

Installation of Trainstops –Timber & Concrete Sleepers

Issue date: 11/04/08

Review date: 19/02/11

SWMS number: SMS-06-SW-1019	SWMS Name: Installation of Trainstops –Timber & Concrete Sleepers			SWMS Team : Signal Review Team
Custodian (Position): Signal Services & External Resources Manager	Assumptions: Site specific risks are addressed and assessed in pre- work briefing			
Approving Authority (Position): Safety and Quality Manager Commercial / Renewals	Equipment/Plant/Tools: <ul style="list-style-type: none">Vehicle Loading CraneFront end Loader, TippersExplosive Power ToolsTenaka Drill/ Electric Power DrillGenerator, Fuel, RCD UnitHand Tools, SpannersTrainstop gaugeElectric Planer, Adze, Electric Circular SawShovels, Pelican PicksOxygen Monitor, Catalytic Converters, Exhaust Fans (In Tunnel Areas)GRN RadiosBarriers, Fencing, WatercartSpill Response Kit / Siphoning System	Records/Reporting: <ul style="list-style-type: none">Worksite Protection PlanPre-work BriefElectrical Test TagsRailCorp Environmental Greenline,Electrical PermitsTrainstop Test Certification	Permits/Licences required: <ul style="list-style-type: none">Electrical Permit HolderVehicle Crane certificateExplosive Power Tool Certified OperatorPlant/ Equipment Operator Certificate	Content reviewed by Technical expert (SME) and RailCorp safety professional (position including Div/Group) Signal Services & External Resources Manager & SEQ Coordinator Asset Management Group Commercial / Renewals
Applicable Standards, Codes of Practice and guidance: <ul style="list-style-type: none">OH&S Act 2000OH&S Regulation 2001Rail Safety Regulation 2003RailCorp Network Rules & ProceduresSignalling Maintenance ProceduresTechnical Maintenance PlanSignal Engineering StandardsRailCorp Safety Management System.MSDS for all chemicals and Hazardous substance used on siteCity Region – Tunnel Emergency Evacuation StepsCity Region – Site Safety RulesAS/NZS 2865:2001 Safe working in a confined spaceEC14 – Guide to Electrical Workers' Safety EquipmentWorkCover NSW Plant Guide				
		MIMS or METRE Ref: Nil		
Personal Protective Equipment required: <ul style="list-style-type: none">Safety BootsHigh Visibility VestsHardhatsProtective ClothingSafety Glasses And as specified below. <ul style="list-style-type: none">GlovesHearing ProtectionDust MasksDuring all Site Works a FIRST AIDER MUST be Present				

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1	Supervisor undertakes site pre-work briefing and gives local induction.	Staff not Listening to Pre-Work Brief	B -	Identify all hazards, Staff to ensure they are properly Briefed as to risks involving Worksite.	D	Team Leader / Work Group Leader / All Staff	Pre-Work Briefing SMS-06-FM-0163
2	Supervisor verifies competence of personnel doing the task and currency of permits for work.	Expired Competency Cards & Permits, Unqualified type of Personnel for the Task.	B -	Visual Inspection of Personnel Competency Cards & Currency of Permits	D	Team Leader / Work Group Leader	Safety Training & Competence SMS-11-SR-0128
3	Review SWMS and confirm it is current.	Use of a SWMS that is out of date	C -	Ensure SWMS is current and up to date.	D	Team Leader / Work Group Leader	SWMS & SWI's SMS-06-PR-0023
4	Verify that plant and equipment for the task is fit-for-purpose.	Plant & Equipment kept in poor working condition	C +	Conduct a Daily Plant Checklist	D	All Staff	Plant SMS-06-GD-0225
5	Access , Egress and Working on site	General					
		Hit by Train	A	Pre-work Brief including Worksite Protection Plan, Site Induction and Inspection	C+	Worksite Protection Officer	Network Rules & Procedures, Safety Knowledge Management SMS-18-SR-0098
		Slips, trips and falls	C-	Pre-work Brief to identify potential hazards	D	Worksite Protection Officer	Workplace Risk Management SMS-06-PR-0104
		Injury from vehicles and plant equipment	B+	Provide a Site Plan detailing safe access paths, parking and location of facilities	C-	Worksite Protection Officer	Plant SMS-06-GD-0225
		Injury from striking Overhead Wiring.	A	Ensure Permit to Work has been obtained.	C+	Authorised OH Line Worker	Electrical Permits SMS-06-EN-0577
		Tunnels					

