

# Installation of Bollards

Issue date: 11/04/08  
Review date: 19/02/11

<b>SWMS number:</b> SMS-06-SW-1013	<b>SWMS Name:</b> Installation of Bollards	<b>SWMS Team :</b> Signal Review Team	
<b>Custodian (Position):</b> Signal Services & External Resources Manager	<b>Assumptions:</b> Site specific risks are addressed and assessed in pre- work briefing		
<b>Approving Authority (Position):</b> Safety and Quality Manager Commercial / Renewals	<b>Equipment/Plant/Tools:</b> Vehicle Crane, Guide ropes <ul style="list-style-type: none"> <li>• Excavator, Back Hoe, Post Hole Digger</li> <li>• Shovels, Picks, Bars, Wheelbarrow, Concrete Mix, Hammers</li> </ul>	<b>Records/Reporting:</b> <ul style="list-style-type: none"> <li>• Worksite Protection Plan</li> <li>• Pre-work Brief</li> <li>• Electrical Test Tags</li> <li>• Services searches diagrams</li> <li>• Signalling Design/ Construction Standards</li> <li>• RailCorp Regional Environmental Officer</li> <li>• MSDS for chemicals</li> </ul>	<b>Permits/Licences required:</b> <ul style="list-style-type: none"> <li>• Vehicle Loading Crane Certificate</li> <li>• Excavator, Back Hoe Operators Certificate</li> </ul>
<b>Applicable Standards, Codes of Practice and guidance:</b> <ul style="list-style-type: none"> <li>• OH&amp;S Act 2000</li> <li>• OH&amp;S Regulation 2001</li> <li>• Rail Safety Regulation 2003</li> <li>• RailCorp Network Rules &amp; Procedures</li> <li>• Signalling Maintenance Procedures</li> <li>• Technical Maintenance Plan</li> <li>• Signal Engineering Standards</li> <li>• RailCorp Safety Management System.</li> <li>• MSDS for all chemicals and hazardous Substances used on site</li> <li>• WorkCover NSW Plant Guide</li> <li>• National Code of Practice for Manual Handling [NOHSC:2005]</li> </ul>	<b>Inspection requirements:</b> Nil	<b>Service schedule:</b> Nil	<b>Training/Qualification required:</b> <ul style="list-style-type: none"> <li>• Construction Industry Induction</li> <li>• Track Safety Awareness or RISI (Rail Industry Safety Induction)</li> </ul> <p>And as specified below.</p> <ul style="list-style-type: none"> <li>• Dust Masks</li> <li>• Gloves</li> <li>• During all Site Works a FIRST AIDER MUST be Present</li> </ul>

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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	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	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
6	Locate other Services	Injury from striking underground services	B+	Services search diagrams. Dial Before You Dig with Utilities.	C-	Work Group Leader	Services Search Checklist SMS-06-FM-0384
7	Excavate hole	Injury to Back from use of Shovels, Picks, Bars etc	B+	Use of PPE – Gloves Ensure tools are in good condition Do not overexert.	C-	All Staff	PPE SMS-06-GD-0323
		Injury by machine	B+	Establish eye contact with operator Operator to stop machine if workers are within reaches.	C-	Work Group Leader, All Staff	PPE SMS-06-GD-0323
		Fuel Spillage	C-	Fill machine in properly bundled area Spill kit on site. No smoking/naked flame or electronic device	D	All Staff	Hazardous Substances SMS-06-GD-0199

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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**

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	
Consequence	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	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.	
	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		
>10 Fatalities	C6	Disastrous	B-	B+	A	A	A	A	To score the risk, follow the steps:
2-10 Fatalities	C5	Catastrophic	C+	B-	B+	A	A	A	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).
1 Fatality (2-10 Major Injuries)	C4	Critical	C-	C+	B-	B+	A	A	2. Identify the likelihood of this level of consequence occurring. (This is done after considering the effectiveness of the current controls in place)
1 Major Injury	C3	Major	D	C-	C+	B-	B+	A	3. Score the risk using the combination of likelihood and consequence ranking.
1 or more Minor Injuries	C2	Minor	D	D	C-	C+	B-	B+	Note: Where there are a range of credible consequences which may lead to a different level of risk and/or where the controls may be different. It may be useful to score the risk more than once.
First aid treatment, or illness/injury not requiring treatment	C1	Negligible	D	D	D	C-	C+	B-	