

Southern Sydney Freight Line Construction Traffic Management Sub Plan

February 2009



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1. Introduction

1.1 Purpose and objectives

The purpose of the Construction Traffic Management Sub Plan (CTMSP) is to demonstrate how the Minister for Planning's Conditions of Approval for the Southern Sydney Freight Line relating to construction traffic management will be addressed. These are as follows:

- Condition of Approval 55 requires the preparation and implementation of a Construction Traffic Management Sub Plan (CTMSP) – as part of the Construction Environmental Management Plan – which includes Traffic Management Reports, Traffic Management Plans, and Traffic Control Plans.
- Conditions of Approval 56 to 59 and Statement of Commitments 85 and 69 outline the broad requirements of the Traffic Management Plans (TMP).
- Statement of Commitments 70 outlines the requirements of the Traffic Management Reports (TMR).
- Statement of Commitments 74 outlines the requirements of the Traffic Control Plans (TCP).

It should be noted that while this report outlines the preferred access routes between the rail corridor access locations and the State road network, potential traffic type, volume of traffic, and approximate periods of use, some details may be subject to change in later stages of letting the project as contractors optimise and coordinate their works. As such, preparation of Traffic Control Plans is appropriate only once the Contractors have finalised planning the specific nature of the works at each location, and hence, these have not provided in this report.

The TMPs for each site will highlight any critical requirements or limitations, which contractors will be required to conform to in their preparation of the TCPs for each site.

The Traffic Management Reports required in CoA 55 have been prepared and distributed to the four Local Government Authorities (that is, Bankstown, Fairfield, Liverpool and Campbelltown Councils). The Traffic Management Reports summarise, for each local government area, the TMPs and the associated TCPs as they become available.

The purpose of this Construction Traffic Management Sub Plan (CTMSP) is to manage the traffic impacts of the Project's construction resulting from:

1. construction traffic generated by the bridge construction and upgrade works associated with the SSFL;
2. road closures possibly required to construct the road/rail bridges for the SSFL.

The traffic and transport assessment of the temporary and permanent traffic changes proposed in the Cabramatta rail station precinct is the subject of a separate report. This report is called *Review of proposed traffic, cycle and pedestrian arrangements in the East Cabramatta area*, which is required under CoA 30.

This CTMSP is to be read in conjunction with the Project's Construction Program and the Spoil and Fill Management Sub-Plan.

1.1.1 Requirements of a Traffic Management Plan

The requirements for a Traffic Management Plan, as specified in the RTA's "*Procedures for use in the preparation of a Traffic Management Plan (TMP)*" are listed in the table below, with a statement as to the extent the requirements are addressed in this report:

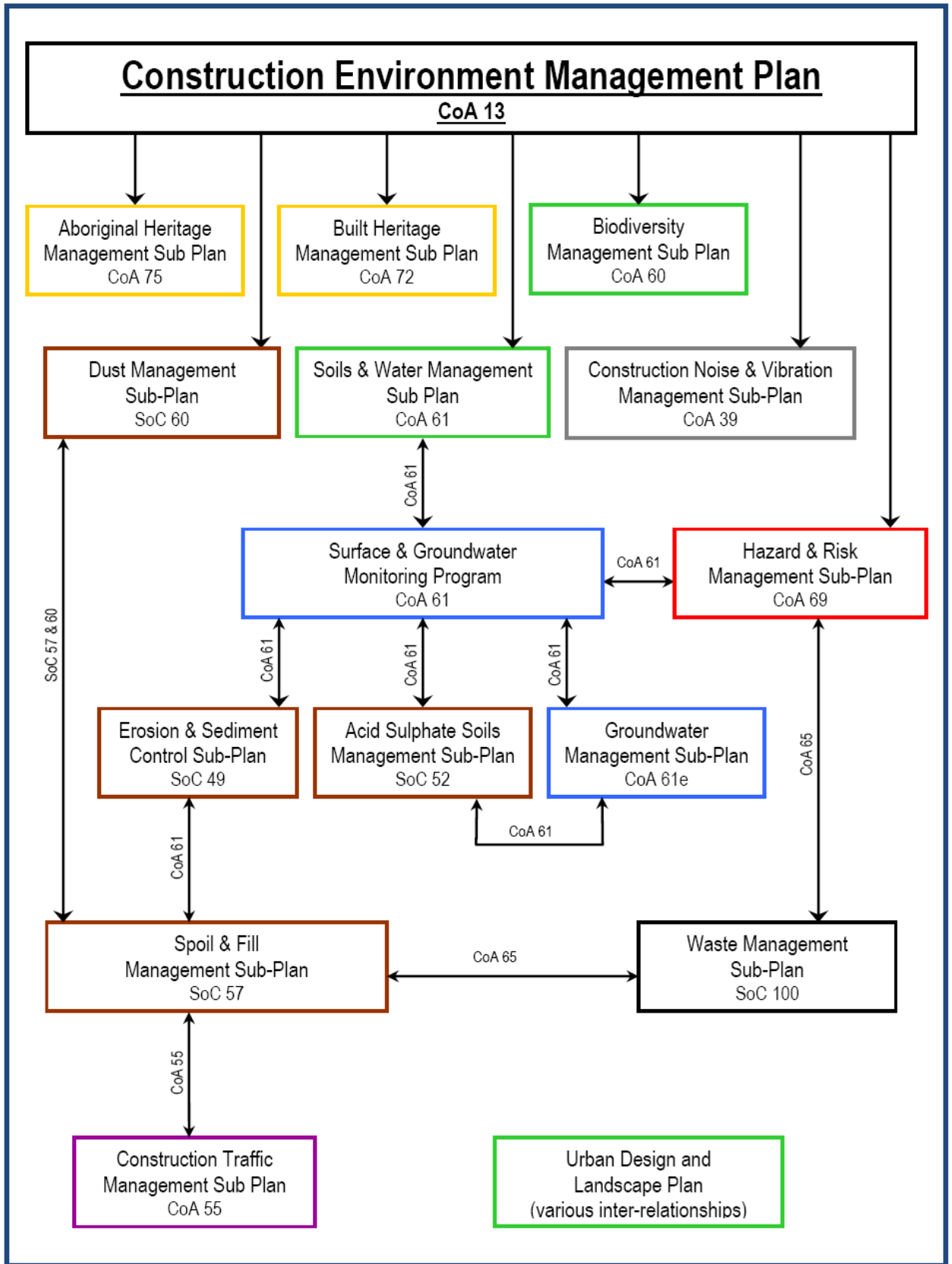
TMP requirement	Addressed in this report? If no, state reasons; if yes, state Section reference in this report.
Description or detailed plan of proposed measures	Yes – see Section 4 under "Description of works" for each location.
Identification and assessment of impact of proposed measures.	<p>Yes – qualitative assessment only. See Section 4 under "Potential impacts" for each location.</p> <p>Traffic modelling for each work site is not considered necessary as the construction traffic impacts are anticipated to be relatively short-term, result in not significant increases in traffic movements and are easily manageable with simple traffic control procedures.</p>
Measures to ameliorate the impact of re-assigned traffic	Yes, generally – See Section 3 "Performance measures" which require that adjacent road crossings of the rail corridor not be closed or impacted upon simultaneously.
Assessment of public transport services affected	Yes – see Section 5 under "Mitigation measures" for each location.
Details of provisions made for emergency vehicles, heavy vehicles, cyclists and pedestrians	Yes – see Section 5 under "Mitigation measures" for each location.
Assessment of effect on existing and future developments with transport implications in the vicinity of the proposed measures	<p>Only existing developments – qualitative assessment only where existing significant developments are in the vicinity of the proposed works locations: As examples. the Chester Hill Road bridgeworks (Chester Hill shops impacts) and the Miller Road bridgeworks (nearby industrial area impacts). See Section 4 under "Potential impacts" for those locations.</p> <p>Re. future developments, construction traffic impacts are anticipated to be relatively short-term and manageable.</p>
Assessment of effect of proposed measures on traffic movements in adjoining Council areas	Yes where relevant – qualitative assessment only. See Section 4 under "Potential impacts" for each location.
Public consultation process	Yes – to be undertaken as part of the broader consultation for the SSFL, via Community Liaison Groups established in each of the affected local government areas.

1.2 Integration with other Sub-Plans in the CEMP

This Construction Traffic Management Sub-Plan (CTMSP) must be read in conjunction with the other related sub-plans that form part of the CEMP. Related sub-Plans that must be read in conjunction with this Construction Traffic Management Sub-Pan include:

- 1) Soil and Water Management Sub-Plan
- 2) Erosion and Sediment Control Sub-plan
- 3) Dust Management Sub-Plan
- 4) Spoil and Fill Management Sub-Plan
- 5) Waste Management Sub-Plan
- 6) Construction Noise and Vibration Management Sub-Plan

All of these Sub-Plans, making up part of the CEMP, are interrelated in accordance with the following Sub-Plan Structure Diagram (following page):



1.3 Structure of this report

To address the requirements of both the CEMP and the TMP, this report is structured as follows:

- Section 1 provides the general background to the requirements of the CTMSP, and an overview of the proposed works;
- Section 2 will summarise the overall legislative requirements and guidelines which apply to the preparation and implementation of the Traffic Management Plans and subsequent Traffic Control Plans;
- Section 3 will outline the performance criteria for the Traffic Management Plans and the Traffic Management Reports;
- Section 4 includes the Traffic Management Plans for the SSFL bridge upgrade works, new rail bridges over roads, and construction compounds locations which will cover: a description of the proposed works at each site, the existing environment and site specific issues, the potential impacts, and mitigation measures to address these impacts;
- Section 5 includes general monitoring, reporting, and mitigation measures, and any other requirements applicable to all work sites for the SSFL construction.
- Section 6 will cover corrective action should non-conformances occur; and
- Section 7 will cover ongoing document control.

2. Legislative requirements, guidelines and conditions

The following acts and guidelines have been considered for the preparation of the CTMSP.

Table 2-1: Legislative and Guideline requirements

Relevant guidelines (author)	Summary of guidelines	Approvals/Permits or licences required
Roads Act 1993	Obtaining a road occupancy licence for the specified activities is a legal requirement under Section 138 of the Roads Act.	For all occupancies that are on or may impact upon a classified road (state road), applications for a road occupancy licence are to be made to the RTA's Planned Incident Unit. For occupancies that impact solely on unclassified (council) roads, applications for a road occupancy licence are to be made to the relevant council.
Rail Safety Act 2003	Covered in s9.20 "Working in the vicinity of railway lines" in RTA's Traffic Control at Worksites manual	
Occupational Health and Safety Act 2000	Preparation of a Traffic Control Plan is a OHS requirement of a work site, and a TCP must comply with AS 1742.3 to comply with the OHS Act.	
Australian Standard 1742.3 Manual of Uniform Traffic Control Devices (Standards Australia)	Refer to Part 3: Traffic Control Devices for Works on Roads to ensure the safety of construction work site staff undertaking construction works in/near roads, and the safety of road users while road construction work is being undertaken.	No new or temporary traffic Control devices will be required as part of this project other than those required as part of obtaining a road occupancy license or those covered in other specific traffic plans for the project eg: Traffic Report for the Cabramatta Precinct.

Relevant guidelines (author)	Summary of guidelines	Approvals/Permits or licences required
Traffic Control at Work Sites manual (RTA)	<p>Must be used on all RTA road and bridge work sites. Its use is also encouraged on non-RTA sites where practitioners are responsible for the control of traffic at work sites.</p> <p>Contains standard Traffic Control Plans (TCPs) which can be used at work sites for which the plan meets all requirements. Where a standard plan does not meet the traffic control needs of a particular site, the manual provides procedures for the design of a new or site specific plan.</p> <p>If the manual does not contain advice on a particular aspect of traffic control, then AS 1742.3 must be consulted and its advice adopted, if such advice exists. [s1]</p>	<p>Approval required from RTA for RTA controlled roads.</p> <p>Approval required from the relevant Local Council's Traffic Committee for local (non-RTA) roads.</p> <p>Traffic control and the selection or designing of TCPs must only be undertaken by persons who are qualified, authorised, and have passed RTA-approved training courses. [s1]</p>

2.1 Conditions of Approval

The conditions relevant to the construction traffic and general traffic management imposed on the project by the Minister for Planning are as follows

Table 2-2: Minister's Conditions of Approval and Statement of Commitments

Condition No.	Summary	Reference in this Document
CoA 55	The CTMSP must include:	Four TMRs have been prepared and distributed to the four Local Government Authorities.
	(a) Traffic Management Reports (TMR) (<i>for Councils</i>),	
	(b) Traffic Management Plans (TMP),	See Traffic Management Plans in Section 4.
	(c) Traffic Control Plans (TCP);	Not prepared but referred to in Section 1.1. To be prepared by Each Contractor (site specific). A copy of a TCP as submitted to Bankstown Council by the Contractor can be seen in Appendix E: Copy of TCP for Woods Road Underpass
	and must be fully integrated with the Spoil and Fill Management Plan.	Report to be read in conjunction with Spoil and Fill Management Plan.
CoA 56	Traffic Management Plans are to be prepared as part of the CTMSP where Construction will affect the operation of the road network. Plans will be prepared for at least:	
	(a) the bridge upgrades identified in Section 10.3.1 of Volume 1 of the Environmental Assessment;	See Traffic Management Plans in Section 4.
	(b) the new rail bridges over roads identified in Section 10.3.2 of Volume 1 of the Environmental Assessment;	See Traffic Management Plans in Section 4.
	(c) the road network changes identified in Section 10.3.3 of Volume 1 of the Environmental Assessment; and	The proposed new road form Farrow Road to Blaxland Road is yet to be finalised by

Condition No.	Summary	Reference in this Document
		Campbelltown City Council. This TMP will be prepared, with Council, input prior to works commencing at this location
	(d) Construction Compounds.	See Traffic Management Plans in Section 4.
	Where road closures are proposed during the construction of bridges, the Traffic Management Plan(s) must include a detailed analysis of the impact on network operation and be referred to the appropriate road authority for comment. Such analysis should include:	See Section 4.
	(e) network modelling where required;	Not required due to only short duration of full road closures. The timing of the closures, which will minimise any adverse impacts, will be determined closer to construction date in consultation with the RTA and relevant councils. RTA "OKed"
	(f) traffic management measures to be provided to maintain optimum network operation and safety;	See 'potential impacts and mitigation measures' for each location in Section 4.
	(g) provisions for pedestrians and cyclists; and	See 'potential impacts and mitigation measures' for each location in Section 4.
	(h) parking control measures.	See 'potential impacts and mitigation measures' for each location in Section 4.
	Where a significant number of truck movements are expected from work sites, the Traffic Management Plan(s) must include intersection modelling to ensure optimum intersection operation. Where applicable, these should include, but be not limited to: (i) Amy Street and Rookwood Road; (j) Auburn Road and Hume Highway; (k) Cabramatta Road East and Hume Highway; and (l) Glenfield Road and Campbelltown Road.	Truck movements expected to be generated from work sites are not considered to be significant. As such this requirement is not applicable. Both RTA and Councils have agreed, in Meetings, to this assessment of this issue. See Spoil and Fill Management Sub Plan for more details.
CoA 57	Traffic Management Plans must include: (a) identification of all public roads to be used by Construction traffic, in particular roads proposed to transport large quantities of Construction materials. The expected timing and duration of road usage will be stated;	See Section 4 for each location and Section 5.5 and Section 5.6. Timeframe for road usage will be provided closer to construction date after contractors issued detailed construction programs.
	(b) management methods to ensure Construction traffic uses identified roads;	Contractors are to ensure that all construction traffic uses identified roads by means as detailed in Table 5-2.
	(c) identification of all public roads that may be partially or completely closed during Construction and the expected timing and duration of these closures. Consideration will be given to	See Section 4 'Description of works' for each location.

