

SWMS number: SMS-06-SW-1060		SWMS Name: Resurfacing			SWMS Team: Renewals Track Production
Custodian (Position): Track Works Manager Infrastructure Renewals		Assumptions: Site specific risks are addressed and assessed in Pre-Work Briefing			
Approving Authority (Position): General Manager, Safety Support Services	Plant/Equipment/Tools: <ul style="list-style-type: none">Track Machines (TJ, BX, DS)Gang BusRMV (Car)Hand Tamping (Cobra)Hand/Head lamps for work at night, torchesSurvey Measuring TrolleyTape, Plumb bobs, level boardHandheld gas detector meter (as required)Pelican PickShovels, Jacks, BarsSpray Marking Paint	Records/Reporting: <ul style="list-style-type: none">Worksite Protection PlanPre-Work BriefDaily Log BookMaterial Safety Data SheetsChemical Register	Permits/licences required: <ul style="list-style-type: none">Track Vehicle Operator Drivers Licence	Content reviewed by Technical expert (SME) and RailCorp safety professional (position including Div/Group) <ul style="list-style-type: none">Program Manager ResurfacingTrack Works ManagerSafety Facilitator SSSD	
Applicable Standards, Codes of Practice and guidance: <ul style="list-style-type: none">Rail Safety Act 2008OH&S Act 2000OH&S Regulation 2001SMS and Network RulesRail Safety Regulation 2003RailCorp Safety PolicyRailCorp Network Rules & ProceduresRailCorp Safety Management System.MSDS for all chemicals and hazardous substances used on site	Inspection requirements <ul style="list-style-type: none">Daily Plant Check ListOperator’s Log Book	Service schedule: Resurfacing Team Leader	Training/Qualifications required: <ul style="list-style-type: none">Construction Industry InductionRISI (Rail Industry Safety Induction)Track Vehicle Operator Competency TrainingProtection Officer Level 1-4	PPE required: <ul style="list-style-type: none">Safety BootsHigh visibility orange vestHard hatsSafety GlassesProtective ClothingHearing protection (as required)Gloves (as required)P2 Masks (as required)	
		MIMS or METRE Ref: N/A			

Number	Step	Hazard or human error (Safety/Environmental hazards identified, including physical environment, human errors, plant and equipment)	Risk ranking before controls	Control (to be Implemented to eliminate or reduce the risk to the lowest practicable level)	Risk ranking after controls	Responsibility	Job step to be completed in accordance with (name associated documentation)
1	Machine start up	Plant & Equipment in poor working condition	C +	Conduct a Daily Plant Checklist	D	All Staff	Plant SMS-06-GD-0225 Plant Instruction Manual
		Crush injury or entrapment due to unauthorised movement	B-	Ensure machine is tagged out or locked out by master key or assurance has been received from operator if work is to be undertaken under the machine Only access machine from approved areas Conduct a Daily Plant Checklist No personnel allowed under the machine while the machine is working	C-	All Staff	Heavy Plant Instruction on tag-out/lock out process
		Excessive Noise	B+	Keep noise to a minimum. Wear hearing protection. Do not keep machine running unnecessarily for long periods.	D	All Staff	SMS-06-GD-0323
		Pinch points	B+	Signs displayed on the machines at pinch point locations and are to be avoided. If pinch points cannot be avoided ensure the machine is shut off before entering area.	D	Plant Mechanic All Other Staff	Heavy Plant Risk Assessment
		Exposure to lubricants whilst handling	C+	Wear appropriate PPE as required such as: Gloves Safety Glasses Respirators Protective Clothing	D	All Staff	As per MSDS Refer to Chemical Register

