Safe Work Instruction	Issue date: 15/09/09
Mobile Scaffolding used in Maintenance Centres	Review date: 11/12/10

Document no.	**Work description**
SMS-06-SW-1161	This SWI describes the safe practices for the use of pre-erected, Mobile Scaffolding in Maintenance Centres
	Scope This SWI applies only to pre-erected, mobile scaffolding of a height less than 4m. This document applies only to the use of this scaffolding for the purposes of maintaining Rollingstock within the confines of a Maintenance Centre in RSD The erection and dismantling of scaffolding is not covered by this SWI. Any scaffolding that requires additional horizontal bracing to prevent distortion during travel is not covered by this SWI Refer to SMS-06-GD-0282 Scaffolding for the requirements of using scaffolding outside the scope of this document
Review date 11/12/10	**References** • OHS Act 2000 • OHS Regulations 2001, Reg 56 • Rail Safety Act 2008 • AS/NZS 4576:1995 Scaffolding • AS/NZS 3000:2007 Wiring Rules • WorkCover COP Low Voltage Electrical Work • WorkCover COP Overhead Protective Structures • Advanced Scaffold (Manufacturer) Instructions • EP 95 00 00 11 SI Requirements for Work Using Scaffolding and Metal Ladders • SMS-06-GD-0268 Working Around Electrical Equipment • SMS-16-SR-0057 Inspection and testing • SMS-05-SR-0027 Records Management • SMS-16-FM-0296 Scaffold Inspection • SMS-06-GD-0282 Scaffolding • SMS-06-PR-0173 Plant and Equipment Lock-out Tag-out

Responsible supervisor	**PPE and precautions**	**Competencies or qualifications**	**Licences or permits required**
Line Manager	• High visibility vest or clothing • Safety Footwear • Relevant barricades, signs and tags as required	• Rail Industry Safety Induction (RISI) • Site specific induction • Electrical Safety Awareness	

Tools and equipment required

Safe escape

Ensure a detailed Workplace risk assessment is undertaken and documented
Ensure observers have a safe place to go in the event of a system failure or emergency

Definitions:
Low voltage means an operating voltage that exceeds extra-low voltage (ELV), but not exceeding 1000V A.C or 1500V D.C. is defined in AS/NZS 3000 *Australian/New Zealand Wiring Rules.*

Competent person" for any task means a person who has acquired through training, qualification or experience, or a combination of them, the knowledge and skills to carry out that task.

IF CONTROL MEASURES ARE NOT SUITABLE AND MAJOR CHANGES ARE NEEDED, CONDUCT A RISK ASSESSMENT AND DEVELOP NEW CONTROLS ACCORDING TO SMS-06-PR-0104 WORKPLACE RISK MANAGEMENT.

Warning

- *Due to overhead power, work from platforms can result in electric shock. Control of this risk is to follow the hierarchy of controls. Where possible conduct the work at ground level. If this is not possible, work in an area away from overhead power or isolate the road. Where this is not possible use a non-conductive (eg. fibreglass) constructed platform (i.e. cannot be modified). Where this is not possible use a non-conductive (eg. fibreglass) scaffold*
- *Where there is a risk of electric shock from overhead, ensure that scaffolding is in a location and of a height that ensures that no person, tool, material or equipment can encroach on the minimum safe distance from overhead power (see "inspection requirements" below for distances). Work is to be carried out in accordance with* SMS-06-GD- 0268 working around Electrical Equipment
- *All scaffolding is to be inspected in instances and intervals as described in* SMS-06-GD-0282 Scaffolding

