedures will be taken to eliminate or minimise the hazards, the risk of injury/damage, and/or potential severity factors. Including the measure to be taken to ensure the proposed controls will be maintained.	Assess the Risk 1 – 6	Specify Person Responsible – PM = Project Manager, SS = Site Supervisor, PE = Project Engineer, OP = Operator, BM = Banks-Man, AP = All Personnel, Other – Please Specify
					1.	6	
					1.	6	
					1.	6	
					2.		
					3.		
					4.		
					5.		

7 Sign Off Record

SAFE WORK METHOD STATEMENT – CONSULTATION/REVIEW AND SIGN OFF RECORD					
Name (Print)	**Signature**	**Date**	**Name (Print)**	**Signature**	**Date**
1.			**16.**		
2.			**17.**		
3.			**18.**		
4.			**19.**		
5.			**20.**		
6.			**21.**		
7.			**22.**		
8.			**23.**		
9.			**24.**		
10.			**25.**		
11.			**26.**		
12.			**27.**		
13.			**28.**		
14.			**29.**		
15.			**30.**		

NAME OF PERSON RESPONSIBLE FOR TRAINING PERSONNEL IN SAFE WORK METHOD STATEMENT					
NAME:	**POSITION:**	**SIGNATURE:**	**NAME:**	**POSITION:**	**SIGNATURE:**

1.			**2.**		
3.			**4.**		

8 Revision History

Rev	Date	Description of Change	Approved
A	20/04/11	Initial Issue	S.H
0	29/06/11	With Comments amended – For Construction	JOC

10.0 Appendix C – Traffic Management Procedure

Diona Pty Ltd
Unit 5, 322 Annangrove Road
Rouse Hill NSW 2155
ABN 48 001 904 258
Tel.: 02 9679 2111

Procedure

Traffic Management (VIC)

Document. No.: 14-2-021
Document Revision.: 0.0
Revision Date: 26/05/2011

Approvals

	Name	Title	Signature	Date*
Prepared by:	Seamus Hickey	OHS Manager		26/05/2011
Approved by:	David O' Connor	General Manager		

* The date shown is when the document was originally issued. For revision history refer to the last page.

Table of Contents

1.0 Purpose

The purpose of this Traffic Management Procedure is to outline all aspects of traffic control procedures required on road works.

2.0 Scope

This procedure will operate and be enforced with all Diona personnel, workplaces and specific projects sites within Victoria:

3.0 References

1. AS 1742.3: Manual of Uniform Traffic Control Devices – Traffic Control for Works on Roads.
2. Road Management Act 2004

4.0 Definitions

Vic Roads – Roads & Traffic Authority http://www.vicroads.vic.gov.au/Home/

Coordinating Road Authorities – Vic Roads, Local Councils, Parks Victoria, Department of Sustainability and Environment.

Works Within Road Reserves Application - allows the proponent to use a specified road space at approved times, provided certain conditions are met.
http://www.vicroads.vic.gov.au/NR/rdonlyres/E32809A0-EAEE-409A-A020-981F385E6B6F/0/WorksWithinRoadReserveForm20091311.xls

Memorandum of Authorisation to Erect, Display, Place, Remove, or Alter Traffic Control Devices – Application to Vic Roads to seek authorisation to erect, display, place, remove, or alter traffic control devices

TMP – Traffic Management Plan - is a document that shows how traffic is to be safely separated from workers at the work site or work route. It is intended as an instruction from the works supervisors to the site crews and is usually in the form of a diagram showing the road conditions (lanes, signs etc.) and how the traffic is to be managed around the site / activities (temporary signs, posting of traffic control staff, etc.)

5.0 Exclusions

There are no exclusions from this procedure.

6.0 Responsibilities

Project Manager – it is the responsibility of the Project Manager to ensure that resources are made available to allow for the successful compliance with this procedure.

Employees – are responsible for complying with the requirements outlined in this procedure.

Contractors/Subcontractors – are responsible for complying with the requirements outlined in this procedure.

Occupation Health & Safety Manager – is responsible for preparing, auditing this procedure.

Occupation Health, Safety & Environmental Coordinator – are responsible for preparing, auditing this procedure.

7.0 Procedure

7.1 Risk Identification & Assessment

Prior to any project commencing a Risk Assessment will be conducted to determine what the risks, hazards and controls to be implemented are. (See **Risk Identification and Assessment Procedure 4.3.1**)

7.2 Road Classifications

Road Type (Classification)		Coordinating Road Authorities responsible for Licensing
1.	Freeway	Vic Roads
2.	Arterial Roads (State roads)	Vic Roads
3.	Sub –arterial roads, collector and distributor roads (Regional roads)	Vic Roads
4.	Secondary Road or Rural Arterial “A” & “B” Road.	Local Councils
5.	Collector Roads or Rural Arterial “C” Road	Local Councils
6.	Local roads (Unclassified)	Local Councils
7.	Non Arterial State Roads eg Roads in National Parks	Parks Victoria, Department of Sustainability and Environment.

7.3 Traffic Management Plans

A Traffic Management Plan (TMP) will be prepared for all work areas where vehicles and pedestrians may be affected by Dionas work activities including foot-paths.

A TMP integrates an activity into the operation of the road network. The plan assesses an activity’s impact on traffic flow. It describes the activities being proposed, their impact on the general area (including public transport passengers, cyclists, pedestrians, motorists and commercial operations), and how these impacts are being addressed.