Condition No.	Summary	Reference in this Document
	programming Construction works to minimise road closures during peak hours and/or holiday periods;	
	(d) impacts on existing traffic (including pedestrians, vehicles, cyclists and disabled persons);	See 'potential impacts and mitigation measures' for each location in Section 4.
	(e) temporary traffic arrangements including property access;	The road closures that are required for the projects will have no impact on private property access.
	(f) access to Construction work sites including entry and exit locations and measures to prevent Construction vehicles queuing on public roads;	See Section 4, and Appendix B: Construction Accessways Trucking Routes
	(g) a response plan for any Construction traffic incident;	See Section 5.7.
	(h) monitoring, review and amendment mechanisms;	See Section 5.5 and 5.6 and 7.
	(i) identification of any requirements for road occupancy licences;	See Section 5.1.
	(j) identification of parking for Construction workers; and	See section 5.5, Table 5-1 (page 2 of table). Managed as a general mitigation measure
	(k) identification of bus routes.	See 'Existing environment and site specific issues' and 'potential impacts and mitigation measures' for each location in Section 4.
CoA 58	The Proponent must ensure that: (a) existing pedestrian/ cyclist access, parking, bus and other transport facilities are not removed or modified prior to alternative provisions being made for these facilities. Any temporary diversion of traffic and pedestrian cycle routes must be clearly sign posted. Priority must be given to pedestrians accessing public transport and where there are potential impacts to school zones and pedestrian crossings, consultation with affected schools should be undertaken;	See section 5.5, Table 5-1 (page 2 of table). Managed as a general mitigation measure. More details are contained in each sub-section of Section 4 where relevant and also shown in the detailed design of station precincts (Please refer to the station drawings (SN-) available on ProjectCentre).
	(b) the CTMSP has regard to cumulative impacts from, and shared access requirements for, the Liverpool Turnback Project in consultation with TIDC;	The NSW Government has postponed the Liverpool Turnback Project. If this project is announced to commence construction before the completion of the SSFL this subclause will be completed and submitted to the DoP for approval.
	(c) traffic impacts resulting from staff (including parking requirements) is considered as part of the preparation of CTMSP to ensure traffic impacts are minimised;	See section 5.5, Table 5-1
	(d) full road closures during Construction are limited to periods which would minimise disruption to road users and the local community (i.e. such as weekends or overnight), unless otherwise agreed to by the relevant road authority;	See Section 3, 4 and Table 5-1.

Condition No.	Summary	Reference in this Document
	(e) alternative access is available to Emergency Services during the full closure of any roads;	See Section 4.1.3, 4.9.3, 5.5, and 5.7.
	(f) notwithstanding the requirement of (d) above, at least one lane of Auburn Road Bridge remains open to traffic at all times during construction unless otherwise agreed by the Director-General in consultation with Relevant Councils or the Roads and Traffic Authority (as relevant) ; and	See Section 4.1
	(g) closure of the Casula level crossing is minimised during construction and that: i. any closure of the crossing is coordinated with the Casula Regional Arts Centre; and ii. alternate vehicle access to the Casula Regional Arts Centre is provided for Emergency Services during any closures.	See
CoA 59	Construction vehicles using public roads will be maintained to prevent any loss of load, whether dust, liquid or soils. Facilities will be provided at exit points of all construction work sites to minimise tracking mud, dirt or other material onto a public road or footpath. In the event of any spillage, the Proponent will remove the spilled material as soon as practicable within the working day of the spillage.	See Table 5-1 and the Dust Management Sub-Plan.
SoC 69	Road dilapidation reports will be prepared for all roads likely to be used by Construction traffic. These reports will be prepared before Construction commences and after Construction is complete. Copies of the reports will be provided to the relevant roads authority. Any damage resulting from Construction, except that resulting from normal wear and tear, will be repaired at the Proponent's cost. Alternatively the Proponent may negotiate an alternative arrangement for road damage with the relevant roads authority.	See Section 5.6 and Table 5-2. The reports have been completed and copies of the plan have been distributed to the relevant road authority.
SoC 70	Traffic Management Reports will be prepared as part of the CEMP for the local government areas of Bankstown, Liverpool and Fairfield. The Reports will be prepared in consultation with relevant road authorities and Relevant Councils in accordance with Section 2 of Australian Standard 1742.3-2002 Manual of Uniform Traffic Control Devices, Part 3: Traffic Control Devices for Works on Roads where relevant and will include: a. the timing and relationship between Construction Work Sites along the proposed SSFL alignment b. the combined impact of all concurrent works within the Report's study area (e.g. Bankstown, Liverpool or Fairfield local government area) including traffic and transport diversions and spoil truck movements c. measures to ameliorate any combined impacts resulting from concurrent works.	Four separate TMRs have been prepared and distributed to the four Local Government Authorities. They summarise the Traffic Management Plans and will be updated to include more detailed program of works and TCPs upon availability.
SoC 74	Traffic Control Plans will be prepared for all Construction works that are proposed to occur in the road or that will affect trafficable areas (e.g. parking areas). Traffic Control Plans will be completed in accordance with the RTA's Traffic Control at Work Sites guidelines and the Australian	Not prepared but referred to in Section 1.1 and Section 5.2. The contractors will prepare these once detailed program of works are available.

Condition No.	Summary	Reference in this Document
	<p>Standard 1742.3 Manual of Uniform Traffic Control Devices, Part 3: Traffic Control Devices for Works on Roads and include:</p> <ul style="list-style-type: none"> a. plans showing temporary traffic paths, their delineation and the position of traffic control or warning devices in relation to the location of the works; b. details of after-hours traffic arrangement, if required; and c. instructions for the installation, operation, between-stage rearrangement and ultimate removal of devices at the conclusion of the Construction works. 	
SoC 85	<p>The Proponent will include in the Traffic Management Plan for Auburn Road bridge options for an alternate pedestrian and cyclist bridge across the rail corridor in the vicinity of Auburn Road bridge during works to the bridge and an assessment of whether these options are Reasonable and Feasible.</p>	<p>The new design for the works at Auburn Road overbridge will retain one side of the existing bridge open at all times. In light of this design change this SoC is no longer relevant and has not been addressed specifically in this report. Otherwise refer to Section 4.1 of this report n Auburn Road Overbridge</p>
	- TABLE ENDS -	

3. Performance criteria

The traffic management principles to be applied by ARTC will ensure:

- The provision of a safe environment for road users and workers;
- The overall impacts on road users is kept to a minimum;
- Access is maintained for the local community, transport operators, and commercial developments, and
- Road users and local communities are regularly informed in relation to changed traffic conditions.

Performance criteria for the Construction Traffic Management Sub-Plan are to:

- Ensure safety for all road users, particularly the more vulnerable users (pedestrians and cyclists), is not reduced. Where existing access is likely to be disrupted by construction traffic, measures should be put in place to provide reasonable alternative access (with a focus on safety and convenience).
- Minimise half- (or full)-road closures during peak periods or school holidays, where practicable.
- Avoid detouring bus routes off their regular routes unless necessary full-road closures mean that a regular bus route cannot operate. Where detours of bus routes are required, keep detours to a minimum with regard to distance detoured, number of missed stops, and duration the detour is required (avoid peak periods where possible).
- Where half-road closures are required, minimise delays to all road users, in particular emergency vehicles and buses. Where half-road closures could result in long delays, it may be appropriate to detour general traffic to alternative routes and allow only emergency vehicles and buses to use the half-road direct route.
- Where full-road closures are required, avoid detouring traffic past sensitive land uses such as schools and town/ village centres, where practicable.
- Heavy vehicles should not be detoured onto local roads, but should be directed onto alternative regional roads.
- Ensure routes for construction traffic (heavy vehicles in particular) to and from work sites avoid streets with sensitive land uses, where practicable.
- Require that Traffic Control Plans (TCPs) are prepared by a Traffic Engineer of the earthworks or construction contractor for all road and/or bridge work sites, prior to commencement of earthworks or construction work. TCPs must be prepared in accordance with the latest RTA *Traffic Control at Worksites manual* and AS1742.3.

Additional performance criteria for the Traffic Management Reports are to:

- Engage in consultation with Bankstown, Liverpool, Fairfield and Campbelltown City Councils in order to schedule any half or full road closures or any other works affecting trafficable areas in such a manner as to minimise disruption to the local road, pedestrian and cycle network.

4. Traffic Management Plans for SSFL construction sites

This section outlines the Traffic Management Plans for works associated with 10 bridge upgrades and one Level Crossing. It also provides TMPs for the 11 work site compounds established along the SSFL. The TMPs for the bridge and site compounds are listed in geographical order along the SSFL from North-East to South-West.

Traffic Diversion Route Drawings illustrate the general traffic diversion routes that will be used for full-road closures. There is a traffic diversion route map for each bridge upgrade site described below. Please find the maps in Appendix C: Traffic Diversion Routes.

Construction Accessway Trucking Route Drawings illustrate the proposed construction exit and entry locations and associated traffic routing to be implemented during the construction phase. There are two different types of maps:

- The TR drawings are based on the concept design drawings and show all permanent and temporary accessway gates to the SSFL work sites including entry and exit routes from adjacent roads. The TR drawings are provided in pdf format.
- The ATR drawings are street maps showing the proposed routes construction traffic will need to follow to access the worksites. The numbering and naming of the ATR identify which TR drawing belongs to which ATR drawing.

The two types of drawings are bundled together and assigned to each bridge upgrade site and work site compound and can be found in Appendix B: Construction Accessways Trucking Routes.

The **Construction Accessway Trucking Routes** provide the information needed for ARTC to control all construction traffic in accordance with the procedure specified in Table 5-2.

ARTC will update and implement the Construction Accessway Trucking Route Drawings, together with each contractor, to ensure construction traffic uses the accessways and identified roads appropriately.

The **Construction Accessway Trucking Routes** need to be read and implemented in conjunction with the **Spoil and Fill Management Sub Plan** of the CEMP.

The Traffic Management Plans, as outlined below, form the basis for the preparation of any TCPs required. As stipulated in Section 5.2 (Traffic Control Plans) all draft TCPs and associated Traffic and Pedestrian Management Plans prepared by the contractors will be reviewed against the TMPs of this CTMSP. This is to ensure compliance with all requirements of this CTMSP and in particular that

- there will be no concurrent works at adjacent bridge sites, and
- any out-of-hours works will have been approved by the DECC and Director-General.

The Traffic and Pedestrian Management Plans that will be prepared by the contractors along with the relevant TCPs will have specific timing and duration of works included. This information is not yet fully available, but will be included in this CTMSP as soon as possible.

4.1 Auburn Road, Birrong (Bankstown LGA)

4.1.1 Description of works

At Auburn Road, the existing road over rail bridge will need to be lengthened to allow the SSFL to pass underneath it. It is proposed that this will be conducted by closing one half of the road at a time to construct the new bridge supports and subsequently place the new spans. Change over, from working on one half of the bridge to the other, will occur during a weekend.

During the bridge extension construction phase, the roundabout at the Auburn Rd/ Wellington Rd/ Tewinga Rd intersection may need to be partly removed (or removed completely and subsequently reconstructed in a slightly different location). When the roundabout is not operational, manual intersection control may be required. Further details will be prepared by the Contractor (Arenco), once they have prepared a detailed works plan for these bridge works, which will outline the design of such round-a-bout alteration works, if alteration is required.

4.1.2 Existing environment and site specific issues

The alignment of Auburn Road, and the approaches of the side streets, results in an intersection on the southern side of the bridge that is currently serviced by a round-a-bout. Assuming the round-a-bout remains in service then the temporary one way arrangements on the southern approaches to the bridge will require careful traffic management measures to ensure safe negotiation of the existing round-a-bout. Pedestrian crossing points will need to be clearly defined to enable pedestrians to cross to the side of the bridge that is open without resulting in unsafe conflicts with cars navigating the round-a-bout.

4.1.3 Potential impacts and mitigation measures

It is a Condition of Project Approval that: *“at least one lane of Auburn Road Bridge remains open to traffic at all times during construction unless otherwise agreed by the Director-General in consultation with Relevant Councils or the Roads and Traffic Authority (as relevant)”*. CoA 58 (f). Therefore, any closure will be subject to Director-General’s approval consistent with the requirements of this condition.

For the half-road closures, the one lane of the bridge that will remain open will have alternating traffic direction controlled by flagmen or automated lights for the duration of the bridge works. Once one half of the bridge has been lengthened, the traffic will be routed onto the new works and the remaining half closed for reconstruction.

For the full-road closures (if ever required), traffic will be diverted to alternative crossing points. The closest alternative rail crossing points for the Auburn Road closure are at Cooper Road to the east (approximately 500 m away) and Woods Road to the west (approximately 700 m away), both of which are light traffic routes. The closest alternative crossing points for heavy vehicles could be at Joseph Street/ Rookwood Road to the east or Hector Street to the west (approximately 1.3 km and 1.5 km away respectively).

- As discussed above, the roundabout at the Auburn Rd/ Wellington Rd/ Tewinga Rd intersection may need to be partly removed (or removed completely and

subsequently reconstructed in a slightly different location) during the bridge extension construction (which is when the temporary full closure will be required). Hence it will not be possible for vehicles to pass through the Auburn Rd/ Wellington Rd/ Tewinga Rd intersection, nor to approach beyond Hill Street on Auburn Road to the south, and Stephenson Street on Wellington Road to the east (local access and emergency vehicles excepted).

- Woods Road is a light traffic route with parks and playing fields along most of its eastern length and residential areas on its western side. Woods Road crosses the rail line as a road underpass with a 5.0 m clearance. There are four roundabouts on Woods Road, with two on either side of the rail line (at Carlingford Street and at Wellington Road) approximately 100 m apart. For the northbound direction, the detour route would be Auburn Rd- Rodd St- Woods Rd- Carlingford St, and the reverse for southbound. Using this route for the southbound direction would require detour signage to commence at Park Road, Regents Park, to direct traffic wanting to proceed to the Auburn Road bridge to divert onto Carlingford Street: this would require complex sign instructions.
- An alternative western detour route would be (northbound) Auburn Rd- Stephenson St- Hill Rd- Wellington Rd- Woods Rd underpass- Carlingford St (and the reverse for southbound). This route requires using part of the local residential streets of Stephenson St and Hill Rd, but reduces the perception of detour as it stays in close proximity to the detoured location. This route also requires use of a length of Wellington Road which may be used by a significant volume of construction vehicle traffic for access into and out of the rail corridor.
- Cooper Road is also a light traffic route. There is a large Sydney Water site along its eastern length, and Birrong Girls High school and residential areas on its western side. The eastern detour route would be Auburn Rd- Rodd St- Cooper Rd- Bagdad St- Auburn Rd (and the reverse for southbound), with rail crossings at Rodd Street and Cooper Street. There are also two small schools at the corner of Bagdad Street and Auburn Road.
- Joseph Street/ Rookwood Road is a major arterial road that runs parallel to Auburn Road, with largely industrial uses on either side. Heavy vehicle access to and from Joseph St/ Rookwood Rd from Auburn Rd would be via either Amy Street to the north or Hume Highway/ Rookwood Road to the south. This detour route crosses the rail line as an underpass (on Joseph St) just south of Amy Street with an approximately 5.3 m clearance.

