General Demolition Works

SWMS number:
SMS-06-SW-0990

SWMS Name:
General Demolition Works

SWMS Team: Civil Construction Review Team

Custodian (Position):
Services Manager Civil

Assumptions:
Site specific risks are addressed and assessed in pre- work briefing. All demolition of structures over 4 m require demolition plan prepared and supervised by qualified person.

Content reviewed by Technical expert (SME) and RailCorp safety professional (position including Div/Group)
Services Manager Civil and Safety facilitator, Safety Support Services Division

Approver (Position):
Civil Electrical Works Manager Infrastructure Renewals

Applicable Standards, Codes of Practice and guidance:
- OH&S Act 2000
- OH&S Regulation 2001
- Rail Safety Regulation 2003
- RailCorp Network Rules & Procedures
- RailCorp Safety Management System.
- MSDS for all chemicals and hazardous Substances used on site
- Electrical Safety Instructions
- SAA Wiring Rules
- Working near Overhead Power Lines
- EC14 – Guide to Electrical Workers' Safety Equipment
- WorkCover NSW Plant Guide
- National Code of Practice for Manual Handling [NOHSC:2005]
- AS 4839 portable oxy-fuel gas systems
- AS 2550.5 Cranes, hoists and winches - Safe use - Mobile cranes.

Plant/Equipment/Tools:
- Scaffolding, Scissor Lift, Crane, Backhoe, Excavator, Bogie Tipper
- Appropriate hand tools, Knives, Hacksaws, Power Tools, Generator
- Barriers, Witches hats and Demarcation fencing, Signs
- No Spill Fuel cans, Spill Response Kit
- Water cart, extinguishers
- Silt Fencing, Hay Bales, Bungs Ballast Cleaning Ramps, Broom, Skip Bins, Sediment Cloth
- Oxy/Acetylene Equipment
- Straps ,Ties Construction Equipment

Records/Reporting:
- Worksite Protection Plan
- Pre-work Brief
- Site Specific Management Plan
- Daily Plant Checklist
- Electrical Tool Test Tags
- Hot Work Permit (During Total Fire Ban)
- Fire Brigade
- Site layout documented
- Services searches
- Traffic Control Plan
- Electrical Permits
- Environmental Protection Plan
- Demolition Plan

Permits/licences required:
- Qualified person under Railcorp Demolition Licence (if required)
- Traffic Controller Certificate
- Electrical Permit Holder
- Truck Pilot/Dogman Ticket

Inspection requirements
Nil

Service schedule:
Nil

Training/Qualification required:
- Demolition I or II TAFE qualification if required
- Construction Industry Induction
- RISI (Rail Industry Safety Induction)

And as specified below.
- Authorised Electrical Person
- Electrical Permit Holder

PPE required:
- Safety Boots
- High Visibility Vests
- Hardhats
- Protective Clothing
- Safety Glasses

And as specified below.
- Type 2 Respirator, P2 Dust Mask
- Fall Arrest Devices
- Gloves
- Spats, Goggles, Face Shield
- Hearing Protection
- During all Site Works a FIRST AIDER MUST be
- Present

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1	Construction Of Access Roads And Stockpiling Areas.	Strike Underground Services	A	Service Search Maps And Dial Before You Dig Searches To Be On Site. Mark Out Locations. Hand Dig Or Use Non Destructive Method To Locate Any Services	C+	Team Leaders Work Group Leaders	SSMP, Pre Work Briefing SMS-06-FM-0163 Excavation & Earthworks SMS-06-GD-0378
		Personnel Struck By Vehicles Or Machinery	B+	Implement Exclusion Zones All Plant Must Have Functional Lights And Alarms As Per Plant Inspection Report. Use Ticketed Operators. Plan Work To Avoid Congestion Use Truck Pilots I F Appropriate	C+	All Staff Team Leader Work Group Leader Workcover Ticketed Operator Sms-11-Gd-0243	SSMP, Pre Work Briefing SMS-06-FM-0163 Plant SMS-06-PR-0225 Truck Pilots SMS-11-GD-0243
		Hit By Moving Or Falling Object	C-	Hard Hats To Be Worn At All Times. Implement Exclusion Zone For Workers Not Involved In Tasks. Plan Work Sites To Avoid Congestion	D	Team Leader Work Group Leader All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 PPE SMS-06-GD-0323
		Manual Handling Injuries	B-	Use Correct Manual Handling Techniques. Rotate Staff On Repetitive Tasks. Use Gloves If Required	C+	Team Leader Work Group Leader All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Manual Handling Guide SMS-06-GD-0001
		Fuel/Oil Spills	C-	Plant To Be Inspected Daily. Use Correct Methods For Filling Machinery. Maintain Spill Response Kits On-Site.	D	Team Leader Work Group Leader All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 MSDS ENVIRONMENTAL PROTECTION PLAN
		Inhaling Dust And Fumes	B-	Implement Exclusion Zones. Wear type 2 Respirators If Required. Water Down Worksite At Appropriate Intervals.	D	Team Leader Work Group Leader All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Hazardous Substances SMS-06-GD-0199
		Hit By Flying Objects	C-	Implement Exclusion Zone Wear Eye Protection	D	Team Leader Work Group Leader All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 PPE SMS-06-GD-0323
		Spoil From Tyres And Tracks Being Dropped On External Roads	C+	Provide Ballast Or Cleaning Ramp At Site Access	D	Team Leaders Work Group Leaders	SSMP, Pre Work Briefing SMS-06-FM-0163 Environmental Protection Plan