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		Access and egress from machines	B-	Access machines via steps only, on the protected side of the machine. Lookout must be provided if you are required to exit onto live road side Door chain/strap to be latched across inside of door to prevent unauthorised exit onto live road side of machines. Three points of contact at all times.	C-	All Staff	Signs displayed on the machines
2	Measure and mark out Track Geometry	Struck by on and off track machinery	B+	Place worksite protection as required. Observe the "Restriction Zone".	C-	Protection Officer All Staff	RailCorp Network Rules and Procedures Survey Trolley Instruction Manual SMS-06-SW-1075: 'Measuring Track' SMS-06-SW-1464 Restriction Zone
3	Set up machines	Pinch points	B+	Signs displayed on the machines at pinch point locations and are to be avoided. If pinch points cannot be avoided ensure the machine is shut off before entering area.	D	Plant Mechanic All Other Staff	Heavy Plant Risk Assessment
		Access and egress from machines	B-	Access machines via steps only, on the protected side of the machine. Lookout must be provided if you are required to exit onto live road side Door chain/strap to be latched across inside of door to prevent unauthorised exit onto live road side of machines. Three points of contact at all times.	C-	All Staff	Signs displayed on the machines

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4	Resurfacing the track within a worksite	Collision with other plant, train or track worker	A	Consult with onsite supervisor All operators MUST observe the "Restriction Zone" around each machine. Use of Reverse Horn / Buzzer signals when starting to move in forward or reverse. Worksite protection to be in place to prevent access from work trains and other on track equipment.	C-	All Staff Operators Protection Officer	RailCorp Network Rules and Procedures SMS-06-SW-1464 Restriction Zone
		Worksite Derailment	A	Assess if track is fit for the resurfacing machine to pass over.	C-	Team Leader Work Group Leader Operator	TMC211: Track Geometry
		Damage to infrastructure	A	Equipment marked with fluorescent paint so operators can identify obstructions.	C-	Operator Ground Staff	Spray Paint MSDS SMS-06-SW-1467 Tampering SMS-06-SW-1468 Ballast Regulators SMS-06-SW-1469 Stabilisers
		Noise	B+	Wear hearing protection Do not keep machine running unnecessarily for long periods.	D	All Staff	SMS-06-GD-0323
		Dust Particles	B+	P2 masks to be worn by all staff Staff must co-ordinate & risk assess when multiple worksites are present.	C-	All Staff	Pre-work Brief: SMS-06-FM-0163 AS/NZS 1716 (Type: RDP2) SMS-6-SW-1465 Resurfacing in Tunnels
		Working in tunnels	B-	Work in accordance with the SWI-WIT001: Resurfacing Work in Tunnels	C-	All Staff	SMS-6-SW-1465 Resurfacing in Tunnels

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5	Hand Tamp areas where required	Muscle Strain	B+	Team Lifts Correct manual handling techniques Maximum 15 minutes of use (SMS-0477) Job rotation. Group lifts of Tie Tamper to carry it to location.	C-	All Staff	Machine Instruction manual for Atlas Copco "Cobra MK-1" SWI: "Use Of Jack Hammer (Cobra)" SMS-06-SW-0477
		Burns	C+	Avoid contact with hot tool/motor after use Use PPE as appropriate	D	All Staff	SMS-06-GD-0323
		Noise	B+	Wear hearing protection. Do not keep machine running unnecessarily for long periods.	D	All Staff	SMS-06-GD-0323
		Exposure to vibration	B+	Use the anti-vibration cobra and/or anti-vibration gloves	D	All Staff	SMS-06-GD-0323
		Dust Particles	B+	P2 masks to be worn by all staff	C-	All Staff	SMS-06-GD-0323

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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

RailCorp Level 2 Risk Matrix - Regional & Local (Workplace)			Likelihood/Frequency						<u>Definition for Use - Regional & Local level (Workplace)</u> 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. 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. 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. To score the risk, follow the steps: 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). 2. Identify the likelihood of this level of consequence occurring. (This is done after considering the effectiveness of the current controls in place) 3. Score the risk using the combination of likelihood and consequence ranking. 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.	
			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		
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-		