The preferred detour routes are:

- General traffic on Auburn Road heading south towards the rail crossing to be diverted east onto Bagdad Street, then Cooper Street – Rodd Street – back to Auburn Road. General traffic on Auburn Road heading north towards the rail crossing to be diverted east onto Rodd Street, then Cooper Street- Bagdad Street- back to Auburn Road.
- Heavy vehicles to be directed to use Amy Street – Joseph Street/ Rookwood Road – Hume Highway route. VMS to be placed on the approaches to this route, advising

heavy vehicles that Auburn Road bridge is closed and direct them to the alternative heavy vehicle route.

The section of Road that is being closed currently has no parking on it.

These alternative traffic routes will not require any specific capacity enhancement, as these routes will have sufficient capacity to accommodate the diverted traffic flows. The TCP will detail any special parking control measures that may be required near tight intersections to accommodate turning movements of diverted traffic (trucks).

All Construction traffic will be controlled when entering or departing the site by the site manager (under the direction of the Project Manager) in accordance with the management measures outlined in Table 5-2 to ensure that it follows the designated Construction Traffic Routes to help reduce the impacts of noise, dust, visual disturbance, road dilapidation and traffic conflicts.

4.2 Woods Road, Sefton (Bankstown LGA)

4.2.1 Description of works

At Woods Road, the SSFL will require the construction of a new rail bridge span over the road, beside the existing rail bridge. This will require alternate partial closure of the roadway for the construction of new pier on either side of the road, and a further full closure of the road when the new bridge deck is craned into place.

4.2.2 Existing environment and site specific issues

The Jim Ring Reserve playing fields, Birrong Swim Centre, and Birrong Bowling & Sports Club are located on the block along the eastern side of Woods Road, bounded by Wellington Rd, Gascoigne Rd, and Rodd St. Parking for the playing fields is generally accommodated on-street on Woods Road and Gascoigne Road, while both the swim centre and the bowling club have their own off-street parking. If the road closure occurs on weekend days that coincide with intensive use of these recreational facilities (particularly the playing fields), traffic around the fields may need to be managed. Further consultation with Council may result in the preferred days and times of road closures being Tuesdays and Thursdays in the middle of the day.

Safe and direct pedestrian access along Wellington Rd is to be maintained at all times. Where pedestrian detours are required (such as around the Woods Rd/ Wellington Rd intersection closure), the detour route should be as direct as possible, with good protection, directional signage, and priority. No cycleways have been identified in this location. However, wherever there are any road, intersection, or footpath closures, "Watch for pedestrians" and "Watch for cyclists" signs should be erected on the approaches to the road, intersection, or footpath closure area.

Existing traffic on Woods Road is generally local traffic. Woods Road is a light traffic route, so there is unlikely to be any heavy vehicle traffic to detour.

4.2.3 Potential impacts and mitigation measures

For the half-road closures, the one lane of the underpass that will remain open will have alternating traffic direction controlled by flagmen or automated lights for the duration of the bridge works. Once the new pier on one side of the road is in place, traffic will be routed onto that side while the traffic lane on the other side is closed and a new pier for the other side is constructed. When both piers are complete, Woods Road underpass would be closed while the new bridge deck is craned into place. The full-road closure may include closing the approaches to the Woods Road/ Wellington Road intersection to allow enough space for the heavy machinery required for the bridgeworks.

For the full-road closure, traffic would be diverted to alternative crossing points. The closest alternative rail crossing points for the Woods Road closure are at Hector Street to the west (approximately 800 m away) and Auburn Road to the east (approximately 700 m away).

- The Hector Street rail crossing is via an underpass with a 4.4 m clearance. There is a signalised intersection just north (within 100 m) of the underpass, and Wellington Road intersects with Hector Street immediately south of the underpass. Possible detour routes would be (northbound): Woods Rd- Rodd St- Hector St- Waldron Rd- Carlingford St- Woods Rd (reverse for southbound); or Woods Rd- Ernest St- Rose St- Wellington Rd- Hector St- Carlingford St- Woods Rd (reverse for southbound). The former route uses collector roads only, minimises turn movements and avoids use of Wellington Road (which will be a major construction vehicle route), whereas the latter route minimises the perception of detour as it maintains the least distance between the detour route and the original route.
- Auburn Road rail crossing is a rail overbridge. Access to Auburn Road from Woods Road would be via Rodd Street to the south (assuming closure of the Woods Rd/ Wellington Rd intersection) and Carlingford Street to the north.

Assuming the full closure of the Woods Road underpass includes closure of the Woods Road/ Wellington Road intersection (to accommodate heavy machinery when putting the new bridge deck spans into place), the following detour routes are recommended/ preferred:

- If the full closure occurs when the rail corridor access gates onto Wellington Road between Woods Road and Hector Street are being heavily used (hence resulting in significant construction vehicle traffic movements on Wellington Road), then the recommended detour route for general traffic would be (northbound) Woods Rd- Rodd St (west)- Hector St- Waldron Rd- Carlingford St- Woods Rd (reverse for southbound).
- It is also recommended that “road closed ahead, local traffic only” signs be placed at all approaches at the nearest intersections to the closure (that is, at Wellington Road/ Rose St, Woods Road/ Ernest St, Wellington Rd/ Gascoigne St, and Woods Rd/ Carlingford St), accompanied by signs directing drivers to the detour route.
- If Wellington Road is not being heavily used by construction vehicle traffic, an alternative detour route would be (northbound) Woods Rd- Ernest St- Rose St- Wellington Rd- Hector St- Carlingford St- Woods Rd (reverse for southbound).

- Woods Road is a light traffic route, so no heavy vehicles or buses are anticipated to require diversion routes.

The traffic detour routes only coincide with part of the 910 bus route (on Hector Street between Rodd St and Proctor Pde). No significant conflicts with bus operations are expected to occur.

The section of Woods Road that is being closed currently has no parking on it.

These alternative traffic routes will not require any specific capacity enhancement, as these routes will have sufficient capacity to accommodate the diverted traffic flows. The traffic control plans will detail any special parking control measures that may be required near tight intersections to accommodate turning movements of diverted traffic (trucks).

All Construction traffic will be controlled when entering or departing the site by the site manager (under the direction of the Project Manager) in accordance with the management measures outlined in Table 5-2 to ensure that it follows the designated Construction Traffic Routes to help reduce the impacts of noise, dust, visual disturbance, road dilapidation and traffic conflicts.

4.3 Hector Street, Chester Hill (Bankstown LGA)

4.3.1 Description of works

At Hector Street, the SSFL will require the construction of a new span over the street beside the existing rail-over-road bridge. This will require a partial closure of the roadway for the construction of a new pier beside the road, and a further complete closure of the road when the new bridge deck is craned into place.

At least two full closures of the bridge will be required, each during a weekend. However, these will only be for a few hours at a time.

4.3.2 Existing environment and site specific issues

Traffic intersections both north and South of Hector Street Rail-Over-Road Bridge currently have an average level of performance during the peak periods. Traffic can queue through both of these intersections and right-hand turns at the southern intersection (between Hector Street and Wellington Rd) are not permitted.

Further consultation with Council may result in the preferred days and times of road closures being Tuesdays and Thursdays, in the middle of the day, to avoid the need to reroute the higher traffic volumes.

Safe and direct pedestrian access along both Hector Street and Wellington Rd is to be maintained at all times. Where pedestrian detours are required (such as around the Hector Street/ Wellington Rd intersection closure), the detour route should be as direct as possible, with good protection, directional signage, and priority. No cycleways have been identified in this location. However, wherever any road, intersection, or footpath closures, "Watch for pedestrians" and "Watch for cyclists" signs should be erected on the approaches to the road, intersection, or footpath closure area.

Existing traffic on Woods Road is generally local traffic. Woods Road is a light traffic route, so there is unlikely to be any heavy vehicle traffic to detour.

4.3.3 Potential impacts and mitigation measures

For the half-road closures, the one lane of the underpass that will remain open will have alternating traffic direction controlled by flagmen or automated lights for the duration of the bridge works. Once the new pier on one side of the road is in place, traffic will be routed onto that side while the traffic lane on the other side is closed and a new pier for the other side is constructed. When both piers are complete, the Hector Street underpass would be closed while the new bridge deck is craned into place. The full-road closure may include closing the whole of the Hector St/ Wellington Rd intersection (and part of the approaches) to allow enough space for the heavy machinery required for the bridgeworks.

For the full-road closure, traffic would be diverted to alternative crossing points. The closest alternative rail crossing points for the Hector Street closure are at Chester Hill Road to the west (approximately 600 m away) and Woods Road to the east (approximately 850 m away).

- Chester Hill Road is a road overbridge crossing of the rail line, located just east of Chester Hill railway station. It is a busy local collector road serving the two sides of Chester Hill village centre (located on parts of Waldron Road, Wellington Road, and Chester Hill Road), and is used by bus routes serving the railway station. The detour route would be (northbound) Hector St- Proctor Pde- Chester Hill Rd- Waldron Rd- Hector St. However, to minimise congestion through the centre, it is preferable to avoid using Chester Hill Road as the alternative crossing point for Hector Street through-traffic.
- Woods Road is a light traffic route with parks and playing fields along most of its eastern length and residential areas on its western side. Woods Road crosses the rail line as a road underpass with a 5.0 m clearance. Council has advised that it prefers that Proctor Parade east of Hector St not be used for detouring traffic. Hence the detour route using the Woods Road underpass would be (northbound) Hector St- Rodd St- Woods St- Carlingford St- Waldron Rd- Hector St (reverse for southbound). This detour route is almost 50% longer than that using Chester Hill Rd.

Assuming the full closure of the Hector Street underpass includes closure of the Hector St/ Wellington Rd intersection (to accommodate heavy machinery when putting the new bridge deck spans into place), the following detour routes are recommended/ preferred:

- If the full closure occurs when the rail corridor access gates onto Wellington Road between Woods Road and Hector Street are being heavily used (hence resulting in significant construction vehicle traffic movements on Wellington Road), then the recommended detour route for general traffic would be (northbound) Hector St- Rodd St- Woods Rd- Carlingford St- Waldron Rd- Hector St (reverse for southbound). Variable message signs with “Hector St underpass closed. Use detour” and “detour” signage should be placed facing approaching traffic at the Hector St/ Rodd St intersection.
- It is also recommended that “road closed ahead, local traffic only” signs be placed at all approaches at the nearest intersections to the closure (that is, at Wellington Rd/

Shaw La, Hector St/ Wellington Rd (west), and Hector St/ Waldron Rd), accompanied by signs directing drivers to the detour route.

- Heavy vehicles to be advised on Hume Highway that Hector Street underpass is closed and to use the Miller Street crossing instead. VMS to be placed on approaches to Miller Street (for eastbound traffic) and to Hector Street (for westbound traffic)

If only partial closure of the Hector St/ Wellington Rd intersection is required (which allows a right-hand turn from Hector St into Wellington Rd east), and Wellington Road is not being heavily used by construction vehicle traffic, an alternative detour route would be (northbound) Hector St- Wellington Rd- Woods Rd- Carlingford St- Waldron Rd- Hector St (reverse for southbound). In this case, "road closed ahead, local traffic only" signs would be placed at Wellington Rd/ Shaw La, Hector St/ Wellington Rd (west), and Hector St/ Waldron Rd), accompanied by signs directing drivers to the detour route.

The section of Hector Street that is being closed currently has no parking on it.

These alternative traffic routes will not require any specific capacity enhancement, as these routes will have sufficient capacity to accommodate the diverted traffic flows. The traffic control plans will detail any special parking control measures that may be required near tight intersections to accommodate turning movements of diverted traffic (trucks).

All Construction traffic will be controlled when entering or departing the site by the site manager (under the direction of the Project Manager) in accordance with the management measured outlined in Table 5-2 to ensure that it follows the designated Construction Traffic Routes to help reduce the impacts of noise, dust, visual disturbance, road dilapidation and traffic conflicts.

4.4 Chester Hill Road, Chester Hill (Bankstown LGA)

4.4.1 Description of works

At Chester Hill Road, the existing road-over-rail bridge will need to be lengthened to allow the SSFL to pass underneath it. It is proposed that this will be conducted by closing one half of the road at a time to construct the new bridge supports and subsequently place the new spans. Once one half of the bridge has been lengthened, the traffic will be routed onto the new works and the remaining half closed for reconstruction.

The length of time for each half closure is expected to be no more than 2 months. At least two full closures of the bridge will be required, each during a weekend. However, these will only be for a few hours at a time.

4.4.2 Existing environment and site specific issues

Chester Hill Road is a road overbridge crossing of the rail line, located just east of Chester Hill railway station. It is a busy local collector road serving the two sides of Chester Hill village centre (located on parts of Waldron Road, Wellington Road, and Chester Hill Road), and is used by bus routes serving the railway station. As Chester Hill Road also provides the only

pedestrian access across the railway between the two sides of Chester Hill town centre, there are also strong pedestrian flows across the bridge.

4.4.3 Potential impacts and mitigation measures

For the half-road closures, the one lane of the bridge that will remain open will predominantly northbound traffic direction controlled by flagmen, with southbound Bus only being allowed through by traffic controllers: the close proximity of the traffic lights immediately north of the bridge on Waldron Street has the potential to cause queuing conflicts for the one open lane of the Chester Hill Road bridge if south bound general traffic is also to be allowed, so manual control of the single lane on the Chester Hill Road bridge will be required, allowing for south bound busses only. Southbound general traffic will be detoured to both Hector Street or Miller Street Rail crossings.

If northbound queue lengths become excessive, it may be necessary to detour some general traffic to an alternative crossing point, with “buses and emergency vehicles only” allowed to proceed over the bridge. The closest alternative rail crossing points for the Chester Hill Road bridge closure are at Miller Street to the west (approximately 700 m away) and Hector Street to the east (approximately 600 m away).

- The Hector Street rail crossing is via an underpass with a 4.4 m clearance. There is a signalised intersection just north (within 100 m) of the underpass, and Wellington Road intersects with Hector Street immediately south of the underpass. Council prefers that Wellington Rd not be used to access the detour route, and that use of Proctor Pde is preferred. The detour route would therefore be (northbound): Chester Hill Rd- Proctor Pde- Hector St- Waldron Rd (reverse for southbound).
- Miller Road is a major north-south traffic route through the Villawood industrial area. The detour route would be (northbound) Chester Hill Rd- Proctor Pde- Orchard Rd- Sir Thomas Mitchell Rd- Miller Rd- Waldron Rd, then to the northern end of Chester Hill Road (reverse for southbound). This route is a longer detour, but may suit traffic that was either intending to head west from Chester Hill Road, or coming from the west to approach Chester Hill Road.

The preferred detour routes are:

- For the full closure (mostly only at night), and any half closures that require the exclusion of general traffic (thereby only allowing buses and emergency access across the bridge), general traffic on Chester Hill Road is to be detoured onto Hector Street: Chester Hill Rd- Proctor Pde- Hector St- Waldron Rd (reverse for southbound).
- Access across Chester Hill Road for pedestrians/ cyclists, buses, and emergency vehicles should be maintained at all times unless a strict full closure is required. Full closures should only be implemented in off-service bus periods (such as night-time). If buses or emergency vehicles are required to be detoured, it is recommended that they be allowed to use the shortest detour route (northbound): Chester Hill Rd- Wellington Rd- Hector St- Waldron Rd- Chester Hill Rd (reverse for southbound).

Pedestrian access across one side of the bridge or the other will need to be maintained at all times.

The section that is being closed currently has no parking on it.

These alternative traffic routes will not require any specific capacity enhancement, as these routes will have sufficient capacity to accommodate the diverted traffic flows. The TCP will detail any special parking control measures that may be required near tight intersections to accommodate turning movements of diverted traffic (trucks).