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		Personnel injury from Fumes/contamination of atmosphere while in Tunnels	B-	Continuous air containing appropriate levels of oxygen is available with an air velocity of no less than 10 m/Min. Atmospheric monitoring while working	C+	All staff	City Region Hazard Summary - Part 2 City Tunnels
		Lack of Communication while in Tunnels	C-	GRN Radios to be used.	D		
5	Access, Egress and Working on site (Cont....)	Tunnels (Cont....)					
		Injury from Placement and use of equipment in tunnels	C+	Use of PPE – Hearing protection, Hand Protection Operators to be aware of extent safe-working area Equipment fitted with Catalytic Converters. No Petrol driven engines to be used in tunnels. LPG Bottles to be changed outside restricted space. All mobile plant shall have a flashing/rotating light visible from the front and rear. Use of Hydraulic equipment were appropriate	D	All staff	City Region Hazard Summary - Part 2 City Tunnels Lifting Equipment Inspection SMS-16-FM-0089 Plant SMS-06-GD-0225
		Injury from debris or dust while in Tunnels	B-	Exclusions zone for workers not involved in tasks Wear Type 1 Respirators Water down materials Use of PPE – Dust Masks	D	All staff	City Region Hazard Summary - Part 2 City Tunnels PPE SMS-06-GD-0323
6	Removal of old JA Trainstop, oil filled	Oil Contamination on Hands / Ground Spill / Slips	B+	Use of PPE – Gloves, Drain out Trainstop Before Removal	C-	All Staff	PPE SMS-06-GD-0323
		Injury from use of Back-hoe	B+	Use certified operators Instruct personnel to keep clear	C-	Workcover Certificate	Excavation & Earthworks SMS-06-GD-0378

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7	Clean out Ballast around Sleepers	Use of hand tools, Shovels, Pelican Picks	C-	Ensure tools are in good condition	D	All Staff	PPE SMS-06-GD-0323
		Electric Shock from rails/equipment/plant due to difference in potential	A	Ensure signalling equipment is electrically isolated. Signal Electrician to isolate.	C-	Signal Electrician / Authorised Officer	Safety Issues for Signalling Personnel TMG J042
		Twisting strain / sprain	B-	Use correct Techniques. Do not over exert	D	All Staff	Manual Handling Guide SMS-06-GD-0001
		Injury from use of Back-hoe	B+	Use certified operators Instruct personnel to keep clear	C-	Workcover Certificate	Excavation & Earthworks SMS-06-GD-0378
8	Preparation / Measuring of Timber / Concrete Sleepers for Trainstop Installation	Injury from Moving Plant / Equipment	B+	Keep clear, Brief Workers of Hazards Ensure that lifting supports (chains, slings etc) are correctly rated for the load.	C-	All Staff	Lifting Equipment Inspection SMS-16-FM-0089
		Injury while Loading / Unloading Equipment	B-	Ensure workers are kept well clear of lift path. Use competent crane operators Use guide ropes if required	C-	Vehicle Crane certificate Holders	
9	Timber Scarfing	Injury using Adze, Planers causing, woodchips, Splinters, cuts etc	C+	Correct use of Electric Tools Valid Tag and Tested label Handle Adze with Extreme Care Check and Re-Check measurements Use of PPE-Gloves, Hearing Protection	D	Work Group Leader, All Staff	PPE SMS-06-GD-0323 Operating Manual
10	Drilling of Timber / Concrete Sleepers	Dust / Splinters / Eye/ Hand Injury / Petrol fumes / Electric Shock	B+	Use of PPE – Gloves. Electric Power Tools to be Tagged / Use of Tenaka Drills in well ventilated Areas	C-	All Staff	PPE SMS-06-GD-0323 Work Around Elect. Equip. SMS-06-GD-0268
		Injury from use of Ram Set Explosive Power Tool due to projectiles, noise etc.	B+	Use of PPE Gloves, Hearing Protection Only WorkCover Certified Operators to handle Explosive Power Tools. Use of Warning Signage.	C-	Explosive Power Tool Certified Operator	PPE SMS-06-GD-0323
		Generators and Power Tools					