The TMP Should Include Technical details of the work involved and also include the following;

- A work Diagram showing exactly where the work is being performed, and vehicle movements around the work site. Be sure to identify the following aspects
- One Way Streets,
- Number of Lanes affected and total number of lanes,
- the exact location and speed limit of ALL speed limit signs at or in a work site

- Traffic signals,
- Turning lanes,
- Location of Skip Bins,
- Any other information resulting from a physical survey of the location
- A section for the site supervisor and/or traffic control supervisor to approve the TMP.

If applicable, the TMP must describe and / or make provisions for:

- Any construction, existing or proposed, that might conflict with this occupancy
- Any restricted movements, banned turns, heavy / high vehicle routes
- Any traffic calming devices
- Whether the occupancy affects tidal traffic flows (am / pm peaks)
- Any impacts on public transport, local residents & businesses, shopping centres, churches, industrial areas, parking stations, public facilities (eg. Football oval) schools, hospitals, etc.
- Access of emergency vehicles, heavy vehicles, cyclists and pedestrians. Any special arrangements should be made by the proponent in conjunction with the affected agency and described in detail. They must be endorsed by the affected agency (fire brigade, ambulance, etc.).
- In the event of an emergency you may be ordered to cease works and restore the road to trafficable condition. The amount of time it would take to do this should be considered and communicated in the TMP.
- Whether proposed traffic movement is contrary to any notice
- Heavy traffic congestions resulting in increased travel times. Detours may alleviate congestion and include special purpose strategic signage (eg: variable message signs).
- Whether the use of variable message signs (VMS) is required (portable or permanent VMS).
- Whether it is necessary to advertise traffic management arrangements in local newspapers / media. Where an occupancy disrupts access to local businesses and residents, the proponent must carry out a letter box drop to inform the local / affected community about changes to normal traffic conditions and possible disruptions.
- Detour routes,
- Details of the public consultation process (how the community is to be advised of your activities) and copies of proposed advertisements,
- Required changes to speed zones signs must submit an application for Speed Zone Authorisation form
- Required changes to traffic signal operation. The Relevant Authority may need to adjust traffic signals to accommodate the occupancy.
- Parking or stopping restrictions
- Effects on facilities for the duration of the occupancy or after occupancy is finished, eg: disabling traffic sensors.
- If the project is to be done in stages, include a full description of the work being performed at each stage, as well as their proposed times. Example: Project description is “water main installation”, but the project may have various stages such as:
  a) excavation in northbound lanes – (proposed times)
  b) excavation southbound lanes – (proposed times), etc.
- Plans for possible issues / risks that may interfere with road occupancy
- Additional Police Requirements.

7.4 Preparing for contingencies in a TMP

If after completing a TMP, other risks are identified the TMP or Safe Work Method Statement must also include how these risks will be addressed.

7.5 Training for Developing a TMP

Only persons with relevant training are to develop, approve, review and/or make modifications to Traffic Management Plans eg RIICC503A – Prepare Workzone Traffic Management Plans, or equivalent.

All personnel developing, approving, reviewing and/or make modifications to Traffic Management Plans should attend an appropriate refresher training course every 3 years.

7.6 Compliance with TMP and Approvals

A Traffic Control Plan will comply with AS 1742.3, Road Management Act 2004 and also comply with other relevant Acts & Regulation of Victoria.

The Traffic Management Plan must be verified by a person who has completed the required training listed in 7.5. The person submitting the TMP must provide their certificate number.

A Traffic Management Plan will be submitted to the relevant Coordinating Road Authorities.

7.7 Factors to Consider when Lodging Applications

The following factors will be considered when a Project Manager/Project Engineer is lodging the following;

1. Memorandum of Authorisation to Erect, Display, Place, Remove, or Alter Traffic Control Devices;
2. Works in the Road Reserve.

The factors to consider are

- Factor in at least 20 days for processing by Vic Roads of your completed Memorandum of Authorisation to Erect, Display, Place, Remove, or Alter Traffic Control Devices and Consent for Works in the Road Reserve in conjunction with your Traffic Management Plans.
- Factor in at least 20 days for processing by Vic Roads of your completed Consent for Works in the Road Reserve in conjunction with your Traffic Management Plans.
- Factor in at least seven days for processing by Local Council of your completed Consent for Works in the Road Reserve in conjunction with your Traffic Management Plans.
- Complete applications in full, including all mandatory attachments such as Traffic Management Plans etc.
- Allow sufficient time to liaise with Police, Local Authorities and Emergency Services after the permit has been provided (if applicable)
- Discuss any questions you have with the relevant Coordinating Road Authorities.

7.8 Factors to Consider When Completing Works

Upon completion of works (including reinstatement) the Project Manager/Engineer must, within 7 days, notify the relevant Coordinating Authority that the works have been completed.

7.9 Notification of Critical Services

The following Critical Services will be notified;

- Police – Local Area Command (LAC)
- Local Fire Stations
- Ambulance Service
- Local Council
- Local & State Bus Authorities
- Other Relevant Authority.

These Critical Services will be notified using the Form 4.4.6 – 1500 F? Stakeholders Notification:

In addition to the Form 4.4.6 – 1500 F? Stakeholders Notification the following information will be supplied to the LAC

- Additional Information including Lane Closures, Detours, etc.
- TMP's
- Public Liability Certificates of Currency;

8.0 Traffic Controllers Training

Only competent personnel with state based road authority accreditation will be engaged to implement Traffic Management Plans and control traffic and pedestrians.