All Construction traffic will be controlled when entering or departing the site by the site manager (under the direction of the Project Manager) in accordance with the management measures outlined in Table 5-2 to ensure that it follows the designated Construction Traffic Routes to help reduce the impacts of noise, dust, visual disturbance, road dilapidation and traffic conflicts.

4.5 Miller Road, Chester Hill (Bankstown LGA)

4.5.1 Description of work

At Miller Road, the existing road-over-rail bridge will need to be lengthened to allow the SSFL to pass underneath it. It is proposed that this will be conducted by closing half of the road at a time to construct the new bridge supports and subsequently place the new spans. Occasional full closures of the bridge may also be required, however these would only be during a weekend.

The expected construction timeframe is 3 months, with half-road closures in place for a total of 1 month at a time.

4.5.2 Existing environment and site specific issues

Miller Road is a major north-south traffic route through the Villawood industrial area and therefore carries a significant proportion of commercial and freight vehicles (including B-doubles). Major traffic generators in the industrial area include: the Sydney Logistics Terminal, BHP, State Parcel Centre, and the Abbott Industrial Estate.

A significant proportion of traffic on Miller Road are commercial and freight vehicles serving the industrial areas.

4.5.3 Potential impacts and mitigation measures

For the half-road closures, the one lane of the bridge that will remain open will have alternating traffic direction controlled by flagmen or automated lights for the duration of the bridge works. Once half of the bridge has been lengthened, the traffic will be routed onto the new half of the bridge and the other half closed for reconstruction.

For the full-road closures, traffic would be diverted to alternative crossing points. The closest alternative rail crossing points for the Miller Road closure are at Chester Hill Road and Hector Street to the east (approximately 700 m and 1.2 kms away respectively) and Woodville Road to the west (approximately 1.3 kms away).

- Chester Hill Road is a road overbridge crossing of the rail line, located just east of Chester Hill railway station. It is a busy local collector road serving the two sides of Chester Hill village centre (located on parts of Waldron Road, Wellington Road, and Chester Hill Road), and is used by bus routes serving the railway station. Therefore to minimise congestion through the centre, it is preferable to avoid using Chester Hill Road as the alternative crossing point for Miller Road through-traffic.
- The Hector Street rail crossing is via an underpass with a 4.4 m clearance. While this crossing would be the preferred route for detouring through-traffic, it requires traffic to drive past the Chester Hill Road crossing and thereby be detoured further. In practice, it may be appropriate to use Chester Hill Road as the general traffic detour crossing point, with detours to the Hector Street crossing when the Chester Hill Road crossing becomes congested.
- Woodville Road is an arterial road, which can provide heavy vehicle access to the industrial areas on both sides of the rail line (via Christina Road to the north, and Llewellyn Avenue to the south), and connection to Miller Street.

The following detour routes are recommended/ preferred:

- General traffic on Miller Road heading south towards the rail crossing to be diverted east onto Waldron Road, then south onto either Chester Hill Road or Hector Street. General traffic on Miller Road heading north to be diverted east off Miller Road at Sir Thomas Mitchell Road, then Orchard Rd – Proctor Pde – Chester Hill Rd.
- Heavy vehicle traffic wanting to access Miller Road north of the rail line would be directed to use the Woodville Road- Christina Road – Miller Road route, while heavy vehicle traffic wanting to access Miller Road south of the rail line would be directed to use the Woodville Road – Llewellyn Avenue – Marple Avenue – Bileola Street – Miller Road route.

The section that is being closed currently has no parking on it.

These alternative traffic routes will not require any specific capacity enhancement, as these routes will have sufficient capacity to accommodate the diverted traffic flows. The TCP will detail any special parking control measures that may be required near tight intersections to accommodate turning movements of diverted traffic (trucks).

It is also recommended that prior to the half- and full-road closures of Miller Road, businesses in the industrial area will be advised to instruct their heavy vehicle traffic of the proposed detour routes. To minimise heavy vehicle delays and conflicts at the Miller Road bridge during half-closures, heavy vehicles may be advised to use the detour routes.

All Construction traffic will be controlled when entering or departing the site by the site manager (under the direction of the Project Manager) in accordance with the management measured outlined in Table 5-2 to ensure that it follows the designated Construction Traffic Routes to help reduce the impacts of noise, dust, visual disturbance, road dilapidation and traffic conflicts.

4.6 Sandal Crescent, Carramar/ Moore Street, Canley Vale (Bankstown/ Fairfield LGAs)

4.6.1 Description of works

Across Prospect Creek and Sandal Crescent, Carramar and Moore Street, Canley Vale, the SSFL will require the construction of a new span over the street beside the existing rail bridge. This will require a partial closure of both Sandal Crescent and Moore Street (either simultaneously or progressively) road underpasses for the construction of new piers beside the roads and across Prospect Creek. A further complete closure of the roads would be required when the new bridge deck sections across the roads are craned into place.

In addition, construction of the bridge piers on either side of Prospect Creek and placement of the bridge deck(s) across the Creek section may require part-or full- closure of both Sandal Crescent and Moore Street to accommodate machinery and/or materials.

The length of time for each half closure is expected to be approximately 2 months. At least two full closures of the bridge will be required, each during a weekend. However, each of these will only occur for a few hours at a time.

4.6.2 Existing environment & site specific issues

Sandal Crescent and Moore Street are local roads, which would only carry local traffic (no through traffic, buses, or heavy vehicles), but the underpasses provide an important local rail crossing function. The underpass has height and width restrictions, consequently no heavy vehicles are currently using or are to use this route.

4.6.3 Potential impacts and mitigation measures

For the half-road closures, the one lane of each of the underpasses that will remain open will have alternating traffic direction controlled by flagmen or automated lights for the duration of the bridge works. Once the new pier on one side of the road is in place, traffic will be routed onto that side while the traffic lane on the other side is closed and a new pier for the other side is constructed. When both piers are complete, the underpasses would be closed while the new bridge deck is craned into place.

For the full-road closure, traffic would be diverted to alternative crossing points.

- For Sandal Crescent, the closest alternative rail crossing point is in the east, at The Horsley Drive (approximately 700m away). The detour route would be (from the north side of Sandal Cres): Sandal Cres- Ruby St- Mitchell St- The Horsley Dr- Hume Hwy- Quest Av- Waterside Cres- Wattle Av- Sandal Cres.
- For Moore Street, the closest alternative rail crossing point is to the southwest, at Bareena Street (approximately 1.5 km away). The detour route would be (from the north side of Moore Street): Moore St- Prospect Rd- Ada St- Premier St- Senior St- Carcool St- First Av- Bareena St- Mackenzie St- Lansdowne Rd- Fraser Rd- Moore St. This route minimises the detour distance, and avoids diverting vehicles past Canley Vale High School. **(Please be aware that Lansvale Primary School**

has an entrance on Lansdowne Rd thus speed limits between 8.00-9.30am and 2.30-4.00pm will need to be observed.)

The section that is being closed currently has no parking on it.

These alternative traffic routes will not require any specific capacity enhancement or parking control measures, as these routes will have sufficient capacity to accommodate the diverted traffic flows.

All Construction traffic will be controlled when entering or departing the site by the site manager (under the direction of the Project Manager) in accordance with the management measured outlined in Table 5-2 to ensure that it follows the designated Construction Traffic Routes to help reduce the impacts of noise, dust, visual disturbance, road dilapidation and traffic conflicts.

4.7 Bareena Street, Canley Vale (Fairfield LGA)

4.7.1 Description of works

At Bareena Street the existing road over rail bridge will need to be lengthened to allow the SSFL to pass underneath it. It is proposed that this will be conducted by closing one half of the road at a time to construct the new bridge supports and subsequently place the new spans. At least two full closures of the bridge will also be required, each during a weekend.

4.7.2 Existing environment & site specific issues

This bridge over the railway carries a significant amount of local through traffic (not regional). It also provides access to the main point of access to Canley Vale East. Any closure of the Bareena Street over-bridge will limit access into Canley Vale East and should be minimised. Close-by the worksite is located the Polish Social Club who have raised concerns regarding impacts resulting from construct (noise, dust etc) as well as issues regarding limited access due to potential road closures. They have been informed by ARTC that no road closures will occur in any manner that would prevent access (by any currently available mode) to the Polish Club.

4.7.3 Potential impacts and mitigation measures

Firstly, it should be noted that the Bareena Street bridge has previously been completely closed by Council for road upgrading works, without significant incident, for a period of up to 3 months. The SSFL project is currently not proposing closures of this nature, only occasional complete closures on some nights.

For the half-road closures, the one lane of the bridge that will remain open will have alternating traffic direction controlled by flagmen or automated lights for the duration of the bridge works. Once one half of the bridge has been lengthened, the traffic will be routed onto the new works and the remaining half closed for reconstruction.

For the full-road closures, the only one alternative rail crossing point nearby is at the Cabramatta Road overbridge (approximately 800m to the south).

The preferred detour route for the Bareena Street closure, for both general traffic and heavy vehicles, is (from the east): Bareena St- Broomfield St- Longfield St- Cumberland St- Cabramatta Rd East- Cabramatta Rd West- Hill St- McBurney Rd- Railway Pde (reverse for from the west). This route bypasses both sides of the busy Cabramatta Town Centre to minimise through movements contributing to traffic congestion in the Town Centre.

The section that is being closed has currently no parking on it.

These alternative traffic routes will not require any specific capacity enhancement or parking control measures, as these routes will have sufficient capacity to accommodate the diverted traffic flows.

All Construction traffic will be controlled when entering or departing the site by the site manager (under the direction of the Project Manager) in accordance with the management measured outlined in Table 5-2 to ensure that it follows the designated Construction Traffic Routes to help reduce the impacts of noise, dust, visual disturbance, road dilapidation and traffic conflicts.

4.8 Sussex Street, Cabramatta (Fairfield LGA)

4.8.1 Description of works

At Sussex Street, the SSFL will require the construction of a new rail bridge span over the road, beside the existing rail bridge. This will require alternate partial closure of the roadway for the construction of new pier on either side of the road, and a further full closure of the road when the new bridge deck is craned into place.

4.8.2 Existing environment and site specific issues

The Cabramatta Creek Reserve, surrounding low density housing and local schools are all located on either side of this road under rail bridge. Sussex Street provides the only vehicular access between all of these locations for about 700m (back to the Cabramatta Road Overbridge). Pedestrians and Cyclists also use this underpass frequently.

Safe and direct pedestrian access along Shepherd Street is to be maintained at all times. Where pedestrian detours are required (such as around the closure), the detour route should be as direct as possible, with good protection, directional signage, and priority. The Main North South Rail Trail Cycleway has been identified in this location. However, it is not likely to be directly or significantly effected by the partial or full closure of the road underpass. Wherever there are any road, intersection, or footpath closures, "Watch for pedestrians" and "Watch for cyclists" signs should be erected on the approaches to the road, intersection, or footpath closure area.

Existing traffic on Sussex Street is generally only local traffic. Sussex Street is considered a light traffic route, so there is unlikely to be any heavy vehicle traffic to detour.

4.8.3 Potential impacts and mitigation measures

For the half-road closures, the one lane of the underpass that will remain open will have alternating traffic direction controlled by flagmen or automated lights for the duration of the

bridge works. Once the new pier on one side of the road is in place, traffic will be routed onto that side while the traffic lane on the other side is closed and a new pier for the other side is constructed. When both piers are complete, Sussex Street underpass would be briefly closed while the new bridge deck is craned into place. The full-road closure may include closing the approaches to the underpass to allow enough space for the heavy machinery required for the bridgeworks.

For the full-road closure, traffic will need to be diverted to alternative crossing points. The closest alternative rail crossing point for the Sussex Street closure would be Cabramatta Road to the North (approximately 700 m away), or The Hume Highway to the South (approximately 2000m away). Both of these routes are classified RTA roads and the increase in traffic on either as a result of this closure would not be significant.

The section that is being closed currently has no parking on it.

These alternative traffic routes will not require any specific capacity enhancement or parking control measures, as these routes will have sufficient capacity to accommodate the diverted traffic flows.

Assuming the full closure of the Sussex Street underpass, the community will be significantly inconvenienced. It is recommended that the closures be restricted to weekends only and then only for a few hours on either day when possible.

This closure is not likely to have any impacts on Bus routes as no bus routes have currently been identified as using this street. No significant conflicts with bus operations are expected to occur.

All Construction traffic will be controlled when entering or departing the site by the site manager (under the direction of the Project Manager) in accordance with the management measures outlined in Table 5-2 to ensure that it follows the designated Construction Traffic Routes to help reduce the impacts of noise, dust, visual disturbance, road dilapidation and traffic conflicts.

4.9 Shepherd Street, Liverpool (Liverpool LGA)

4.9.1 Description of works

At Shepherd Street, the SSFL will require the construction of a new rail bridge span over the road, beside the existing rail bridge. This will require alternate partial closure of the roadway for the construction of new pier on either side of the road, and a further full closure of the road when the new bridge deck is craned into place.

4.9.2 Existing environment and site specific issues

The Light Horse Reserve, a small medium density Housing precinct and an old industrial estate are all located on the eastern side of this road under rail bridge. Shepherd street provides the only vehicular access to all of these locations and as such can not be closed to public access for any length of time other than for very short periods (ie 30 minutes max). Closures that may need to be longer than this will only be possible with extensive community consultation prior to the proposed closure with adequate notice. If the road closure occurs on weekend days that coincide with intensive use of the industrial facilities, traffic approaching

either side of the bridge will quickly build up, needing to be urgently managed. Further consultation with Council may result in the preferred days and times of road closures being established.

Safe and direct pedestrian access along Shepherd Street is to be maintained at all times. Where pedestrian detours are required (such as around the closure), the detour route should be as direct as possible, with good protection, directional signage, and priority. No cycleways have been identified in this location. However, wherever there are any road, intersection, or footpath closures, "Watch for pedestrians" and "Watch for cyclists" signs should be erected on the approaches to the road, intersection, or footpath closure area.

Existing traffic on Shepherd Street is a mix of general local traffic and light industrial traffic. Shepherd Street is considered a light traffic route, so there is unlikely to be any heavy vehicle traffic to detour.

4.9.3 Potential impacts and mitigation measures

For the half-road closures, the one lane of the underpass that will remain open will have alternating traffic direction controlled by flagmen or automated lights for the duration of the bridge works. Once the new pier on one side of the road is in place, traffic will be routed onto that side while the traffic lane on the other side is closed and a new pier for the other side is constructed. When both piers are complete, Shepherd Street underpass would be briefly closed while the new bridge deck is craned into place. The full-road closure may include closing the approaches to the underpass to allow enough space for the heavy machinery required for the bridgeworks.

For the full-road closure, traffic can not be diverted to alternative crossing points. The closest alternative rail crossing point for the Shepherd Street closure could be Woodbrook Road to the South (approximately 1200 m away) however this route would not be a paved road and would only be available during an emergency.

- The Woodbrook Road rail crossing is via an underpass with a 2.4 m clearance. Access to this underpass would be via an unpaved roadway passing over a private property recently acquired by Liverpool City Council but leased to its previous industrial owners. Access across this site would also need to be negotiated.

Assuming the full closure of the Shepherd Street underpass, the community will be significantly inconvenienced, if the closure is to be for a duration of more than 30 minutes as there is no appropriate alternative access.

This Closure is not likely to have any impacts on Bus routes as no bus routes have currently been identified as using this street. No significant conflicts with bus operations are expected to occur.

The section that is being closed currently has no parking on it.