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		Injury from Electric Shock from Generators/Power tools	A	Inspect and check equipment parts, electrical cables (Valid Test and Tag Label), RCD Units fitted (General Inverter Type Excluded)	C+	All Staff	Equipment Operating Manual, Work Around Elect. Equip. SMS-06-GD-0268
		Injury from fumes, fuels	C+	Appropriate care with placement of fuels/oils Ensure well ventilation from exhausts and fumes, Spill kit on hand MSDS for Chemicals	D	All Staff	Hazardous Substances SMS-06-GD-0199 MSDS
11	Installation of Trainstop	Moving Plant / Equipment	B+	Keep clear, Brief Workers of Hazards	C-	Workcover certificates	Lifting Equipment Inspection SMS-16-FM-0089 Plant SMS-06-GD-0225
		Injury from use of Back-hoe	B+	Use certified operators Instruct personnel to keep clear	C-	All Staff	Excavation & Earthworks SMS-06-GD-0378
		Hand Injury	C+	Use of PPE – Gloves	D	All Staff	PPE SMS-06-GD-0323
12	Trainstop gauging and certification	Injury from Electric Shock	B+	Handle Gauging Equipment only. Avoid touching track whilst holding equipment	C-	Appropriate Certification	Signalling Design Standards
		Crush Injuries	B+	Keep clear of moving plant	C-	All Staff	
		Injuries from straining / overexertion	B-	Use Backsafe training manual Regular breaks	D	All Staff	Manual Handling Guide SMS-06-GD-0001

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NOTE: Each work group or team member must sign off on the SWMS to acknowledge they have been briefed about or instructed in the SWMS

Team member name (Please print)	Team Member signature	Instructor/ Briefer name	Date	Team member name (Please print)	Team Member signature	Instructor/ Briefer name	Date

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RailCorp Level 2 Risk Matrix - Regional & Local (Workplace)		Likelihood/Frequency							Definition for Use - Regional & Local level (Workplace)
		Event Frequency	Less than once every 1000 years	Once every 100 to 1,000 years	Once every 10 to 100 years	Once every 1 to 10 years	More than once per year up to and including 10 times per year	More than 10 times per year	
		Historical (Likelihood)	Unheard of in the rail industry	Has occurred once or twice in the rail industry	Has occurred many times in the rail industry, but not in NSW	Has occurred once or twice in NSW	Has occurred frequently in NSW	Has occurred frequently at specific locations	
		Workplace Predictive (Likelihood)	Not expected to occur	May occur only in exceptional circumstances	Could occur at some time but not likely	You would expect it to occur at least once in the next 10 years performing similar activities	You would expect it to occur at least once this year performing similar activities	You would expect it to occur at least once this month performing similar activities	
Consequence			F1	F2	F3	F4	F5	F6	
			Incredible	Improbable	Remote	Occasional	Probable	Frequent	
>10 Fatalities	C6	Disastrous	B-	B+	A	A	A	A	<p>Used for workplace hazards and safety risks that do not consider the whole of the network. Indicatively this matrix is appropriate for use where the hazards under consideration are up to 10% of the total network exposure. This includes regional and local workplace risk assessments.</p> <p>As an example, the Level 2 scale would be used when examining the risk of slips, trips and falls on specific RailCorp platforms within a region or at a particular station, or the risk of fire within a depot.</p> <p>There are 3 options for descriptors which can be used to determine the frequency category. One set of descriptors is provided for frequency, one for historical likelihood, and one for predictive likelihood in the workplace. Choose the most appropriate.</p> <p>To score the risk, follow the steps:</p> <p>1. Identify the magnitude of the credible consequence if the risk were to occur. If applicable, risks should be considered in terms of the safety (this matrix), commercial and environmental impact (using other matrices).</p> <p>2. Identify the likelihood of this level of consequence occurring. (This is done after considering the effectiveness of the current controls in place)</p> <p>3. Score the risk using the combination of likelihood and consequence ranking.</p> <p>Note: Where there are a range of credible consequences which may lead to a different level or risks and/or where the controls may be different. It may be useful to score the risk more than once.</p>
2-10 Fatalities	C5	Catastrophic	C+	B-	B+	A	A	A	
1 Fatality (2-10 Major Injuries)	C4	Critical	C-	C+	B-	B+	A	A	
1 Major Injury	C3	Major	D	C-	C+	B-	B+	A	
1 or more Minor Injuries	C2	Minor	D	D	C-	C+	B-	B+	
First aid treatment, or illness/injury not requiring treatment	C1	Negligible	D	D	D	C-	C+	B-	