8.1 Traffic Control Training Courses

There are 2 training courses/qualifications available relating to the provision of traffic control at worksites; as a minimum personnel involved with traffic control sites will have one or a combination of the following training;

- Traffic Control - VBQU506 – Use Stop/Slow Bat to control Traffic, or equivalent.
  This qualification allows the holder to act as a traffic controller.
- Traffic Guidance Schemes – VBQU507 – Implement & Monitor Operational Traffic Management Plans.
  This qualification allows the holder to set out, implement, monitor, and/or make minor modifications to a traffic guidance scheme as required by a traffic management plan.

  All personnel involved in Traffic Control & Traffic Guidance Schemes should attend an appropriate refresher training course every 3 years.

9.0 Records

Personnel involved with Traffic Control will ensure that they carry evidence of their qualifications with them at all times.

Traffic Management Plans, Memorandum of Authorisation to Erect, Display, Place, Remove, or Alter Traffic Control Devices, Works in the Road Reserve be maintained on site at all times.

A copy of these permits will be available with the Site Supervisor and the Traffic Control Supervisor. (2 copies will be maintained on the one site)

Once the Project has been completed the Traffic Management Plans, of Authorisation to Erect, Display, Place, Remove, or Alter Traffic Control Devices, Works in the Road Reserve will be maintained in a project folder at the relevant office.

10.0 Coordinating Road Authority Contact List

Road Authority Email Contact List

Local Government	
Council	**Email Address**
1. Alpine	enquiries@alpineshire.vic.gov.au
2. Ararat	council@ararat.vic.gov.au
3. Ballarat	ballcity@ballarat.vic.gov.au
4. Banyule	roadconsent@banyule.vic.gov.au
5. Bass Coast	wondepot@basscoast.vic.gov.au
6. Baw Baw	works@bawbawshire.vic.gov.au
7. Bayside	engineeringsupport@bayside.vic.gov.au
8. Benalla	council@benalla.vic.gov.au
9. Bendigo	consent@bendigo.vic.gov.au
10. Boroondara	Works.Permits@boroondara.vic.gov.au
11. Brimbank	info@brimbank.vic.gov.au
12. Buloke	buloke@buloke.vic.gov.au
13. Campaspe	shire@campaspe.vic.gov.au
14. Cardinia	roads@cardinia.vic.gov.au
15. Casey	caseycc@casey.vic.gov.au
16. Central Goldfields	mail@cgoldshire.vic.gov.au
17. Colac Otway	inq@colacotway.vic.gov.au
18. Corangamite	shire@corangamite.vic.gov.au
19. Dandenong	council@cgd.vic.gov.au
20. Darebin	mailbox@darebin.vic.gov.au
21. East Gippsland	feedback@egipps.vic.gov.au
22. Frankston	RMA@frankston.vic.gov.au
23. Gannawarra	council@gannawarra.vic.gov.au
24. Geelong	COGGRecords@geelongcity.vic.gov.au
25. Glen Eira	mail@gleneira.vic.gov.au
26. Glenelg	enquiry@glenelg.vic.gov.au
27. Golden Plains	enquiries@gplains.vic.gov.au
28. Hepburn	shire@hepburn.vic.gov.au
29. Hindmarsh	info@hindmarsh.vic.gov.au
30. Hobsons Bay	customerservice@hobsonsbay.vic.gov.au
31. Horsham	council@hrcc.vic.gov.au
32. Hume	email@hume.vic.gov.au
33. Indigo	indigoshire@indigoshire.vic.gov.au

Local Government	
Council	**Email Address**
34. Kingston	utility.liaison@kingston.vic.gov.au
35. Knox	knoxcc@knox.vic.gov.au
36. Latrobe	latrobe@latrobe.vic.gov.au
37. Loddon	Loddon@loddon.vic.gov.au
38. Macedon Ranges	mrsc@macedon-ranges.vic.gov.au
39. Manningham	Manningham@manningham.vic.gov.au
40. Mansfield	council@mansfield.vic.gov.au
41. Maribyrnong	utilities@maribyrnong.vic.gov.au
42. Maroondah	maroondah@maroondah.vic.gov.au
43. Melbourne	engineering@melbourne.vic.gov.au
44. Melton	csu@melton.vic.gov.au
45. Mildura	consent@mildura.vic.gov.au
46. Mitchell	mitchell@mitchellshire.vic.gov.au
47. Moira	webmaster@moira.vic.gov.au
48. Monash	works.consent@monash.vic.gov.au
49. Moonee Valley	rmaconsent@mvcc.vic.gov.au
50. Moorabool	info@moorabool.vic.gov.au
51. Moreland	Info@moreland.vic.gov.au
52. Mornington Peninsula	works.consent@mornpen.vic.gov.au
53. Mount Alexander	mtalex@mountalexander.vic.gov.au
54. Moyne	Moyne@moyne.vic.gov.au
55. Murrindindi	msc@murrindindi.vic.gov.au
56. Nillumbik	notifications@nillumbik.vic.gov.au
57. Nth Grampians	ngshire@ngshire.vic.gov.au
58. Port Phillip	assist@portphillip.vic.gov.au
59. Pyrenees	Pyrenees@pyrenees.vic.gov.au
60. Queenscliffe	info@queenscliffe.vic.gov.au
61. Shepparton	council@shepparton.vic.gov.au
62. Sth Gippsland	council@southgippsland.vic.gov.au
63. Sth Grampians	notifications@sthgrampians.vic.gov.au
64. Stonnington	utilities.consent@stonnington.vic.gov.au
65. Strathbogie	info@strathbogie.vic.gov.au
66. Surf Coast	info@surfcoast.vic.gov.au
67. Swan Hill	road_consent@swanhill.vic.gov.au
68. Towong	staff@towong.vic.gov.au
69. Wangaratta	council@wangaratta.vic.gov.au
70. Warrnambool	Wbool_city@warrnambool.vic.gov.au