Consideration will need to be given in the TCP to the specific timing of temporary closures, as no alternative road access is available. Access for pedestrians, Cyclist and emergency vehicles will be maintained at all times through the temporary use of alternate portals under the existing bridge.

All Construction traffic will be controlled when entering or departing the site by the site manager (under the direction of the Project Manager) in accordance with the management measures outlined in Table 5-2 to ensure that it follows the designated Construction Traffic Routes to help reduce the impacts of noise, dust, visual disturbance, road dilapidation and traffic conflicts.

4.10 Woodbrook Road, Casula (Liverpool LGA)

4.10.1 Description of works

Woodbrook Road is a road under rail bridge passing under the railway line at Casula. The vertical clearance under the existing brick arch rail bridge is low, too low for most trucks or lorries. The new rail bridge will be built over the roadway on the eastern side of the existing rail over road bridges, and will not have significantly higher clearance than the existing underpass. Woodbrook Road only provides access to the former Liverpool City Golf Course which is currently disused and has been proposed as a potential stockpile location for the construction of the SSFL project. Closure of the underpass is not considered to be likely to cause a significant problem for the community as this route does not provide access to any residential or publicly accessible lands. The existing underpass currently has gates which are often locked.

4.10.2 Existing environment and site specific issues

This location does not have any significant environmental or site specific issues that need to be considered as part of this TMP. Access by pedestrians to the former Golf Course and adjoining lands will be restricted by the proposed works, however these lands are not currently considered to be open to the public.

4.10.3 Potential impacts and mitigation measures

Closure of the underpass at Woodbrook Road may cause some inconvenience to local residents who are using it to gain unauthorised access to the currently non-accessible lands along the shore of the Georges River. Should pedestrian access be required, this will be subject to legality and permissibility of access in consultation with the landowner, that being Liverpool City Council.

As no traffic currently uses this underpass there will be no significant impacts on the performance of the local traffic network.

All Construction traffic will be controlled when entering or departing the site by the site manager (under the direction of the Project Manager) in accordance with the management measures outlined in Table 5-2 to ensure that it follows the designated Construction Traffic Routes to help reduce the impacts of noise, dust, visual disturbance, road dilapidation and traffic conflicts.

4.11 Sefton Level Crossing (Bankstown LGA)

4.11.1 Description of works

The relocation of the current level crossing at the Sefton triangle is required as part of the SSFL. The level crossing is required to enable safe access for maintenance staff to the RailCorp Depot within the land bounded by the connections between the Bankstown Line and the New South Line.

4.11.2 Existing environment and site specific issues

The current crossing is located across the west chord of the triangle, linking the Bankstown Line with the New South Line. Access is provided off Wellington Road, between Hill Road and Royal Avenue.

The relocation of the private level crossing to the North Chord of the Sefton triangle was proposed by RailCorp and designed in accordance to the RailCorp Infrastructure Engineering Standard ESC 520. Access to this location is provided through the existing RailCorp depot, located off Carlingford Street, between Guelph Street and Clapham Road.

4.11.3 Potential impacts and mitigation measures

Due to the very low traffic volumes using the private level crossing there will be no adverse impact on the surrounding road network from the new crossing. The connection point for the proposed level crossing to the road network will be via a reconfigured existing gate, which currently provides access into the RailCorp depot on Carlingford road.

The increase in traffic connecting to the road network through this gate will not be significant. The gate is located on a straight section of Carlingford Road, about 30m from the start of the curve in the road. Sighting around the curve is adequate and turning movements are not likely to generate any additional impacts to road operation or performance.

There will be some construction traffic on Carlingford Street during the instalment of the new level crossing. The master programme of works will take into account that the construction of the level crossing should not be undertaken at the same time as works at Woods Road when road closures are required.

All Construction traffic will be controlled when entering or departing the site by the site manager (under the direction of the Project Manager) in accordance with the management measured outlined in Table 5-2 to ensure that it follows the designated Construction Traffic Routes to help reduce the impacts of noise, dust, visual disturbance, road dilapidation and traffic conflicts.

4.12 Sefton Park Junction site compound, Regents Park (Bankstown LGA)

4.12.1 Description of works

Excavation

Significant excavation earthworks will occur at Sefton Park junction over a total period of up to 20 months. Approximately 46,000 m³ (69,000 tonnes) of fill material is expected to be excavated from the site, of which potentially 100% is suitable for reuse in other SSFL work sites that require additional fill. All fill is likely to be carried to the main stockpile area at Casula unless it can be used in one of the other work sites straight away.

Construction

Later stages of work at Sefton Park junction involve construction of the cutting walls and bridging structure to support the Bankstown Lines above, as well as the lengthening of the Auburn Road Overbridge. This would require the delivery of materials, the use of heavy vehicles and activity occurring over many months. The site compound is proposed to be located in Birrong Girls High School will also be used to store materials that cannot be securely stored at other nearby sites.

4.12.2 Existing environment & site specific issues

The compound is to be located on the lower soccer field of Birrong Girls High School. The site is bounded on two sides by the existing Railway Corridors of the Bankstown Line and the Chullora Good Line. There is a pocket of bushy regrowth in the north-Western tip of the site which is proposed to be securely fenced off and sign posted "no entry - Bush Regeneration Area". The school buildings are on the eastern and southern side of the proposed compound, separated from it by yet other play fields/playground areas. The Construction Contractor, Arencos, has negotiated with Birrong Girls High, and the Dept of Education, to use the site for the duration of the works and will reinstate a better rebound-ace surface for the courts with a three tire concrete seating area on two sides (the up-hill sides) with landscaped garden, once the site is vacated.

The site has no residential properties adjoining it and all surface drainage appears to flow to the adjoining Rail Corridor.

Construction Traffic Noise will need to be carefully monitored (in accordance with the Construction Noise Management Sub-Plan), and regular discussions with the school will be required to ensure that noise does not occur during sensitive exam periods. Removal of Spoil Stockpiles might best be done after school hours or on Saturdays.

4.12.3 Potential impacts and mitigation measures

It is anticipated that large semi-trailer and dog trailer trucks would be used to transport the fill, capable of carrying 14, 15 or 19 tonnes of material. Vehicles would enter at a gate off Teresa Street from Marmion to Cooper Road, or from Avalon and Rodd Streets to Auburn Road arriving via Hume Highway – Auburn Road – Bagdad Street – Cooper Road; or Rookwood Road – Bruncker Road – Cooper Road, and exit at the same gate, using the same roads as entry. Council has advised that Cooper Road should not be used for heavy vehicle access

unless unavoidable (such as when Auburn Road bridge is closed). At peak excavation periods up to 12 trucks an hour may pass through the Sefton Park Junction site. Other large excavation and earth moving equipment may be kept on the site for certain works at various times. This equipment will also need to access the site from time to time and will follow all the same conditions for other construction traffic.

All Construction traffic will be controlled when entering or departing the site by the site manager (under the direction of the Project Manager) in accordance with the management measured outlined in Table 5-2 to ensure that it follows the designated Construction Traffic Routes to help reduce the impacts of noise, dust, visual disturbance, road dilapidation and traffic conflicts.

The number of staff and the resulting parking requirements are yet to be fully specified by the contractor undertaking the work at Sefton Park Junction. Current Compound designs indicate that all expected parking requirements can be provided on-site. Staff access to the compound would be via the same access routes as for construction vehicles.

4.13 Chester Hill Road site compound (Bankstown LGA)

4.13.1 Description of works

Excavation

Excavation earthworks will occur either side of Chester Hill Road Overbridge over a total period of up to 6 months. Approximately 6,000 m³ (9,000 tonnes) of fill material is expected to be excavated from the site, of which potentially 100% is suitable for reuse in other SSFL work sites that require additional fill. All fill is likely to be carried to the main stockpile area at Casula unless it can be used in one of the other work sites straight away. No spoil or fill will be transported through this site as it is primarily for the construction of the lengthening of the Chester Hill Road overbridge.

Construction

Later stages of work at Chester Hill Road Overbridge Approach Cutting involve construction of the cutting walls and bridging structure to support the lengthening of the Chester Hill Road Overbridge. This would require the delivery of materials, the use of heavy vehicles and activity occurring over many months. The site compound is proposed to be located in Nugent Park beside Chester Hill Road, immediately beside the rail corridor, will also be used to store materials that cannot be securely stored at other nearby sites.

4.13.2 Existing environment & site specific issues

The compound is to be located on a small part of Nugent Park beside Chester Hill Road, immediately beside the rail corridor. The site is bounded on two sides by roads, by the railway to the north and by one residential property to the west (however there will remain most of the park on this side of the compound). The Construction Contractor Arengo has negotiated with Bankstown Council to use the site for the duration of the works and will reinstate a better landscaped garden once the site is vacated.

All surface drainage appears to flow to either the adjoining Rail Corridor or the streets. New Drains from the Compound will drain to the rail corridor.

Construction Traffic Noise will need to be carefully monitored (in accordance with the Construction Noise Management Sub-Plan), and regular discussions with both Council and the CLG will be required to ensure that noise does not occur during sensitive times. Removal of Spoil will not occur through this compound, but from nearby construction accessway gates.

4.13.3 Potential impacts and mitigation measures

It is anticipated that only a small number of staff cars would ever need to access this compound. Vehicles would enter at a gate off Wellington Road from Chester Hill Road, arriving via Hume Highway – Chester Hill Road Wellington Road, and exit at the same gate, using the same roads as entry. Council has advised that Chester Hill Road will be suitable for use for a limited number of construction vehicles when required. Occasionally, large excavation and earth moving equipment may be kept on the site for certain works at various times. This equipment will also need to access the site from time to time and will follow all the same conditions for other construction traffic.

All Construction traffic will be controlled when entering or departing the site by the site manager (under the direction of the Project Manager) in accordance with the management measured outlined in Table 5-2 to ensure that it follows the designated Construction Traffic Routes to help reduce the impacts of noise, dust, visual disturbance, road dilapidation and traffic conflicts.

The number of staff and the resulting parking requirements are yet to be fully specified by the contractor undertaking the work at Chester Hill Road Overbridge Compound. Current Compound designs indicate that all expected parking requirements can be provided on-site. Staff access to the compound would be via the same access routes as for construction vehicles.

4.14 Woodville Road site compound (Bankstown LGA)

4.14.1 Description of works

Construction

The Woodville Road Site Compound is primarily needed to facilitate the construction of the new trackwork in the vicinity of Leightonfield Yard and may also be used to service the Miller Road Lengthening that is also nearby. This would require the delivery of materials, the use of heavy vehicles and activity occurring over many months. The site compound is proposed to be located in the unused road reserve between the southern approaches of Woodville Road bridge (over the rail Line) and the adjoining Llewellyn Ave. The Rail Corridor is located immediately to the northern side of this proposed compound. This site may be used to store materials that cannot be securely stored at other nearby sites.

4.14.2 Existing environment & site specific issues

The compound is to be located on a small part of land between Woodville road and Llewellyn Ave, immediately beside the rail corridor. The site is three sided, bounded on two sides by roads and by the railway to the north. The surrounding area is industrial land, the other side of Woodville Road is a local commercial area. The Construction Contractor Arenco has negotiated with the RTA, who is the owner of the land, for the use of the site for the duration of the works and will reinstate a better landscaped area once the site is vacated.

All surface drainage appears to flow to either the adjoining Rail Corridor or the streets. New Drains from the Compound will drain to either the street or to the rail corridor.

Construction Traffic Noise will need to be carefully monitored (in accordance with the Construction Noise Management Sub-Plan), and regular discussions with both Council and the CLG will be required to ensure that noise does not occur during sensitive times. Removal of Spoil will not occur through this compound, but from nearby construction accessway gates.

4.14.3 Potential impacts and mitigation measures

It is anticipated that only a small number of staff cars would ever need to access this compound. Vehicles would enter at one of two gates off Llewellyn Ave from Woodville Road, and exit at the same gate, using the same roads as entry. Council has advised that Llewellyn Ave will be suitable for use for a limited number of construction vehicles when required. Occasionally, large excavation and earth moving equipment may be kept on the site for certain works at various times. This equipment will also need to access the site from time to time and will follow all the same conditions for other construction traffic.

All Construction traffic will be controlled when entering or departing the site by the site manager (under the direction of the Project Manager) in accordance with the management measured outlined in Table 5-2 to ensure that it follows the designated Construction Traffic Routes to help reduce the impacts of noise, dust, visual disturbance, road dilapidation and traffic conflicts.

The number of staff and the resulting parking requirements are yet to be fully specified by the contractor undertaking the work at Woodville Road Compound. Current Compound designs indicate that all expected parking requirements can be provided on-street. The adjoining street (Llewellyn Ave) is wide and has few driveways. It is proposed that staff parking that does not fit into this compound will be located along Llewellyn Ave, beside the railway corridor, but away from the corner (bend) to avoid conflicts with turning semi trailers who's sweep curves may conflict with parked cars located on the bend. Staff access to the compound would be via the same access routes as for construction vehicles.

4.15 Moore Street site compound (Fairfield LGA)

4.15.1 Description of works

Earthworks

Embankment widening will occur either side of Prospect Creek Overbridge over a total period of up to 6 months. Approximately 6,000 m³ (9,000 tonnes) of fill material is expected to be imported to the site, of which potentially 100% could be form reuse from other SSFL work sites that generate suitable spoil. All fill needed for this site is likely to be carried directly to where it will be required and deposited directly on site, no stockpiles are anticipated at this location. Fill will be transported through this site as it is primarily for the construction of the embankment widening and installation of a new bridge for the Freight track over the Prospect Creek.

Construction

Later stages of work at Prospect Creek Overbridge Approach embankments involve construction of the retaining walls and bridge abutment structures to support the new Creek Overbridge. This would require the delivery of materials, the use of heavy vehicles and activity occurring over many months. The site compound is proposed to be located in a small triangle of Railway land located beside Moore Street and Fraser Road, immediately beside the rail corridor. Although the site is currently not fenced as part of the Rail Corridor it is actually Railway Land and the Railway has granted Arenco permission for its use. The site will also be used to store materials that cannot be securely stored at other nearby sites.

4.15.2 Existing environment & site specific issues

The compound is to be located on a small parcel of Railway land beside Moore Street and Fraser Road, immediately beside the rail corridor. The site is bounded on two sides by roads, by the railway to the north and by Residential properties across the road to the south and east. The Construction Contractor Arenco has negotiated with the Railways to use the site for the duration of the works and will reinstate a better landscaped area once the site is vacated.

All surface drainage appears to flow towards the adjoining streets. New Drains from the Compound will drain to the rail corridor or streets after passing through the required sediment controls.

Construction Traffic Noise will need to be carefully monitored (in accordance with the Construction Noise Management Sub-Plan), and regular discussions with both Council and the CLG will be required to ensure that noise does not occur during sensitive times. Removal of Spoil will not occur through this compound, but the delivery of fill material will occur.

4.15.3 Potential impacts and mitigation measures

It is anticipated that only a very small number of staff cars would ever need to access this compound. Vehicles would enter at a gate off Moore Street or Fraser Street from Moore Street, Fraser Road and Lansdowne Road. Exit would be from the same gates, using the same roads as entry. Council has advised that this route will be suitable for use for a limited number of construction vehicles when required. Occasionally, large excavation and earth moving equipment may be kept on the site for certain works at various times. This equipment will also need to access the site from time to time and will follow all the same conditions for other construction traffic.

All Construction traffic will be controlled when entering or departing the site by the site manager (under the direction of the Project Manager) in accordance with the management measured outlined in Table 5-2 to ensure that it follows the designated Construction Traffic Routes to help reduce the impacts of noise, dust, visual disturbance, road dilapidation and traffic conflicts.