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		Run-Off From Stock Piles	C+	Sediment Traps Placed Around Perimeter	D	Team Leaders Work Group Leaders	SSMP, Pre Work Briefing SMS-06-FM-0163 Environmental Protection Plan
		Residual Dirt On External Roads Flowing Into Stormwater	C+	Place Hay Bale Around Inlet	D	Team Leaders Work Group Leaders	SSMP, Pre Work Briefing SMS-06-FM-0163 Environmental Protection Plan
2	Install Environmental Protection	Strike Underground Services	A	Service Search Maps And Dial Before You Dig Searches To Be On Site. Mark Out Locations. Hand Dig Or Use Non Destructive Method To Locate Any Services	C+	Team Leaders Work Group Leaders	SSMP, Pre Work Briefing SMS-06-FM-0163 Excavation & Earthworks SMS-06-GD-0378
		Manual Handling Injuries	B-	Correct manual handling procedures. “back-safe” training. Plant to move heavy and/or bulky items. As per Risk assessment.	C+	Team Leader Work Group Leader All Staff	SSMP, pre work briefing SMS-06-FM-0163 manual handling guide SMS-06-GD-0001
WARNING	*The Following Precautions Are To Be Undertaken For When Using Hot Works As In Activity 3 During Total Fire Bans:* • An Hot Works Permit Must Be Issued Before Work Tasks Are To Be Performed • The Welder Or Other Person In Control Of The Worksite Must Take Reasonable Care To Inspect The Workplace To Identify Potential Fire Hazards • All Fire Hazards Are To Be Removed Prior To Commencing Welding Tasks • Fire Fighting Equipment Must Be On Hand At The Worksite E.G. Watercart, Knapsacks, Fire Extinguishers • (Hot Works In Progress) Warning Signs Are To Be Placed At Appropriate Locations Hot Work Sms-06-Pr-0329						
3	Demolition Works / Set up Machines	Personnel Struck By Vehicles Or Machinery	B+	Implement Exclusion Zones All Plant Must Have Functional Lights And Alarms As Per Plant Inspection Report. Use Ticketed Operators. Plan Work To Avoid Congestion Use Truck Pilots I F Appropriate	C+	All Staff Team Leader Work Group Leader Workcover Ticketed Operator Sms-11-Gd-0243	SSMP, Pre Work Briefing SMS-06-FM-0163 Plant SMS-06-PR-0225 Truck Pilots SMS-11-GD-0243 Demolition Planning SMS-06-GD-0324

General Demolition Works

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		Strike Live Services	A	Use Service Search Maps And Dial Before You Dig Searches To Be On Site. Mark Out Locations. Hand Dig Or Use Non Destructive Method To Locate Any Services Close To Excavations Ensure All Services To Structure Being Demolished Are Disconnected And Made Safe	C+	Team Leader Work Group Leader All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Excavation & Earthworks SMS-06-GD-0378 Demolition Planning SMS-06-GD-0324
		Contact With Live O/H Wires (High Voltage)	A	Maintain regulated clearances on wires at all times. Isolate power when in side Safe approach distance (SAD).	C+	Qualified Permit Holder QEL29/MEI61 Team Leader Work Group Leader All Staff	Electrical equipment SMS-06-GD-0268 Electrical permits SMS-06-EN-0577
		Fall From Height	B+	Provide Scaffold, Elevated Work Platform Or Wear Harness	C+	Team Leader Work Group Leader All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Working At Heights SMS-06-GD-0240 Demolition Planning SMS-06-GD-0324
		Flying Objects	B-	Implement Exclusion Zone Erect Hoardings And Fences To Isolate Site From Public. Wear Eye Protection	C-	Team Leader Work Group Leader All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 PPE SMS-06-GD-0323 Demolition Planning SMS-06-GD-0324
		Noise From Plant	C+	Implement Exclusion Zones. Use Appropriate Plant With Noise Control Measures. Use Ear Protection Where Required.	D	Team Leader Work Group Leader All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 PPE SMS-06-GD-0323 Demolition Planning SMS-06-GD-0324
		Fire From Oxy-Acetylene Cutting	B+	Hot Work Permit If Required. Water cart, Or Fire Extinguishers On Site Wet Down Work Area	C+	Team Leader Work Group Leader All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Hot Work SMS-06-PR-0329 Demolition Planning SMS-06-GD-0324