Local Government	
Council	**Email Address**
71. Wellington	*enquiries@wellington.vic.gov.au*
72. West Wimmera	*council@westwimmera.vic.gov.au*
73. Whitehorse	*utilities@whitehorse.vic.gov.au*
74. Whittlesea	*whitcc@whittlesea.vic.gov.au*
75. Wodonga	*Workpermits@wodonga.vic.gov.au*
76. Wyndham	*mail@wyndham.vic.gov.au*
77. Yarra	*info@yarracity.vic.gov.au*
78. Yarra Ranges	*mail@yarraranges.vic.gov.au*
79. Yarriambiack	*info@yarriambiack.vic.gov.au*

VicRoads	
Region	**Email Address**
1. Metro North West	NRIW.MetroNW@roads.vic.gov.au
2. Metro South East	NRIW.MetroSE@roads.vic.gov.au
3. Eastern Victoria	NRIW.Eastern@roads.vic.gov.au
4. North Eastern Victoria	NRIW.NthEastern@roads.vic.gov.au
5. Northern Victoria	NRIW.Northern@roads.vic.gov.au
6. South Western Victoria	NRIW.SthWestern@roads.vic.gov.au
7. Western Victoria	NRIW.Western@roads.vic.gov.au

11.0 Revision Records

Rev	Date	Description of Change	Approved
0.0	26/05/2011	- Initial Issue	S. Hickey

11.0 Appendix D – Preliminary Permits and Correspondence

Diona Pty Ltd
Unit5/322 Annangrove Road
ROUSE HILL NSW 2155

25 May 2011
VicRoads Ref:AC3985A

Dear Tom Ryan

APPLICATION FOR CONSENT TO CONDUCT WORKS WITHIN THE ROAD RESERVE
VICTORIA ROAD, LILYDALE, LILYDALE

I refer to your application for consent dated 17 May 2011 to undertake works within the road reserve at the above location.

VicRoads hereby gives consent to the proposed works subject to the applicant complying with the following requirements:

- Attachment 1: Conditions of Consent
- Attachment 2: Information contained in Acts, Regulations and Ministerial Codes of Practice
- Attachment 3: General information relating to the conducting of works within road reserves
- Attachment 4: Standard requirements for conducting works within road reserves

The proposed works may be undertaken from the 1 June 2011 to the 1 July 2012 between the hours of 7.00am to 6.00pm.

Restriction to traffic flow are only permitted between the hours of an approved Memorandum of Authorisation.

No restriction to traffic flow is permitted outside of this period. Normal trafffic flow will be restored after each works session.

Should you have any queries, Ruth Campbell on Tel: 9881 8824 would be pleased to assist.

Yours sincerely

DUNCAN ELLIOTT

REGIONAL DIRECTOR - METRO SOUTH EAST VICTORIA

Attachment 1

CONDITIONS FOR CONSENT TO CONDUCT WORKS IN ROAD RESERVES

All conditions apply unless they are struck out.

STANDARD CONDITIONS OF CONSENT

Item	Description
1	The granting of this consent does not exempt the Proponent from the requirements of other Commonwealth and State legislation or policy.
2	The Proponent shall conduct the works in accordance with the requirements of the Code of Practice for Management of Infrastructure in Road Reserves.
3	The Proponent acknowledges and agrees that its entry and occupation of the Site and the carrying out of the Works is entirely at its risk and responsibility in all respects.
4	The Proponent indemnifies VicRoads against any liability arising out of the works undertaken, the failure to reinstate any roads to their prior condition, where the Proponent or its agent has been negligent in their performance of the work.
5	The Proponent shall be responsible for any reinstatement works for a period of 12 months (including any associated repairs to the road infrastructure).
6	~~The Proponent shall locate the proposed works and assets in accordance with the following plans and drawings ....~~
7	~~The Proponent shall conduct all works in accordance with the following plans and specifications .....~~
8	~~The Proponent shall not conduct any works during the following nominated times ....~~
9	Traffic management shall be conducted in accordance with a traffic management plan prepared in accordance with the Road Safety Act, Code of Practice for Worksite Safety – Traffic Management and other relevant legislative requirements. Safe alternative arrangements shall be provided for pedestrians and cyclists where necessary.
10	The Proponent must report any damage to vehicle detection loops or traffic signal hardware immediately to VicRoads on 13 11 70.
11	The Proponent must reasonably satisfy itself of the location of any existing underground infrastructure that may be affected by the proposed works, consult with any affected infrastructure managers, and take any necessary precautions to minimise the impact on that infrastructure.
12	The Proponent shall ensure that any open trenching is conducted safely and minimises damage to the road reserve by using good industry construction practices.
13	~~The Proponent shall reinstate road infrastructure as soon as reasonably practicable, or within the following timeframes ..... , and to the requirements of the relevant VicRoads Standard Specification (eg. Standard Requirements to Conduct Works within Road Reserves).~~
14	~~The Proponent shall provide .... days/weeks advance notice to the public and other authorities, where affected by the works.~~
15	Where access to abutting properties is affected, the Proponent shall consult with the property occupiers prior to the commencement of the works, and provide for safe and reasonable alternative access arrangements during the works.
16	The Works must be covered by a Public Risk insurance policy with a minimum cover of $10,000,000 indemnifying the Roads Corporation against claims for damages or injury arising from the Works.
17	In giving this written consent, where applicable to the subject works, the Roads Corporation hereby appoints the Proponent as the Principal Contractor for any works within the road reserve as described in the consent application form and authorises the Proponent to manage the workplace to the extent necessary to discharge the duties imposed on a principal contractor under Part 5.1 subdivision 2 of the Occupational Health and Safety Regulations 2007.
ADDITIONAL CONDITIONS FOR NON-UTILITIES	
18	~~The Proponent is required to provide a bank guarantee for $ ..... which VicRoads can draw against should works not be completed to VicRoads satisfaction. The bank guarantee will be held for the duration of the works and for a maintenance period of 12 months.~~