Establish the Work Area	Ensure a detailed Workplace risk assessment is undertaken and documented. Ensure a pre-work brief is undertaken with all team members involved in the work activity. Determine the location that the scaffolding can be used, including ensuring the location has a hard flat surface Determine the proximity that the scaffolding will have to any 1500v DC overhead power. Seek authority, as required – see Proximity to Overhead Power below In addition to any authority above, advise operations planners or suitable line management of intent to conduct work using scaffolding at identified location Determine a safe route to the intended location (i.e. free from moving vehicles, trip hazards, electrical hazards) Establish protection for travel and work, as required, to eliminate the risk of a train related incidents Establish traffic control for travel and work, as required, by using traffic controllers, barricades, signs, posts, buffer rails, kerbs etc to minimise the risk of a mobile plant related incident
	***Warning*** • *Failure to ensure protection against trains or mobile plant could result in a collision between vehicles and the scaffolding. Wherever possible the protection is to be hard protection (i.e. barriers instead of barrier tape) to eliminate or minimise the amount of damage caused, should a collision occur*
Inspection requirements	As per SMS-16-SR-0057 Inspection and testing requirements **All types where a person or object may fall more than 4 metres** • Pre Use- Handover inspection required before first use • In Service Inspections- Varies according to site conditions, nature of the work, degree of risk associated with a failure of the scaffold and specifications or recommendations, given by the designer/ supplier. Inspection intervals must not exceed 30 days • Alteration or repair- the scaffold and its supporting structure are re-inspected by a competent person before further use of the scaffold **Where a person or object cannot fall more than 4 metres** • Pre Use- Required at completion of scaffold assembly and before each use • In Service Inspections-Varies according to site conditions, nature of the work, degree of risk associated with a failure of the scaffold and specifications or recommendations, given by the designer/ supplier. Inspection intervals must be determined by a risk assessment. • Alteration or repair- the scaffold and its supporting structure are re-inspected by a competent person before further use of the scaffold • Before use, check that scaffolding is fitted with a tag that records an inspection within the last 30 days • Ensure that scaffolding is complete with no missing rails, toe boards or internal ladders / stairs • Conduct a inspection in accordance with SMS-16-FM-0296 Scaffold Inspection. Maintain inspection and test records in accordance with SMS-16-SR-0057 Inspection and Testing. The record of this inspection is to be provided to Line Management and retained in accordance with SMS-05-SR-0027 Records Management • Check that casters and outriggers, if provided, are functioning correctly
	***Warning*** • *Never use a scaffold that has not been inspected in accordance with the inspection requirements above, which appears to be unsafe or is missing parts. Immediately tag it as out of service, in accordance with* SMS-06-PR-0173 Plant and Equipment Lock-out Tag-out*, and notify your Line Manager as soon as practicable*
Position Scaffolding	With assistance, roll scaffolding to location and into position Recheck proximity to nearest overhead power (see *Proximity to Overhead Power* below) Lock casters to prevent movement of the scaffold Extend outriggers, if provided Establish a pedestrian exclusion zone through the use of barricades, witches hats and/or barrier tape with danger tags or signs

Warning

- *Where provided, outriggers must always be used to ensure the stability of the scaffolding. Casters must be fitted with a braking mechanism which must be engaged once positioned. Failure to secure and stabilise the scaffolding, in accordance with the manufacturer's instructions, could result in serious injury or death caused by falls from height*
- *Failure to establish a pedestrian exclusion zone could result in someone being inadvertently struck by falling materials, tools or equipment. Immediately cease work if anyone enters the exclusion zone*

Proximity to Overhead Power - 1500ohv

According to SMS-06-GD-0282 Scaffolding, scaffolds are to be positioned such that no part of the scaffold, nor persons, tools, materials or equipment on the scaffolding, will come any closer than the following distances (below) from 1500v DC overhead power.