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		Burns From Cutting Equipment And Hot Work	C+	Wear Gloves Long Sleeve Shirts, Long Pants , Spats, Goggles Or Face Shield As Appropriate	D	Team Leader Work Group Leader All Staff Ticketed Cutter/ Welder	SSMP, Pre Work Briefing SMS-06-FM-0163 MSDS PPE SMS-06-GD-0323 Demolition Planning SMS-06-GD-0324
		Inhaling Dust And Fumes	B-	Implement Exclusion Zones. Wear type 2 Respirators If Required. Water Down Worksite At Appropriate Intervals If Required.	D	Team Leader Work Group Leader All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Hazardous Substances SMS-06-GD-0199 Demolition Planning SMS-06-GD-0324
	Demolition Works Cont…	Injury Or Allergies From Chemicals Or Hazardous Substances	B-	Wear Long Sleeved Shirt Long Pants And Suitable Gloves Where Needed Check Site For Potential Hazardous Materials And Substances Before Demolishing And Remove Safely Trained First Aid Officer To Be On Site.	C-	Team Leader Work Group Leader All Staff. First Aid Officer Senior First Aid Or Better	SSMP, Pre Work Briefing SMS-06-FM-0163 Hazardous Substances SMS-06-GD-0199 Demolition Planning SMS-06-GD-0324
		Struck By Crane, Excavator, Backhoe or load	B+	Implement Exclusion Zones For Workers Not Involved In Loading/ Unloading. Control Load With Tag Lines, Position Dogman With Clear Escape Route Away From Anticipated Load Movement. Wear Head Protection	C+	Workcover Ticketed Operator And Dogman Sms-11-Gd-0243	SSMP, Pre Work Briefing SMS-06-FM-0163 PPE SMS-06-GD-0323 Lifting Equipment Inspection SMS-16-FM-0089 Demolition Planning SMS-06-GD-0324
		Failure Of Lifting Equipment From Overloading	B+	Select Appropriate Equipment For Task. Competent Operators To Assess Loads Prior To Lifting. Equipment To Be Properly Maintained And Marked.	C+	Team Leader Work Group Leader. Workcover Ticketed Operator And Dogman Sms-11-Gd-0243	SSMP, Pre Work Briefing SMS-06-FM-0163 Lifting Equipment Inspection SMS-16-FM-0089 Plant SMS-06-PR-0225 Demolition Planning SMS-06-GD-0324
		Struck By Falling Demolition Material	B-	Keep Areas Clear Of Other Workers. Provide Dedicated Spotter	C-	Team Leader Work Group Leader All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 PPE SMS-06-GD-0323 Demolition Planning SMS-06-GD-0324

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		Electric Shock	B+	All Tools Tested And Tagged Take Care To Route Extension Cords Away From Work Areas Do Not Use Power Tools In Wet Conditions Use Power Sources With RCD (Earth Leakage) Protection	C-	Team Leader Work Group Leader All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Work Around Elect. Equip. SMS-06-GD-0268 Demolition Planning SMS-06-GD-0324
4	MATERIAL TRANSFER	Personnel Struck By Vehicles Or Machinery	B+	Implement Exclusion Zones Use Reversing Beepers. Use Ticketed Operators. Plan Work To Avoid Congestion	C+	Team Leader Work Group Leader All Staff Workcover Ticketed Operator Sms-11-Gd-0243	SSMP, Pre Work Briefing SMS-06-FM-0163 Plant SMS-06-PR-0225 Demolition Planning SMS-06-GD-0324
		Unstable Loads	B+	Ensure Materials Are Secured Before Transit. Don't Exceed Safe Working Load Of Equipment Check Loads Are Stable Before Removing Ties	C+	Team Leader Work Group Leader All Staff Workcover Ticketed Operators Sms-11-Gd-0243	SSMP, Pre Work Briefing SMS-06-FM-0163 Plant SMS-06-PR-0225 Demolition Planning SMS-06-GD-0324
		Contact With Live O/H Wires (High Voltage)	A	Maintain regulated clearances on wires at all times. Isolate power when in side Safe approach distance (SAD).	C+	Qualified Permit Holder QEL29/MEI61 Team Leader Work Group Leader All Staff	Electrical equipment SMS-06-GD-0268 Electrical permits SMS-06-EN-0577
		Noise From Plant	C+	Implement Exclusion Zones. Use Appropriate Plant With Noise Control Measures. Use Ear Protection.	D	Team Leader Work Group Leader All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 PPE SMS-06-GD-0323 Demolition Planning SMS-06-GD-0324
		Dust From Movement Of Machinery	B-	Water Down Access Roads If Appropriate Wear Dust Mask	D	Team Leader Work Group Leader All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Hazardous Substances SMS-06-GD-0199 Demolition Planning SMS-06-GD-0324

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		Struck By Crane Or Load	B+	Vigilance During Loading And Unloading Of Materials	C+	Team Leader Work Group Leader All Staff	SSMP, Pre Work Briefing SMS-06-FM-0163 Plant SMS-06-PR-0225 Demolition Planning SMS-06-GD-0324

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						
		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
			F1	F2	F3	F4	F5	F6
Consequence			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-

Extreme
High
Medium
Low

Definition for Use - Regional & Local level (Workplace)

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 liklihood 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 matricies).

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.