ATTACHMENT 2

INFORMATION CONTAINED IN ACTS, REGULATIONS AND MINISTERIAL CODES OF PRACTICE

1. General

The applicant is required to conduct the works in accordance with, and fully inform himself/herself regarding, the obligations and legal responsibilities under the Acts, Regulations and Codes of Practice as listed below, together with any other relevant Acts, Regulations, Government policies, good engineering practice and industry standards. The information below is only an introduction to these legal and industry requirements and should not be relied upon as reflecting all obligations and responsibilities in their entirety. Legal advice should be sought where obligations and responsibilities are not understood or known.

2. Legislation

Road Management Act 2004

Section 20 of the Road Management Act 2004 (RMA) sets out the *principal object and management principles* for the management of roads, including the management of works and infrastructure.

Part 1, Schedule 7 of the RMA sets out the specific duties of infrastructure managers and works managers. These duties include, but are not limited to:

- Clause 1 - Duty to apply principles in clause 14, Schedule 7;
- Clause 2 - Duty to act in accordance with good engineering practice or relevant industry standard;
- Clause 3 - Duty to have traffic management plan;
- Clause 4 - Duty to cooperate;
- Clause 5 - Duty to avoid unnecessary delay or obstruction or interference with infrastructure;
- Clause 6 - Duty to maintain non-road infrastructure or related works to a satisfactory standard;
- Clause 7 - Duty to give notice to the relevant coordinating road authority;
- Clause 8 - Duty to give notice to other infrastructure or works manager;
- Clause 9 - Duty to provide information;
- Clause 10 - Duty to consult members of the public;
- Clause 11 - Duty to take other reasonable measures to minimise disruption and ensure safety;
- Clause 12 - Duty to reinstate; and

· Clause 13 - Notice of completion of works.

A copy of the *Road Management Act 2004* can be viewed via the VicRoads website at www.vicroads.vic.gov.au .

Road Safety Act 1986

Section 99A of the Road Safety Act 1986 (RSA) applies to any person conducting, or proposing to conduct, any works on a road, and requires that the works are conducted in a manner that is safe for road users and persons engaged in carrying out the works. To comply with this requirement, a person to whom this section applies must:

(a) have in operation a traffic management plan;
(b) give appropriate warnings to road users;
(c) engage appropriately trained and qualified persons to carry out the works or manage the non-road activities or direct traffic; and
(d) give appropriate directions to the persons engaged in carrying out the works or non-road activities.

A traffic management plan should be prepared by a person who is suitably experienced and competent in traffic management, and must comply with any requirements as prescribed in the proposed Road Safety (Traffic Management) Regulations when made. All works shall be conducted in accordance with the traffic management plan.

The *Code of Practice for Worksite Safety – Traffic Management* (refer further information below) provides practical guidance in the preparation of a traffic management plan.

3. Regulations

Road Management (Works and Infrastructure) Regulations 2005

These Regulations deal with a number of matters relating to works and infrastructure within road reserves, including:

· prescribing exemptions from the requirement to obtain consent under the RMA before conducting certain works;
· prescribing exemptions from the requirement to give notice as to the conduct or completion of certain works;
· prescribing exemptions from the requirement to give notice of any proposed installation of non-road infrastructure or related works on the road reserve; and
· prescribing fees for applications under the RMA for written consent to conduct the proposed works on a road.

Note: The exemptions provided under these Regulations, in general, only apply to a utility, an agent of a utility, a responsible road authority and an agent of a responsible road authority, for the conduct of certain prescribed works.

A copy of the *Road Management (Works and Infrastructure) Regulations 2005* can be

viewed via the VicRoads website at *www.vicroads.vic.gov.au* .

4. Codes of Practice

Code of Practice for Management of Infrastructure in Road Reserves

This Code of Practice provides practical guidance and benchmarks of good practice for utilities, providers of public transport and road authorities, who are required to work together cooperatively to facilitate the installation, maintenance and operation of road and non-road infrastructure within road reserves. The general matters dealt with in the Code include:

- long term planning and coordination;
- project planning and design, including the positioning of utility infrastructure;
- consent and notification processes;
- works management, including reinstatement works;
- sharing of information; and
- dispute resolution.

A number of specific matters dealt with in the Code include:

- attachment of utility infrastructure to bridges or other road authority structures;
- reinstatement works to be guaranteed by the proponent for a period of 12 months;
- damage to road and other infrastructure;
- disruption to traffic and the delivery of utility services;
- conduct of emergency works;
- conduct of works to minimise the impact on public transport services; and
- notification requirements for works affecting public transport infrastructure and services.