The number of staff and the resulting parking requirements are yet to be fully specified by the contractor undertaking the work at Moore Street (Prospect Creek Bridge) Compound. Current Compound designs indicate that all expected parking requirements can be provided on-site. Parking beside the rail Corridor on Fraser Street is also possible without causing conflict with local residents as residential use of on street parking, especially during the day time, is very low. Staff access to the compound would be via the same access routes as for construction vehicles.

4.16 Warwick Farm (Kimberly Clark) site compound (Liverpool LGA)

4.16.1 Description of works

Earthworks

Minor embankment widening will occur between Cabramatta Creek and Liverpool Hospital (Elisabeth Drive) Level Crossing over a total period of up to 4 months. Approximately 10,000 m³ (15,000 tonnes) of fill material is expected to be imported to the site, of which potentially 100% could be sourced from other SSFL work sites that generate suitable spoil. All fill needed for this site is likely to be carried directly to where it will be required and deposited directly on site, no stockpiles are anticipated at this location. Fill will be transported through this site as it is primarily for the construction of the embankment widening and installation of a new bridge for the Freight track over the Cabramatta Creek.

Construction

Later stages of work at Cabramatta Creek Overbridge Approach embankments involve construction of the retaining walls and bridge abutment structures to support the new Creek Overbridge. This would require the delivery of materials, the use of heavy vehicles and activity occurring over many months. The site compound is proposed to be located in an existing car park on land owned by (and known as the) Kimberly Clark Site. Access to the site is off Manning Street. Although the site is currently not fenced as part of the Rail Corridor it is actually adjacent to it and Kimberly Clark has granted ARTC's Contractors permission for its use. The site will also be used to store materials that cannot be securely stored at other nearby sites.

4.16.2 Existing environment & site specific issues

The compound is to be located on a small parcel of Private land beside Manning Street, immediately beside the rail corridor. The site is bounded on two sides by Industrial Buildings, by the railway to the west and by a Horse Stabling facility over the road to the east. The Construction Contractor has negotiated with Kimberly Clark to use the site for the duration of the works and will reinstate a paved parking area once the site is vacated.

All surface drainage appears to flow towards the adjoining streets. New Drains from the Compound will drain to both the rail corridor and streets after passing through the required sediment controls.

Construction Traffic Noise will need to be carefully monitored (in accordance with the Construction Noise Management Sub-Plan), and regular discussions with both Council and the CLG will be required to ensure that noise does not occur during sensitive times. Removal of Spoil will not occur through this compound, but the delivery of fill material will occur.

4.16.3 Potential impacts and mitigation measures

It is anticipated that only a very small number of staff cars would ever need to access this compound. Vehicles would enter at a gate off Manning Street from Munday Street, and Governor Macquarie Drive, from the Hume Highway, and exit at the same gate, using the same roads as entry. Council has advised that this route will be suitable for use for a limited number of construction vehicles when required. Occasionally, large excavation and earth

moving equipment may be kept on the site for certain works at various times. This equipment will also need to access the site from time to time and will follow all the same conditions for other construction traffic.

All Construction traffic will be controlled when entering or departing the site by the site manager (under the direction of the Project Manager) in accordance with the management measured outlined in Table 5-2 to ensure that it follows the designated Construction Traffic Routes to help reduce the impacts of noise, dust, visual disturbance, road dilapidation and traffic conflicts.

The number of staff and the resulting parking requirements are yet to be fully specified by the contractor undertaking the work at the Kimberly Clark Site Compound. Current Compound designs indicate that all expected parking requirements can be provided on-site. Staff access to the compound would be via the same access routes as for construction vehicles.

4.17 Elizabeth Drive Level Crossing site compound (Liverpool LGA)

4.17.1 Description of works

Earthworks

Significant embankment widening will occur between Liverpool Hospital (Elisabeth Drive) Level Crossing and Liverpool Station over a total period of up to 6 months. Up to 8,000 m³ (12,000 tonnes) of fill material is expected to be imported to the site, of which potentially 100% could be sourced from other SSFL work sites that generate suitable spoil. All fill needed for this site is likely to be carried directly to where it will be required and deposited directly on site, however, a small stockpile may be needed for use when required at this location. Fill will be transported through this site as it is primarily for the construction of the embankment widening and installation of a new slab structure for the Freight track along the top of the bank of the Georges River.

Construction

Later stages of work at Liverpool involve construction of the retaining walls and bridge like support structures to support the new track beside the top of the riverbank. This would require the delivery of materials, the use of heavy vehicles and activity occurring over many months. The site compound is proposed to be located in an existing railway stockpile area on land owned by the Railways. Access to the site is off Elisabeth Drive, but inside the barriers of the level crossing. The site is currently not fenced from the level crossing and appears to be a part of the active Rail Corridor; however, it is well clear of the running lines. The Railways have granted Arenco permission for its use. The site may also be used to store materials that cannot be securely stored at other nearby sites.

4.17.2 Existing environment & site specific issues

The compound is to be located on a small parcel of Railway land beside Elisabeth Drive level Crossing, immediately beside the rail corridor. The triangular site is bounded by the railway on the west, a hospital carpark to the east and the steep slope of the Georges River Bank to the south. The Construction Contractor Arenco will undertake further negotiations with the Railways and the hospital to use the site for the duration of the works and will reinstate an unpaved stockpiling area once the site is vacated.

All surface drainage appears to flow towards the adjoining River Bank. New Drains from the Compound will drain toward the river also but only after passing through the required sediment controls.

Construction Traffic Noise will need to be carefully monitored (in accordance with the Construction Noise Management Sub-Plan), and regular discussions with both Council and the CLG will be required to ensure that noise does not occur during sensitive times. Removal of Spoil will not occur through this compound, but the delivery of fill material will occur.

4.17.3 Potential impacts and mitigation measures

It is anticipated that only a very small number of staff cars would ever need to access this compound. Vehicles would enter via the level crossing and through a new gate into the compound, from Elisabeth Drive and the Hume Highway, and exit at the same gate, using the same roads as entry. Council has advised that this route will be suitable for use for a limited number of construction vehicles when required. Occasionally, large excavation and earth moving equipment may be kept on the site for certain works at various times. This equipment will also need to access the site from time to time and will follow all the same conditions for other construction traffic.

All Construction traffic will be controlled when entering or departing the site by the site manager (under the direction of the Project Manager) in accordance with the management measured outlined in Table 5-2 to ensure that it follows the designated Construction Traffic Routes to help reduce the impacts of noise, dust, visual disturbance, road dilapidation and traffic conflicts.

The number of staff and the resulting parking requirements are yet to be fully specified by the contractor undertaking the work at the Liverpool Site Compound. Current Compound designs indicate that all expected parking requirements can be provided on-site. Staff access to the compound would be via the same access routes as for construction vehicles.

4.18 Casula Embankment site compound (Liverpool LGA)

4.18.1 Description of works

Earthworks

Significant embankment widening will occur between Liverpool Station and Casula Station over a total period of up to 6 months. Up to 100,000 m³ (150,000 tonnes) of fill material is expected to be imported to the site, or sourced from the adjacent Golf Course (with Council permission) as part of re-landscaping it into a public park. All fill needed for this site is likely to be carried directly to where it will be required and deposited directly on site, however, a small stockpile may be needed for use when required at this location. Fill will be transported through this site as it is primarily for the construction of the embankment widening.

Construction

Later stages of work at Casula Embankment involve construction of the retaining walls and support structures to support the new track beside the Casula Arts Centre. This would require the delivery of materials, the use of heavy vehicles and activity occurring over many months. The site compound is proposed to be located on the former Liverpool Golf Course

land, negotiation for which are yet to be finalised with Liverpool City Council. Access to the site is off Woodbrook Road or the Shepherd Street Extension. The site is currently not fenced from the rest of the disused golf course and is adjacent to the rail corridor. The site may also be used to store materials that cannot be securely stored at other nearby sites.

4.18.2 Existing environment & site specific issues

The compound is to be located on a small parcel of the disused Liverpool Golf Course land, south of the M5 Motorway, immediately beside the rail corridor. The site is bounded by the railway on the west and the remainder of the disused Golf Course on the other three sides. The Construction Contractor Seymour Whyte will undertake further negotiations with the Council to use the site for the duration of the works and will reinstate a landscaped area for use as part of the proposed new Park once the site is vacated.

All surface drainage appears to flow towards the golf course and then towards the nearby River Bank. New drains from the Compound will drain toward the river also but only after passing through the required sediment controls.

Construction Traffic Noise will need to be carefully monitored (in accordance with the Construction Noise Management Sub-Plan), and regular discussions with both Council and the CLG will be required to ensure that noise does not occur during sensitive times. Removal of Spoil will not occur through this compound, but the delivery of fill material will occur.

4.18.3 Potential impacts and mitigation measures

It is anticipated that only a very small number of staff cars would ever need to access this compound. Vehicles would enter via the road access at Woodbrook Road and through a new gate into the compound, from Lakewood Cr and Congressional Drive and the Hume Highway, and exit at the same gate, using the same roads as entry. Council has advised that this route will be suitable for use for a limited number of construction vehicles when required. Occasionally, large excavation and earth moving equipment may be kept on the site for certain works at various times. This equipment will also need to access the site from time to time and will follow all the same conditions for other construction traffic, unless to large to pass under the rail bridge at Woodbrook Road. Then these vehicles would need to use the Shepherd Street extension, or the Casula level crossing.

All Construction traffic will be controlled when entering or departing the site by the site manager (under the direction of the Project Manager) in accordance with the management measured outlined in Table 5-2 to ensure that it follows the designated Construction Traffic Routes to help reduce the impacts of noise, dust, visual disturbance, road dilapidation and traffic conflicts.

The number of staff and the resulting parking requirements are yet to be fully specified by the contractor undertaking the work at the Casula Embankment Compound. Current Compound designs indicate that all expected parking requirements can be provided on-site. Staff access to the compound would be via the same access routes as for construction vehicles.

4.19 Glenfield Junction site compound, Glenfield (Campbelltown LGA)

4.19.1 Description of works

Earthworks

Significant embankment construction for the Glenfield freight Flyovers will occur between Casula Station and Glenfield Junction over a total period of up to 6 months. Up to 100,000 m³ (150,000 tonnes) (or more) of fill material is expected to be imported to the site, or sourced from the adjacent Tip excavation (with The Tip's permission). All fill needed for this site is likely to be carried directly to where it will be required and deposited directly on site, however, a small stockpile may be needed for use when required at this location. Fill may be transported through this site however, as there are gates closer to the site of the embankment, most fill is expected to arrive at those. This Compound is primarily for the use of construction equipment and local site office.

Construction

Later stages of work at the Glenfield Freight Flyover involve construction of the retaining walls and support structures to support the new tracks of the flyover. This would require the delivery of materials, the use of heavy vehicles and activity occurring over many months. The site compound is proposed to be located in an existing Railway compound on Railway land, negotiations for which are yet to be finalised with RailCorp. Access to the site is from Glenfield Road. The site is currently fenced from the public and is adjacent to the rail corridor. The site may also be used to store materials that cannot be securely stored at other nearby sites.

4.19.2 Existing environment & site specific issues

The compound is to be located on a small parcel of Railway land, south of Glenfield Station, immediately beside the rail corridor. The site is bounded by the railway on the east and Glenfield Road to the west. Rural residential properties are located to the west – across the road. The Construction Contractor will undertake further negotiations with RailCorp and Council to use the site for the duration of the works. The site will only be required during the earlier stages of works for track formation, but will be vacated before actual track laying occurs, as new track will need to be laid through the compound site. The remainder of the site will be converted into a drainage channel once rail formation levels have been completed, prior to commencement of the actual track laying.

All surface drainage appears to flow across the site from south to north on the headwaters of the Glenfield Creek catchment. New drains from the Compound will drain toward the formalised channel that will become the creek, once all earthworks have been completed, but only after passing through the required sediment controls.

Construction Traffic Noise will need to be carefully monitored (in accordance with the Construction Noise Management Sub-Plan), and regular discussions with both Council and the CLG will be required to ensure that noise does not occur during sensitive times. Careful consideration of the requirements of the Dust management Sub-Plan and Spoil and Fill management Sub-Plan will be required in formulating a site specific operations plan for this compound, due to the proximity of a watercourse in the site. Removal of Spoil will not occur

through this compound, but the delivery of very limited amounts of fill material, for formation, will occur.

4.19.3 Potential impacts and mitigation measures

It is anticipated that only a very small number of staff cars would ever need to access this compound. Vehicles would enter via the road access at Glenfield Road from the Hume Highway, and exit at the same gate, using the same roads as entry. RTA has advised that this route will be suitable for use for a limited number of construction vehicles when required. Occasionally, large excavation and earth moving equipment may be kept on the site for certain works at various times. This equipment will also need to access the site from time to time and will follow all the same conditions for other construction traffic.

All Construction traffic will be controlled when entering or departing the site by the site manager (under the direction of the Project Manager) in accordance with the management measures outlined in Table 5-2 to ensure that it follows the designated Construction Traffic Routes to help reduce the impacts of noise, dust, visual disturbance, road dilapidation and traffic conflicts.

The number of staff and the resulting parking requirements are yet to be fully specified by the contractor undertaking the work at the Glenfield Site Compound. Current Compound designs indicate that all expected parking requirements can be provided on-site. Staff access to the compound would be via the same access routes as for construction vehicles.

4.20 Ingleburn Perway Siding Site compound (Campbelltown LGA)

4.20.1 Description of works

Earthworks

Significant embankment widening will occur south of Ingleburn Station, towards Minto Station, over a total period of up to 6 months. Up to 50,000 m³ (75,000 tonnes) of fill material is expected to be imported to the site. All fill needed for this site is likely to be carried directly to where it will be required and deposited directly on site, however, a small stockpile may be needed for use, when required, at this location. Fill will be transported through this site as it is primarily for the construction of the embankment widening.

Construction

Later stages of work along this section of the rail Corridor involve construction of the retaining walls and support structures to support the new rail over creek bridges between Ingleburn and Minto. This would require the delivery of materials, the use of heavy vehicles and activity occurring over many months. The site compound is proposed to be located on Railway land, currently used as a site compound to service the existing RailCorp Ingleburn Perway Siding. Negotiation with RailCorp is to be finalised regarding the use of this site. Access to the site is from Stanley Road. The site is currently fenced from the public and is adjacent to the rail corridor. The site may also be used to store materials that cannot be securely stored at other nearby sites.

4.20.2 Existing environment & site specific issues

The compound is to be located on a small parcel of land that currently forms a small compound for RailCorp, adjacent to the Ingleburn Perway Siding. The site is bounded by the railway on the east and Stanley Street to the west and is in an industrial area. The Construction Contractor will undertake further negotiations with both RailCorp and Council to use the site for the duration of the works and will reinstate a paved area for use as a rail maintenance yard once the site is vacated.

All surface drainage appears to flow towards the street. New drains from the Compound will drain toward the rail Corridor where possible, or towards the street, but only after passing through the required sediment controls.

Construction Traffic Noise will need to be carefully monitored (in accordance with the Construction Noise Management Sub-Plan), and regular discussions with both Council and the CLG will be required to ensure that noise does not occur during sensitive times. Removal of Spoil will not occur through this compound, but the delivery of some fill material will occur.

4.20.3 Potential impacts and mitigation measures

It is anticipated that only a very small number of staff cars would ever need to access this compound. Vehicles would enter via the road access at Stanley Road and through a new gate into the compound, having come from Aero Road, Lancaster Street, Henderson Road, Williamson Road, Brooks Road and the M5, and exit at the same gate, using the same roads as entry. Council has advised that this route will be suitable for use for construction vehicles as required. Occasionally, large excavation and earth moving equipment may be kept on the site for certain works at various times. This equipment will also need to access the site from time to time and will follow all the same conditions for other construction traffic.