Warning

- *Encroaching closer than the following distances could result in injury or death from electrical arcing.*

Table A – Minimum Safe Approach Distances for Scaffolding Work unless performed under an Electrical Permit

Electrical equipment type	Scaffolding material			
	Conductive		Non-conductive	
	Vertical (see note 1)	Horizontal	Vertical (see Note 1)	Horizontal
1500V DC Aerial feeders	4.0m	4.0m	2.7m	1.5m
1500V DC Overhead Wiring (clearance to OHW and extremity of pantographs)	4.0m	Structure gauge + 4.0m (see Note 2)	2.7m	Structure gauge + 1.5m (see Note 2)
Above 1000V AC but not exceeding 33kV AC	4.0m	4.0m	3.5m	2.1m
Above 33kV AC but not exceeding 132kV AC	4.0m	4.0m	4.0m	3.0m
Not exceeding 1000V AC	4.0m	4.0m	2.7m	1.5m

NOTE - *1. Vertical distances are measured from the highest part of the scaffold, including handrails.*

2. Structure Gauge is the profile of the maximum allowable infrastructure limits in relation to track. Consult the track discipline representative for values of the Structure Gauge if there is any doubt.

Use of Scaffolding

Use internal ladders or stairs to climb scaffolding. Never climb the outside of a scaffold

Never drop or throw tools or equipment onto or from scaffolding as doing so could result in damage to equipment or injury to persons

Do not introduce longer tools, materials or equipment that may encroach upon the safe distance noted above

Emergency Treatment	Should an employee become injured or ill whilst on a scaffold, covered by the scope of this document, the following is to occur All persons: firstly ensure your own safety (eg. isolate electricity, move obstacles) Line Manager • Once you are safe, assist to make the injured person safe • Assess the injured or ill person and call for emergency services, as required • Call for first aid treatment (regardless of whether emergency services is required) • Control bystanders First Aider • Upon arrival assess the scene and ensure your own safety before proceeding • Assess the the injured or ill person and call for emergency services, as required • Treat injured person, as required • If safe to do so, encourage a conscious and capable person to leave the scaffolding without assistance • If this is not possible, immediately call for emergency services
	***Note*** • *Do not hesitate to call for emergency assistance as soon as it is identified that you may need help*
Emergency Rescue	Rescuing an injured or ill person could result in further injury to them. Additionally, carrrying or otherwise assisting, an injured or ill person down a scaffold could result in manual handling or fall injury to the rescuers. Always consult with your line manager and assess the risk before taking any action. Safe Scene If safe to do so always provide first aid assessment / treatment to an injured or ill person in the location they are found. Once assessment / treatment has been provided, determine rescue arrangements as follows: • If they are unconscious or otherwise incapacitated leave them where they are until emergency services arrive. Emergency services are better trained and equiped to deal with patients in these conditions and therefore less likely to do harm to the patient or themselves • If they are conscious and capable, encourage the injured or ill person to leave the scaffold without assistance, when they are ready Unsafe Scene The first priority of dealing with an incident is to make the scene safe. It is better to take the time to make the scene safe and avoid serious injury or worse to rescuers than it is to quickly respond to the injured or ill person. • Do not rush in. Stop and assess the scene. If the rescue could result in serious injury or death, do not rescue. Ensure emergency services have been provided the necessary detail and wait for their arrival. Ensure you keep control of bystanders and 'would-be' rescuers • If the rescue can be safely achieved, retrieve the injured or ill person from danger and move them to a location where they can be treated until emergency services arrive
	***Warning*** • *Every year rescuers are injured or killed. To prevent further injury or death. Do not rush in. Ensure any rescues are carefully considered and communicated before being carried out* • *Wherever possible, do not leave an injured or ill person alone as the incident scene and their condition can rapidly decline. Use other witnesses / bystanders to get help or call for emergency assistance.* • *Attempt to keep the injured or ill person warm and calm until help arrives*

Additional controls

- *Where possible isolate overhead power before using any work platform (including scaffolding) near or under it*
- *Work from a platform or scaffold that may encroach the safe distance from overhead power requires written authorisation from the Chief Engineer, Electrical Systems*
- *Additional controls may be required, depending upon the work being carried out. Refer to relevant SWI's*