Code of Practice for Worksite Safety – Traffic Management

This Code of Practice provides practical guidance to any person conducting, or proposing to conduct, any works on a road in Victoria. The general matters dealt with in the Code include:

- responsibilities and duty of care obligations in conducting works on roads;
- worksite risk assessment and risk control;
- traffic management plans (for both short term and long term works); and
- general information on risk control measures (eg. high visibility clothing, worksite speed limits, traffic control signs and devices).

Copies of the Codes of Practice can be viewed via the VicRoads website at *www.vicroads.vic.gov.au* .

Attachment 3

GENERAL INFORMATION - CONDUCTING WORKS ON ROADS

- The granting of consent by VicRoads, as the coordinating road authority, for the subject works in accordance with Schedule 7, clause 16 of the Road Management Act 2004:
  - does not exempt the Proponent from the requirements of other Commonwealth and State legislation or policy;
    (**Note**: any planning permit approval received in accordance with a municipal planning scheme does not constitute consent to conduct the works under the RMA).
  - does not exempt the Proponent from the requirement to obtain a Memorandum of Consent from VicRoads where it proposes to erect certain traffic control devices at a worksite in accordance with the Road Safety (Road Rules) Regulations 1999 as amended or substituted at the relevant time.

- The Proponent must reasonably satisfy itself of the location of any existing underground infrastructure that may be affected by the proposed works and take the necessary precautions to minimise the impact on that infrastructure (Schedule 7 of the RMA).

- It is an offence under the Road Management Act 2004 for:
  - a person to conduct any works in, on, under or over a road without the written consent of the relevant coordinating road authority to conduct the proposed works (unless an exemption applies under the Road Management (Works and Infrastructure) Regulations 2005, or the works are conducted in an emergency by the relevant infrastructure manager). Penalties apply to this offence, being 10 penalty units for a natural person and 50 penalty units for a body corporate (***Note*** : As at 1 July 2005, a penalty unit is valued at $104.81).
  - an infrastructure manager or works manager to fail to notify the relevant coordinating road authority within 7 days of completing any works, including reinstatement works (unless an exemption applies under the Road Management (Works and Infrastructure) Regulations 2005). Penalties apply to this offence, being 5 penalty units for a natural person and 25 penalty units for a body corporate; and
  - a person to fail to comply with the conditions to which a written consent has been given by a coordinating road authority for the conduct of the works (unless an exemption applies under the Road Management (Works and Infrastructure) Regulations 2005). Penalties apply to this offence, being 10 penalty units for a natural person and 50 penalty units for a body corporate.

- It is an offence under the Road Safety Act 1986 if a person does not ensure that the works on a road are conducted in a manner that is safe for road users and persons engaged in carrying out the works. A penalty applies to this offence, being 60 penalty units. An offence constitutes failure to do the any of the following:
  (a) have in operation a traffic management plan;
  (b) give appropriate warnings to road users;

(c) engage appropriately trained and qualified persons to carry out the works or manage the non-road activities or direct traffic; and

(d) give appropriate directions to persons engaged in carrying out works or non-road activities.

Further Information:

Visit the VicRoads website at *www.vicroads.vic.gov.au* and view the "**Working within the Road Reserve**" webpage.

Attachment 4

SECTION 706 - INSTALLATION OR REPLACEMENT OF UTILITY INFRASTRUCTURE WITHIN ROAD RESERVES

##This section cross-references Section 173.
If Section 173 is relevant, it should be included in the specification.
If Section 173 is not included in the specification, all references to it should be struck out, ensuring that the remaining text is still coherent:

706.01 DESCRIPTION

This section covers requirements for the installation or replacement of utility infrastructure (e.g. conduits, pipes, service pits, poles, aerial services/cables) within the road reserve of an arterial road or freeway, as shown on the drawings, or as specified.

706.02 LEGISLATIVE FRAMEWORK

The management principles and practices applying to utilities and road authorities for the installation, maintenance, replacement and operation of utility infrastructure within road reserves are set out in the Road Management Act 2004, Road Management (Works and Infrastructure) Regulations 2005 and the Code of Practice for Management of Infrastructure in Road Reserves (Victoria Government Gazette No. S 269 Monday 6 October 2008).

All planning, design and installation or replacement of utility infrastructure, as shown on the drawings, or as specified, shall be carried out in accordance with the requirements set out in the above legislative framework and the additional requirements specified in this section.

Any consultation required with, and authorisation required from, other authorities under relevant utility regulations and codes shall be the responsibility of the Contractor.

706.03 POSITIONING, DEPTH AND HEIGHT CLEARANCE

All utility infrastructure within road reserves shall be clear of road carriageways and parallel or at right angles to the centreline of road carriageways unless otherwise agreed with the Superintendent.

Aerial services shall have a minimum height clearance of 5.5 m above the finished road surface level or the natural surface. Poles for aerial services shall have a minimum lateral clearance of 3 m from the edge of carriageway in urban areas and 9 m in rural areas, except where frangible poles are used.

Unless otherwise shown on the drawings or specified, utility infrastructure and associated conduits installed under road carriageways for freeways and arterial roads shall be at depths to provide the following cover over the top of the infrastructure (including conduit):

(a) 1200 mm minimum cover to the finished road surface level; and

(b) 750 mm minimum cover to the invert level of road carriageway open drains.

706.04 BORING UNDER CARRIAGEWAYS

Unless otherwise specified or approved by the Superintendent, all utility infrastructure (including conduits) under road carriageways shall be installed by boring.

Detailed proposals for boring under carriageways or alternative underground methods proposed by the Contractor shall be submitted to the Superintendent for review two weeks prior to the programmed commencement of work.

Unless otherwise specified, boring by water jetting will not be permitted.