All Construction traffic will be controlled when entering or departing the site by the site manager (under the direction of the Project Manager) in accordance with the management measures outlined in Table 5-2 to ensure that it follows the designated Construction Traffic Routes to help reduce the impacts of noise, dust, visual disturbance, road dilapidation and traffic conflicts.

The number of staff and the resulting parking requirements are yet to be fully specified by the contractor undertaking the work at the Ingleburn Perway Siding Site Compound. Current Compound designs indicate that all expected parking requirements can be provided on-site. Staff access to the compound would be via the same access routes as for construction vehicles.

4.21 Campbelltown Yard Site Compound (Campbelltown LGA)

4.21.1 Description of works

Earthworks

Earthworks will occur South and North of Campbelltown Station over a total period of up to 10 months. Up to 10,000 m³ (15,000 tonnes) of fill material is expected to be imported to the site. All fill needed for this site is likely to be carried directly to where it will be required and deposited directly on site, however, a small stockpile may be needed for use, when required, at this location. Small amounts of fill may be transported through this site as it is primarily for the construction of the embankment widening.

Construction

Later stages of work along this section of the rail Corridor involve construction of the retaining walls and support structures to support the new rail over creek bridges between Macarthur and Leumeah. This would require the delivery of materials, the use of heavy vehicles and activity occurring over many months. The site compound is proposed to be located on Railway land, currently unused and adjacent to the Campbelltown RailCorp Stabling Yard. Negotiation with RailCorp is to be finalised regarding the use of this site. Access to the site is from Farrow Road. The site is currently fenced from the public and is adjacent to the rail corridor. The site may also be used to store materials that cannot be securely stored at other nearby sites.

4.21.2 Existing environment & site specific issues

The compound is to be located on a small parcel of land that is currently unused By RailCorp, located near the southern end of Farrow Road, and is adjacent to the Campbelltown Stabling yard. The site is bounded by the railway on the east and land owned by Council to the west and is in an industrial area. The Construction Contractor will undertake further negotiations with both RailCorp and Council to use the site for the duration of the works and will reinstate a paved area for use as a rail maintenance yard once the site is vacated.

All surface drainage appears to flow towards the street and a nearby creek. New drains from the Compound will drain toward the Rail Corridor where possible, or towards the creek, but only after passing through the required sediment controls.

Construction Traffic Noise will need to be carefully monitored (in accordance with the Construction Noise Management Sub-Plan), and regular discussions with both Council and the CLG will be required to ensure that noise does not occur during sensitive times. Removal of Spoil will not occur through this compound, but the delivery of some fill material will occur.

4.21.3 Potential impacts and mitigation measures

It is anticipated that only a very small number of staff cars would ever need to access this compound. Vehicles would enter via the road access at Farrow Road and through a new gate into the compound, having come from Badgelly Road, Blaxland Road, Campbelltown Road and the M5, and exit at the same gate, using the same roads as entry. Council has advised that this route will be suitable for use for construction vehicles as required. Occasionally, large excavation and earth moving equipment may be kept on the site for certain works at

various times. This equipment will also need to access the site from time to time and will follow all the same conditions for other construction traffic.

All Construction traffic will be controlled when entering or departing the site by the site manager (under the direction of the Project Manager) in accordance with the management measures outlined in Table 5-2 to ensure that it follows the designated Construction Traffic Routes to help reduce the impacts of noise, dust, visual disturbance, road dilapidation and traffic conflicts.

The number of staff and the resulting parking requirements are yet to be fully specified by the contractor undertaking the work at the Campbelltown Yard Site Compound. Current Compound designs indicate that all expected parking requirements can be provided on-site. Staff access to the compound would be via the same access routes as for construction vehicles.

4.22 Macarthur South Junction Site Compound (Campbelltown LGA)

4.22.1 Description of works

Earthworks

Earthworks will occur South and North of Macarthur South Junction over a total period of up to 60 months. Up to 6,000 m³ (9,000 tonnes) of fill material is expected to be imported to the site. All fill needed for this site is likely to be carried directly to where it will be required and deposited directly on site, however, a small stockpile may be needed for use, when required, at this location. Small amounts of fill may be transported through this site as it is primarily for the construction of the embankment widening.

Construction

Later stages of work along this section of the rail Corridor involve construction of the retaining walls and support structures to support the new rail over small creek bridges between Macarthur and Leumeah. This would require the delivery of materials, the use of heavy vehicles and activity occurring over many months. Later, the site will be used for the delivery and installation of the new Turnouts required to create the new Junction between the main South Line and the SSFL. The site compound is proposed to be located on Railway land, currently unused and adjacent to the Rail Corridor. Negotiation with RailCorp is to be finalised regarding the use of this site. Access to the site is from Menangle Road. The site is currently not fenced from the public but is adjacent to the rail corridor. The site may also be used to store materials that cannot be securely stored at other nearby sites.

4.22.2 Existing environment & site specific issues

The compound is to be located on a small parcel of land that is currently unused by RailCorp, located near the proposed location of the Macarthur South Junction. The site is bounded by the railway on the west and a low density private residential estate to the east of the road, low density education facility to the west of the rail Corridor (UWS Macarthur campus). The Construction Contractor will undertake further negotiations with both RailCorp and Council to use the site for the duration of the works and will reinstate a paved area for use as a rail maintenance yard once the site is vacated.

All surface drainage appears to flow towards the Rail Corridor. New drains from the Compound will drain toward the Rail Corridor where possible, or towards a nearby creek passing under the rail line north of the compound site, but only after passing through the required sediment controls.

Construction Traffic Noise will need to be carefully monitored (in accordance with the Construction Noise Management Sub-Plan), and regular discussions with both Council and the CLG will be required to ensure that noise does not occur during sensitive times. Removal of Spoil will not occur through this compound, but the delivery of some fill material will occur.

4.22.3 Potential impacts and mitigation measures

It is anticipated that only a very small number of staff cars would ever need to access this compound. Vehicles would enter via the road access at Menangle Road and through a new gate into the compound, having come from Narellan Road and the M5, and exit at the same gate, using the same roads as entry. Council and the RTA has advised that this route will be suitable for use for construction vehicles as required. Occasionally, large excavation and earth moving equipment may be kept on the site for certain works at various times. This equipment will also need to access the site from time to time and will follow all the same conditions for other construction traffic.

All Construction traffic will be controlled when entering or departing the site by the site manager (under the direction of the Project Manager) in accordance with the management measures outlined in Table 5-2 to ensure that it follows the designated Construction Traffic Routes to help reduce the impacts of noise, dust, visual disturbance, road dilapidation and traffic conflicts.

The number of staff and the resulting parking requirements are yet to be fully specified by the contractor undertaking the work at the Campbelltown Yard Site Compound. Current Compound designs indicate that all expected parking requirements can be provided on-site. Staff access to the compound would be via the same access routes as for construction vehicles.

5. Monitoring, reporting, mitigation measures and other requirements

This section outlines the plans, drawings and other management documents that will be prepared and implemented to ensure safe management of traffic during the construction phase of the project. It also outlines the monitoring and reporting requirements for all SSFL construction sites and construction traffic routes, as well as the general mitigation measures that apply to all sites and construction traffic routes.

5.1 Road Occupancy Licensing

ARTC acknowledges that a Road Occupancy Licence (ROL) scheme applies along some SSFL work sites, and understands the benefits of co-ordinating the occurrence of delays at separate work sites. In this regard, except in the case of an emergency, or when directed by Police or Emergency Services, ARTC or its contractors will obtain a ROL prior to the commencement of any works which:

- Slows, stops or otherwise delays traffic on public roads affected by the SSFL construction; or
- Diverts any traffic from its normal course, including full or half-road closures, turning restrictions, side-tracks, detours and diversions.

ROL applications will be submitted in accordance with the RTA's Road Occupancy Manual, a **minimum of 10 working days prior to commencement of works.**

5.2 Traffic Control Plans

Traffic Control Plans are diagrams that illustrate the signs and devices that will be installed to warn traffic, and guide it around or past, or if necessary through, the work site. The plans will address the specific measures stipulated within the TMPs, and will comply with the requirements of Australian Standard AS 1742.3, RTA Specification G10, and the RTA's "Traffic Control at Work Sites" manual.

In keeping with the following (SoC 74),

"Traffic Control Plans will be prepared for all Construction works that are proposed to occur in the road or that will affect trafficable areas (e.g. parking areas). Traffic Control Plans will be completed in accordance with the RTA's Traffic Control at Work Sites guidelines and the Australian Standard 1742.3 Manual of Uniform Traffic Control Devices, Part 3: Traffic Control Devices for Works on Roads and include:

- a. plans showing temporary traffic paths, their delineation and the position of traffic control or warning devices in relation to the location of the works;*
- b. details of after-hours traffic arrangement, if required; and*
- c. instructions for the installation, operation, between-stage rearrangement and ultimate removal of devices at the conclusion of the Construction works."*

Site specific Traffic Control Plans (TCPs) will be developed by ARTC contractors for both long and short-term works, with the aim to maximise safety for workers and road users. These plans will be based on the principles and measures outlined in this Plan, and the relevant sections of the Site Specific Traffic Management Plans. All TCPs will be prepared by a suitably qualified person who has successfully completed the RTA's select/modify (red card) and design/audit (orange card) traffic control courses.

The TCPs will be developed with the aim to:

- **Warn** drivers of changes to the usual road conditions;
- **Inform** drivers about changed conditions;
- **Guide** drivers through the work site; and
- **Safety** for workers, motorists, pedestrians and cyclists.

Please find a copy of a TCP and associated Traffic and Pedestrian Management Plan for works at Woods Road (as submitted to Bankstown City Council) prepared by B &K. Kimber Enterprises for Arenco in **Appendix E**. The TCP complies with all requirements stated above. The associated Traffic and Pedestrian Management Plan is based on the relevant TMP of this CTMSP. However, please note that ARTC is aware of the requirement for an approval from DECC and from the Director-General of the DoP for the out-of-hour works specified in the Plan.

5.2.1 Procedure for preparing TCPs and associated Traffic and Pedestrian Management Plans to obtain work permits or ROL

- The contractor shall prepare a traffic control plan (TCP) and associated, detailed Traffic and Pedestrian Management Plan for each discrete area or site where the works will have an impact on road traffic, parking areas or transport facilities such as bus stops, taxi ranks, footpaths and footbridges.
- ARTC will establish and maintain a register of TCPs, showing the status of each TCP.
- Each draft TCP shall be **submitted to ARTC for review** before submitting the final TCP to the relevant local government authority (LGA) or the RTA **at least 15 working days** prior to the proposed commencement of works.
- In its review, ARTC will assess whether the draft TCP complies with the provisions of this Construction Traffic Management Sub-plan (CTMSP) and other relevant conditions. ARTC will also seek to identify issues arising from the TCP that may require resolution with the relevant LGA, RTA or other stakeholders and will initiate consultation with affected stakeholders to mitigate such issues.
- If necessary, ARTC will require the contractor to amend the draft TCP to meet the provisions of the CTMSP and to incorporate any mitigating actions agreed with the stakeholders.
- The contractor will be responsible for submitting each TCP to the relevant LGA or the RTA, so as to obtain a permit to implement the TCP and carry out the works. The contractor's submissions must comply with the specific requirements of each LGA,

including the use of standard application forms and the payment of any fees and charges levied by the LGA.

- The contractor will advise ARTC of its progress in submitting TCPs to LGAs or the RTA and obtaining permits for implementing the works to allow ARTC to maintain the register of TCPs.

5.3 Bus and cycle network

Potentially affected bus routes in the wider area of the existing rail corridor are illustrated in Appendix A. Generally, bus routes serve as feeder services to rail stations, with the rail corridor forming the boundary of some Route Catchments. Bus services are generally infrequent, with few routes offering services more frequent than half-hourly during weekday peak hours. Services are generally hourly or less frequent on weekends. The only exception to this is at Chester Hill where a number of routes, of varying frequencies, focus on the station. Impacts and mitigation measures on the bus and cycle network along the SSFL route are discussed for each location in Section 4 above.

5.4 Safe Work Method Statements

Where it is considered that a work process must be carried out in a strictly controlled manner to ensure the specified safety and quality requirements will be met, a specific Safe Work Method Statements (SWMS) will be prepared and implemented.

Each contractor will prepare Safe Work Method Statements in consultation with workers and the traffic team, and implement them before the related work starts to ensure the issues relating to safety and quality are appropriately addressed.

The provisions for working on, or adjacent to, trafficable areas and the traffic control measures to be applied will be incorporated where necessary within the SWMS.

Please refer to ARTC *Project Safety Management Plan* for more details on the SWMS.

5.5 General mitigation measures for all sites

Table 5-1 outlines general mitigation measures that apply to all SSFL work sites.

Table 5-1: General Mitigation measures (for all sites)

Mitigation measures	Responsibility	Source of requirement
Pre-construction		
<ul style="list-style-type: none"> Removal of any identified traffic control measures and/or signage earmarked for removal to facilitate easier construction vehicle movement. The Contractor may make arrangements for signage to be stored at the relevant Council's works depot for reinstatement post-construction. 	CW-PM	n/a
<ul style="list-style-type: none"> Preparation of Traffic Control Plans for each of the anticipated traffic diversions, in accordance with RTA's Traffic Control at Work Sites guidelines and the Australian Standard 1742.3 Manual of Uniform Traffic Control Devices, Part 3. 	CW-PM	SoC 74
<ul style="list-style-type: none"> As part of the work programming, ensure that adjacent road crossings of the rail corridor not be closed or impacted upon simultaneously, as multiple simultaneous closures could create an unmanageable traffic deviation requirement. 	CW-PM	n/a
<ul style="list-style-type: none"> Make available trucking route drawings (TR- and ATR-) to all contractors to ensure construction traffic uses identified roads. 	CW-PM	CoA 57 b
<ul style="list-style-type: none"> Advise local residents, businesses, landowners, relevant bus and taxi operators, and emergency services of any part- or full-road closures to be put in place at least two weeks prior to such closures. Include advice on detours for general traffic and for heavy vehicles, anticipated start and end dates of the part- or full-closure, and a contact number for more information. 	CW-PM	
Construction		
<ul style="list-style-type: none"> Implementation of approved Traffic Control Plans. Advise LGA/RTA prior to commencement and on completion of each separate TCP. Also advise the LGA/ RTA when any changes to the TCP are required (including delay or extension in the time period required for the TCP to be in place). 	CW-PM	SoC 74
<ul style="list-style-type: none"> During peak traffic periods during half-road closures, where delays may become significant, it may be necessary to advise drivers on approach to use alternative routes (that is, routes that would be put in place for the full-road closure at the same location). 	CW-PM	SoC 74
<ul style="list-style-type: none"> Construction vehicles using public roads will be maintained to prevent any loss of load (whether dust, liquid, soils, or objects). Any loads that are likely to generate dust must be covered securely. In the event of any spillage, spilled material will be removed as soon as practicable within the working day of the spillage occurring. 	CW-PM	CoA 59
<ul style="list-style-type: none"> Rumble pads or vehicle wash down to be provided at exit 	CW-PM	CoA 59

Mitigation measures	Responsibility	Source of requirement
points of all construction work sites to minimise tracking of mud, dirt or other material onto a public road or footpath.		
<ul style="list-style-type: none"> Wherever there are any road, intersection, or footpath closures, "Watch for pedestrians" and "Watch for cyclists" signs should be erected on the approaches to the road, intersection, or footpath closure area. 	CW-PM	SoC 74
<ul style="list-style-type: none"> Staff Parking and associated Traffic Identification of parking for construction workers at Compounds and Worksites will need to be undertaken by each contractor responsible for each site/compound. Off street parking should be identified where possible and safe (ie: not in the actual work site or within 6m of an active rail line if inside the rail corridor). On street parking, if required, should not be located near tight corners, near schools or in medium or high density residential or Commercial areas. If special signposting is required for on-street parking this will need to be negotiated with Council by the relevant Contractor. 	CW-PM	CoA 57 and CoA 58
<ul style="list-style-type: none"> Pedestrians, Cyclists, Bus Access, Parking Facilities etc. existing pedestrian/ cyclist access, parking, bus and other transport facilities are not to be removed or modified prior to alternative provisions being made for these facilities. (refer to station precinct plans for details at stations (SN-Drawings)) Any temporary diversion of traffic and pedestrian cycle routes must be clearly sign posted. Priority must be given to pedestrians accessing public transport and where there are potential impacts to school zones and pedestrian crossings, consultation with affected schools should be undertaken; 	CW-PM / PD, Consultation with Schools has already been done by post by ARTC	CoA 58 (a)
Post-construction		
<ul style="list-style-type: none"> Restore or repair any traffic control measures (roundabouts etc) that were removed or damaged as part of the SSFL construction works. 	CW-PM	SoC 69
<ul style="list-style-type: none"> Repair any damage resulting from construction (except damage resulting from normal wear and tear) or proceed with alternative arrangements if such arrangements were made (refer to Monitoring and reporting table for pre- and post-construction dilapidation reporting). 	CW-PM	SoC 69
<ul style="list-style-type: none"> Advise RTA of cessation of Traffic Control Plans. 	CW-PM	SoC 74
- End of Table -		

Note: EMR: Environmental Management Representative
 PD: ARTC Project Director
 CM: Construction Manager
 DM: Design Manager
 EM: Environment Manager
 CW-PM: Contractors – Contract Works package Manager
 CLM: Community Liaison Manager

5.6 Monitoring and reporting requirements

Table 5-2 outlines monitoring and reporting measures applicable to all SSFL work sites.