Unless otherwise specified, the annulus between the bore and the pipe or carrier-conduit shall be filled by pressure grouting.

706.05 EXCAVATION

Where the open trench method of crossing under a carriageway pavement is accepted, the line of the trench shall be straight, at right angles to the carriageway, and form the shortest link between terminals wherever practical. The width of trench shall be not greater than that necessary to carry out the work.

The edges of all trenches located within a road pavement shall be sawcut.

Any infrastructure located within the road reserve that is disturbed as a result of the work shall be reported immediately to the Superintendent and shall be reinstated promptly in consultation with the relevant infrastructure manager.

706.06 MATERIALS

Unless otherwise specified, materials used for bedding and backfilling shall be uniform in composition and free from perishable matter and shall comply with the requirements specified in Table 706.061.

Table 706.061 - Material Properties

Material	Sieve Size - AS (mm) Percentage Passing (by mass)					Plasticity Index	
	75.0	37.5	19.0	2.36	0.075	min	max
Bedding	-	-	100	-	10-40	2	10
Selected backfill	-	100	-	-	10-40	5	20
Common backfill	100	-	-	40-100	-	-	-

Pavement material shall be as specified in Clause 706.12 and shall comply with the requirements of the specified sections as applicable.

706.07 BEDDING

Where specified in Clause 706.12 that bedding is required, bedding shall be placed below, around and above the pipe or carrier-conduit for the full width of the trench. Not less than 25 mm compacted depth of bedding shall be placed below, and not less than 150 mm compacted depth of bedding shall be placed above, the pipe or carrier-conduit. Bedding shall be placed in layers not exceeding 150 mm loose thickness and shall be compacted as specified.

706.08 BACKFILLING

Unless otherwise specified or shown on the drawings, selected and common backfill shall be placed and compacted as follows under, around, and above the conduit after the sections are bedded:

(a) Conduits under Area to be Paved, including Shoulders and Verges

Where the trench has been excavated from the nominated or designed subgrade level or above, the trench shall be backfilled up to the nominated or designed subgrade level with selected backfill material placed and compacted in layers not exceeding 150 mm loose thickness, and above that level with common backfill material.

Where the trench is excavated from below the nominated or design subgrade level, the trench shall be filled with selected backfill material placed and compacted in layers not exceeding 150 mm loose thickness.

(b) Conduits under Area not to be Paved

The opening shall be backfilled with common backfill placed and compacted as specified in layers not exceeding 200 mm loose thickness.

(c) Conduits through Existing Paved Areas including Shoulders and Verges

Unless otherwise specified or shown on the drawings, the opening shall be backfilled to the existing subgrade level with selected backfill material placed and compacted in layers not exceeding 150 mm loose thickness and the pavement material placed and compacted in layers not exceeding 100 mm loose thickness using materials in accordance with Clause 706.12 (b).

706.09 COMPACTION STANDARDS

(a) Bedding and backfill (except pavement)

Unless otherwise specified, bedding and backfill shall have during compaction a uniform moisture content within the range 85% to 115% of the optimum moisture content as determined in the Standard compactive effort. For backfill of nominal size greater than 40 mm the fraction of material passing the 37.5 mm sieve shall have during compaction a uniform moisture content within the range 85% to 115% of the optimum moisture content as determined for that fraction in the Standard compactive effort.

Bedding and backfill shall be compacted to refusal using hand held mechanical equipment.

Backfilling beneath areas to be paved shall be assessed for compaction in lots as defined in Section 173. The number of tests per lot shall be three. Backfill, the whole of which passes the 37.5 mm AS sieve, shall be compacted to a mean value of density ratio of not less than 97%. The calculation of density ratio shall be based on Standard compactive effort. A lot shall consist of a single layer of work. A minimum of 20% of all lots constructed shall be tested.

Detailed proposals for the compaction of backfill materials of nominal size greater than 40 mm shall be submitted to the Superintendent for review before commencing work.

(b) Pavement

Unless otherwise specified, pavement material shall have during compaction a uniform moisture content within the range 85% to 115% of the optimum moisture content as determined in the Modified compactive effort.

Pavement material shall be assessed for compaction in lots as defined in Section 173. The number of tests per lot shall be three. All pavement layers shall be compacted to a mean value of density ratio not less than the percentage specified in Clause 706.12(b). The calculation of density ratio shall be based on Modified compactive effort. All pavement layers shall be tested.

706.10 CLEANING OF SITE

Surplus excavated material shall be removed from the road reserve. Areas affected by the work shall be restored to a condition similar to that which existed prior to the commencement of the work.

706.11 MAINTENANCE OF PAVEMENT

The reinstated surface shall be maintained in a trafficable condition after the completion of backfilling. Additional pavement material shall be placed in the trench and compacted as specified where in paved areas settlement or loss of material from the surface exceeds 20 mm measured from a straight edge laid across the

top of the trench.

706.12 Schedule of Details

~~*** (a) Bedding (Clause 706.07) - ##:Required/Not required~~

*** (b) Pavement material (Clause 706.06)

Pavement Layer		Material Type	Thickness (mm)	Density Ratio (Modified)
1.				
2.				
3.				
4.				
5.				