Table 5-2: Monitoring and reporting requirements

Monitoring and reporting requirements	Responsibility	Source of requirement
Pre-construction		
<ul style="list-style-type: none"> <p>▪ Prior to commencement of work (including any heavy vehicle movements to/from the sites), undertake a pre-construction dilapidation study for key non-RTA roads to be used by construction heavy vehicles.</p> <p>(A list of roads surveyed can be found in Appendix D: List of Roads surveyed for Dilapidation.)</p> <p>The roads to be included must be agreed to with the relevant Council. Site inspections may be undertaken with Council officers/ Traffic Committee representatives. A final copy will be forwarded to the local Council's Traffic Committee.</p> <p>Any agreements reached between the Construction contractor and Council regarding contributions towards 'making good' potential damage should be noted.</p> 	CW-PM	SoC 69
<ul style="list-style-type: none"> <p>▪ Residences, businesses, and community facilities within 500 m of the proposed traffic changes will be informed of the relevant details at least 2 weeks prior to the changes occurring.</p> 	CW-PM	n/a
Construction		
<ul style="list-style-type: none"> <p>▪ Visual inspection (of road, kerbs, traffic facilities and signage) to identify any visible damage or deterioration to the items listed in the pre-construction dilapidation report. Inspections to be undertaken weekly and/or after significant construction traffic movements (by volume or tonnage). Any damage or deterioration is to be reported to the EM and action to be determined by the EM and Project Director and undertaken by the relevant Contractor.</p> 	CM-EM ARTC-PD	n/a
<ul style="list-style-type: none"> <p>▪ The site office phone number should be clearly displayed at the entry gate of all site offices to facilitate community reporting or comment.</p> 	CW-PM	n/a
<ul style="list-style-type: none"> <p>▪ Observe/ monitor length of queues resulting from traffic controls put in place for the construction works. If delays become excessive, Local Project Manager will notify the ARTC Project Director and the EM.</p> 	CW-PM EM PD	n/a
<ul style="list-style-type: none"> <p>▪ The PD will determine the appropriate action, that will need to be implemented by the relevant CW-PM on site, to alleviate traffic impacts. The EM will monitor traffic at that location to ensure that traffic impacts have been adequately alleviated or notify the ARTC-PD that further measures are required.</p> 		
<ul style="list-style-type: none"> <p>▪ Ensure that construction traffic uses identified roads:</p> <ul style="list-style-type: none"> ▪ Issue relevant trucking route maps and accessway drawings to each sub-contractor and supplier. ▪ Provide appropriate briefing to all sub-contractors and suppliers to ensure they adhere to the routes 	CW-PM	CoA 57

Monitoring and reporting requirements	Responsibility	Source of requirement
<p>specified.</p> <ul style="list-style-type: none"> ▪ Keep daily record of exit and entries at site access points including vehicle type and load type. ▪ Cross check this information with delivery dockets for the work sites on a daily basis. ▪ Audit the use of trucking routes once a week without notice. ▪ If construction traffic uses different routes investigate the reason and resolve issues in consultation with contractor or local authorities. 		
<ul style="list-style-type: none"> ▪ Coordinate any closure of the Casula level crossing with the Casula Regional Arts Centre ▪ Document correspondence with the Casula Regional Arts Centre and make available to ARTC for review and filing. ▪ Provide any Traffic Control Plan and detailed construction plan for closure of Casula level crossing to ARTC for review to ensure alternate vehicle access to the Casula Regional Arts Centre is provided for Emergency Services during any closures 	CM	CoA 58
<ul style="list-style-type: none"> ▪ Provide contact details of the ARTC construction manager to the relevant local government authority. The local government authority can request the ARTC Construction Manager to effect urgent repairs to roads damaged by construction traffic so as to maintain public safety. 	CW-PM	n/a
<ul style="list-style-type: none"> ▪ Review detailed construction plan for Lighthouse Park to ensure that pedestrian access from Riverpark Drive to Newbridge Road bridge via Lighthouse Park is maintained at all times ▪ Monitor the construction progress at regular intervals and record that pedestrian access is maintained. 	CW-PM	SoC 84 a
<ul style="list-style-type: none"> ▪ Review construction schedule on a regular basis to ensure that works at Chester Hill Road, Miller Road and Bareena Street railway underbridges does not occur at more than one of these Construction Work Sites at any time if cumulative traffic impacts would arise. ▪ Resolve scheduling issues immediately with ARTC to avoid disruption to traffic. 	CW-PM	SoC 87
<ul style="list-style-type: none"> ▪ Review construction schedule on a regular basis to ensure that at least one of the three pedestrian accesses under the bridges between Liverpool and Casula (i.e. Woodbrook Road, Mill Park Road 1 or Mill Park Road 2) will be open at any time during Construction to ensure pedestrian access to the riverfront parkland along Georges River. ▪ Resolve scheduling issues immediately with ARTC to avoid disruption to community. 	CW-PM	SoC 88
Post-construction		
<ul style="list-style-type: none"> ▪ Undertake a post-construction dilapidation study, covering the items addressed in the pre-construction dilapidation report and any additional items that may have arisen during the construction phase. Provide a copy of the post-construction dilapidation report to the relevant Council's 	CM	SoC 69

Monitoring and reporting requirements	Responsibility	Source of requirement
Traffic Committee representative for concurrence.		
<ul style="list-style-type: none"> ▪ Ensure all temporary traffic works and signage are removed as soon as they are no longer required. 	CW-PM	SoC 74
- End of Table -		
<i>Note: EMR: Environmental Management Representative PD: ARTC Project Director CM: Construction Manager DM: Design Manager EM: Environment Manager CW-PM: Contractors – Contract Works package Manager CLM: Community Liaison Manager</i>		

5.7 Unplanned Incident Management

5.7.1 Road Network

The occurrence of unplanned incidents within the construction site will potentially have negative impacts on the operation of the adjacent road network. Similarly, incidents on the surrounding road network of the SSFL can temporarily restrict construction activities.

In accordance with its statutory obligations, the RTA has the ultimate responsibility for road safety and traffic management of the State Road Network. It is the lead agency for traffic management in NSW, including the management of unplanned incidents in co-ordination with NSW Police. For further information refer to the “RTA & Police – Memorandum of Understanding Traffic Management of Incidents” (1999).

ARTC will support the RTA in the management of incidents to promote road safety, and the efficient restoration of normal traffic conditions. In this regard, ARTC will:

- Maintain regular communications between the ARTC Construction Manager, the RTA’s Traffic Operations Manager and the Roads and Traffic Authority’s Transport Management Centre (TMC);
- Inform the TMC of any incident, either planned or unplanned, as a high priority and continually co-ordinate activities for the duration of the incident;
- If resources are available, provide initial response to unplanned incidents with the aim to make the incident scene safe, and prevent further harm to persons or property;
- Provide close support to emergency services, including traffic control in the vicinity of the incident;
- During major incidents, provide a senior construction representative on-site to liaise with the RTA and emergency service agencies; and
- Reschedule planned works that will interfere with the incident, or create additional delays to those road users already affected by the incident.

5.7.2 Construction Site Incidents

ARTC and its Contractors will develop an Emergency Action Plan which will incorporate standard operating procedures for managing construction site unplanned incidents and emergencies. This Plan will:

- Define ARTC's roles and responsibilities in the event of incident and emergencies;
- Establish and define ARTC's emergency response procedures dealing with different category of emergency arising from construction, traffic, environmental incidents;
- Identify and define the roles and responsibilities of key ARTC Project personnel during incidents and emergencies;
- List available ARTC response resources;
- Outline control, coordination and liaison arrangements with the RTA and emergency services;
- Establish the communication system;
- Outline incident administration procedures including training, record keeping etc; and
- Establish formal arrangements for the review and maintenance of the Plan.

The types of incident and emergencies that may occur include, but are not limited to; motor vehicle crashes, bush fires, environmental spills, terrorist attacks/bomb threats, construction type incidents, structural catastrophic failures, in climate weather conditions, flooding and anti- social behaviour.

6. Corrective action

Possible non-conformances with this Sub-Plan include non-compliance with the management measures and mitigation strategies outlined in Section 5.

All incidents and non-conformances are to be reported and investigated and corrected in accordance with the CEMP to ensure effective dust management practices at all time. Specific corrective actions for the Traffic Management Sub-Plan are provided in Table 6-1.

This Sub-Plan will be reviewed during the construction period based on results from monitoring, observations, non-conformance or complaints. The review will allow adjustments to occur to the plan if they are found to be beneficial, or if measures need adjusting.

All project staff will be notified of changes made to this Sub-Plan.

Table 6-1: Corrective actions for Traffic non-conformances

Trigger	Action	Responsibility
Complaints received from nearby resident/s	<ul style="list-style-type: none"> • Record complaint. • Investigate and verify complain. • Undertake formal Traffic monitoring • Assess results against traffic goals and determine the need for corrective action. • Discuss results with affected residents, and agree on approach for corrective action. 	CM / CW-PM
Traffic from site becomes excessive due to unforeseen increases in local scope	<p>In accordance with ARTCs statements of commitment, the following corrective action would be implemented:</p> <ul style="list-style-type: none"> ▪ Immediate action such as route redesignation will be undertaken. ▪ Speed limits on local streets for construction traffic will be reduced by 10 km/h (or lower if required) to further limit impacts to the nearest potential affected receiver. ▪ Construction activities that are unable to conform to the acceptable traffic generating levels will need to be reassessed and alternative trucking routes established and approved by the EMR. ▪ If the project continues to receive complaints or non-conformances, further control measures are to be implemented such as limiting the number of truck movements allowed per route or gate per hour, or opening new gates and closing 	CM / CW-PM

	others to redistribute the traffic entering and leaving the site.	
Monitoring of traffic shows unacceptable levels	<ul style="list-style-type: none"> Implement mitigation measures with more rigour. 	All
Road damage by construction traffic	<ul style="list-style-type: none"> At the request of a local government authority (Bankstown, Fairfield, Liverpool or Campbelltown City Councils), and where it can be shown that SSFL Construction Traffic is responsible for the damage, ARTC will undertake urgent repairs to roads damaged by construction traffic so as to maintain public safety. 	CW-PM

7. Document control

The Traffic Management Sub-Plan will be reviewed and amended, if required or if the activities change, and reissued as soon as possible. The Traffic Management Sub-Plan will be issued to all Contractors by the ARTC Environment Manager. Contractors and project staff will be notified of changes made to this Sub- Plan by the ARTC Environment Manager.

This Construction Traffic Sub-Plan should be reviewed as part of the detailed construction planning, following detailed design.

Contractors responsible for undertaking the construction planning will be responsible for ensuring that appropriate Traffic Management Plans (TMPs) and Traffic Control Plans (TCPs) are prepared for each site, and each phase of work (that is, where a change in traffic control is required). TCPs must be prepared in accordance with the guidelines listed in Table 2-1 and performance criteria outlined in Section 3 of this Sub-Plan.

Appendix A: Bus and Cycle Network

Please see enclosed document and electronic file "Appendix A: SSFL - Bus and Cycle Network"

Appendix B: Construction Accessways Trucking Routes

Please see enclosed document and electronic file "Appendix B: SSFL – Construction Accessways Trucking Routes"

Appendix C: Traffic Diversion Routes

Please see enclosed document and electronic file "Appendix C: SSFL – Traffic Diversion Routes"

Appendix D: List of Roads surveyed for Dilapidation

Airds Road
Auburn Road
Badgally Road
Bareena Street
Bathurst St
Ben Lomond Rd
Bridge St
Broomfield (Pat)
Broomfield St (Chris B)
Brunker Rd
Burney Rd
Canberra Av
Carcoola St
Carlingford St
Casula Rd
Chancery St
Chester Hill Rd
Christina Rd
Cooper Rd
Cumberland St
Denison St
Edmunds St
Elizabeth St
Elm St
Ernest St
Essex St
Farrow Rd
First Ave
Fraser Rd
Glenfield Rd
Glenfield Waste Disposal
Governor Macquarie St
Hector St
Henderson Rd
Hill St
Hope St
Huntsmore Rd
Kellicar Rd
Kialba Rd
Lancaster Rd
Lansdowne Rd
Lawrence Hargrave Rd
Leacocks Lane
Leumeah Station Carpark
Lewis St
Lincoln St
Liverpool St
Llewlyn Av
Longfield St
Mackenzie St
Macquarie St
Manning St
Mannix Pde
Marsh Pde
Mill Rd
Miller Rd
Mitchell St
Moore St
Munday St
National St
Nicholls St
Norwich Rd
Orchard Rd
Pirie St
Plough Road Inn
Premier St
Priddle St
Private Rd
Proctor Pde
Prospect Rd
Quest Ave
Railway Pde
Riverpark Dr
Rodd St
Rodd St - Birrong
Rose Payten Dr
Rose St
Rose St (Sefton)
Ruby St
Sandal Cr
Scrivener St
Senior St
Shepherd St
Shortland St
Sir Thomas Mitchell Rd
Somerset St
Speed St
Stanley Rd
Station St
Stennett Rd
Sundale Pl
Sussex St
Tewinga Rd
UWS
Vale St
Villawood Rd
Waldron Rd
Warwick St
Waterside Cr
Watsford Rd
Wattle Ave
Wellington Rd
West St
Williamson Rd
Wiltshire Rd
Woods Rd

Appendix E: Copy of TCP for Woods Road Underpass