Diona Pty Ltd
322 Annangrove Road
ROUSE HILL NSW 2155

ROAD RESERVE / EASEMENT WORKS PERMIT

PERMIT NO. AP/7702/2011

SHIRE OF YARRA RANGES

ROAD RESERVE / EASEMENT WORKS PERMIT

PERMIT NO. AP/7702/2011

PERMIT HOLDER / APPLICANT:

Name:	Diona Pty Ltd	
Address:	322 Annangrove Road ROUSE HILL NSW 2155	
Contact Phone:	(H)	(W) 02 9679 2111

PROPOSED WORKS:

Description:	Gas transmission pipeline Victoria Road Lilydale, Coldstream, Yering to Spadoni's Nature Reserve

PERMIT LOCATION:

Property No:	
Address:	Road Reserve/Applications Victoria Road, Lilydale VIC 3140
Owner's Name:	Shire of Yarra Ranges (Road Reserve/Applications)
Owner's Address:	PO Box 105, LILYDALE VIC 3140

I/We acknowledge and agree that the above permit is granted subject to the conditions on the attached sheets which I/We knowledge to have read and understood and I/We hereby give the undertakings and indemnities described in condition 9 on the attached sheets and particularly undertake to reinstate the road or easement under the management and/or control of the Council as directed by the authorised officer of the Council at my/our expense. It is acknowledged that if this undertaking and indemnity is given by more than one person, it is given jointly and severally. It is also acknowledged that this undertaking and indemnity shall bind the estate or estates of the person or persons giving it.

SIGNATURE: ..... DATE: ...../...../.....

PERMIT IS VALID FOR A PERIOD OF THREE MONTHS FROM DATE OF ISSUE - FEE IS NOT REFUNDABLE

NOTE: THE ASSET MANAGEMENT DEPARTMENT MUST BE NOTIFIED 24 HOURS PRIOR TO COMMENCEMENT OF WORKS. TELEPHONE 1300 368 333. FAILURE TO NOTIFY MAY RESULT IN FORFEITURE OF BOND.

UPON COMPLETION OF WORKS PLEASE NOTIFY GARY WHITEHEAD ON 1300 368 333.

Fee	$5000.00	Account No: RCOPEN	Receipt No:
Bond	$0.00	Account No: RCBOND	
TOTAL	**$5000.00**		

SIGNED: *GWhitehead* **NAME (PRINT): G Whitehead DISTRICT OFFICE : Lilydale**

FURTHER ENQUIRIES: GARY WHITEHEAD – 0419 527 524
SEAN KAVANAGH - 0409 977 549

✂ ----------

AP/7702/2011 **$_____** **Receipt No: _____**

Payer Name:_____

John Paul

From: Tom Ryan [Tom.Ryan@diona.com.au]
Sent: Wednesday, 1 June 2011 2:58 PM
To: Kaylock Janet
Cc: John Paul
Subject: RE: Lilydale Pipeline
Attachments: Copy of 004- Memorandum of Authorisation Application Yarra Council 26 05 11.xls

Janet,

Please find attached Memorandum of Authorisation. As discussed we intend to commence works on Victoria road on the 6th June 2011. I would appreciate it if you could advise if we will have this authorisation in place prior to this date. Thanks Janet.

Regards,

Tom Ryan

From: Kaylock Janet [mailto:J.Kaylock@yarraranges.vic.gov.au]
Sent: Wednesday, 1 June 2011 12:07 PM
To: Tom Ryan
Subject: FW: Lilydale Pipeline

Tom

This is the email I sent you on 20th May

Regards
Janet Kaylock | **Traffic Engineer**
P: (03) 9294 6755
F: (03) 9294 6765
E: j.kaylock@yarraranges.vic.gov.au
W: www.yarraranges.vic.gov.au

From: Kaylock Janet
Sent: Friday, 20 May 2011 3:13 PM
To: 'Tom.Ryan@diona.com.au'
Subject: RE: Lilydale Pipeline

Tom

Gary Whitehead has indicated your interest in obtaining a permit for delivery vehicles during the Gas Pipeline Construction along Victoria Road.

Vehicles over 6 tonnes GVM are able to access a worksite along Victoria Road and or MacIntyre Lane provided they use the shortest access route. This would mean using Coldstream West Road or the Lilydale end of Victoria Road or the Melba Hwy for access to the work sites, whichever is the closest. Delivery vehicles would have to exit to the same point.

Provided the police will agree, I can provide a permit that can be given to your drivers so they don't have to use Coldstream West Road. The permit would need to be copied and filled in with the registration number for each truck and would need to be signed by a representative of your company.

Can you please indicate:

1. the expected start and finish dates for the work?
2. the name and title of the company representative.
3. the location/s of the proposed gas pipe.

Please phone me to discuss this request prior to sending an email with the required information.

(I won't be in the office on Monday)

Regards
Janet Kaylock | **Traffic Engineer**
P: (03) 9294 6755
F: (03) 9294 6765
E: j.kaylock@yarraranges.vic.gov.au
W: www.yarraranges.vic.gov.au
please consider the environment before printing this email

From: Whitehead Gary [mailto:G.Whitehead@yarraranges.vic.gov.au]
Sent: Tuesday, 17 May 2011 5:02 PM
To: Kaylock Janet
Subject: FW: Lilydale Pipeline

Janet,
I think Tom will be the nominated person for this project. Could you please forward the letter of exemption as per below and CC me a copy.
Thanks

Regards
Gary Whitehead | Drainage & Services Coordinator
Infrastructure Services
P: (03) 9294 6708
M: 0419 527 524
F: (03) 9294 6703
E: g.whitehead@yarraranges.vic.gov.au
W: www.yarraranges.vic.gov.au

12.0 Revision History

Rev	Date	Description of Change	Approved
A	31/05/11	Issued for Review	JP O'Connor
B	10/07/11	With Review Amendments	JP O'Connor