BUTLINS STAY SAFE

23 YEARS OF EXCELLENCE 1997 - 2020 AUSTRALIAN SCAFFOLD WORK SAFER - FASTER - SMARTER

100,000 Safer Australian Workers By 2030

USER MANUAL

ROOF EDGE PROTECTION

Australian Scaffolds

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Roof Edge Protection

Information & User Manual

1. Design Information and Duty Ratings:

1.1 - Live Impact Rating Load : 600N
- Maximum Span between Hand Rail Posts : 2.4 metres
- Maximum roof slope 35 degrees

- Note: the live load duty ratings are as specified by AS/NZS 4994.1: 2009

2. Storage & Maintenance:

2.1 All components must be stored off the ground and in an area away from corrosive substances.

2.2 While in storage all components must be provided with suitable protection from mechanical damage.

2.3 When Roof Edge Protection is not being used, it should be stacked in a neat and safe manner in a way that is not dangerous to others.

2.4 Components left in the weather, should be stacked in such a way as not to collect rain water.

2.5 Report any damaged components to your employer or the owner of the scaffold for repairs or replacement. Stack damaged items separately.

2.6 Components should be cleaned regularly as they can become blocked with cement or other debris, which may obstruct the component parts from going into each other.

2.7 All components are galvanized, any build-up of mortar and other materials must be cleaned off.

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2.8 Carry out regular maintenance and inspection of all component parts to ensure they are free of damage and operate freely.

2.9 All component parts are to be inspected before use and any damaged items should be tagged “**out of service**”.

2.10 Damaged items should be returned to your supplier for assessment and repair recommendations. Repairs to be carried out ***only*** by authorized personnel.

3. Access & Safety:

3.1 Although the required access may vary with each scaffold arrangement, it will be necessary for all access ladders to comply with Australian Standards, be of sound condition and be secured at each landing.

3.2 Ladder access can be made by installing Ladder Access at appropriate intervals in the Roof Edge Protection guard rails.

3.3 A scaffold must not be erected within 4 metres of low voltage power lines, such as to a residence. Where it is necessary to erect a scaffold closer than 4 metres to low voltage power lines or where there is doubt of the voltage, do not proceed without written authority from the local power supply authority. **Note:** Victorian regulations require clearances of 4.6 metres horizontally and 5 metres vertically from the overhead wires.

3.4 Make sure you are wearing appropriate Personal Protective Equipment.

3.5 Do not lift any gear up on a scaffold using a pulley, block, hook or fitting that is visibly worn, cracked, rusted or otherwise damaged

3.6 Do not lift any gear up on a scaffold if the hoisting rope is frayed, torn or visibly damaged.

3.7 Do not use any scaffold tagged “Out of Service” or “Scaffold Incomplete”.

3.8 Do not sit or climb on the guardrails.

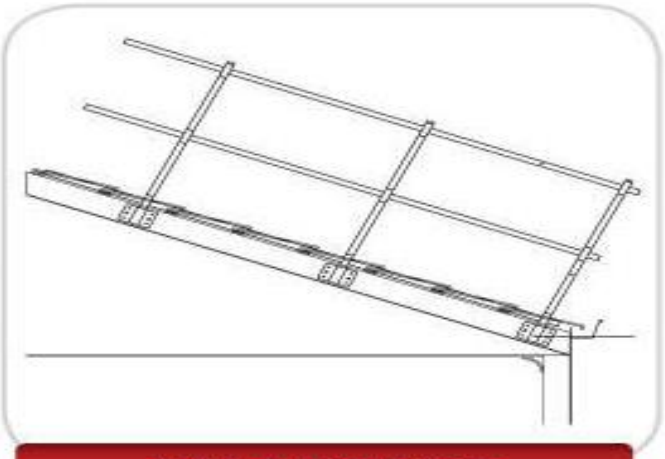
3.9 Do not lean out from the guardrails.

4. Roof Design Type and System Selection :

TYPE 1: L BEND EXPOSED EAVES

TYPE 2: WALL STUD WITH

TYPE 3: IRON ROOF



TYPE 4: GABLE END

TYPE 5: Z BEND WITH EAVES

TYPE 6: TILE ROOF WITH EAVES

5. Transport:

5.1 Roof Edge Protection components can be easily damaged during transport so care must be taken when arranging their loading and placement on the vehicle. Components may be transported in either the vertical or horizontal position but must always be lashed in bundles of not more than 10.

5.2 Note: Where suitable mechanical protection cannot be provided, top loading should be considered.

5.3 Roof Edge Protection components are best transported and stored in the S1 Stillage provided.

6. Erection Guidelines:

6.1 Roof Edge Protection over 4.0 metres high must be erected by a competent licensed (ticketed) scaffolder.

6.2 Hand Rail Posts must not exceed a 2.4 metre span.

6.3 Where a roof slope exceeds 35 degrees, roof edge protection should be specifically designed.

6.4 All Guard Rails should be secured on each corner with a Swivel Coupler. All guard rails meeting mid span must be secured with a Double Coupler.

6.5 A minimum of two people are required to erect an Australian Scaffolds system. A component list and unit weight is provided on Page 10.

6.6 Make sure the base structure, roof rafters and/or wall studs are secure and soundly fixed.
A Roof Edge Protection system *must not* be erected on any structures that have not been completed.

6.7 Do not use any component that shows signs of damage. Always check to make sure all components are well maintained and suitable for use.

6.8 Seek expert advice if the roof edge protection system is to be set up in an unusual, dangerous or unfamiliar work area.

6.9 Select the Roof Edge Protection system that will best fit the job and proceed to Erection Steps

Australian Scaffolds

Component List and Unit Weights

Stock Item No.	Component Description	Size mm	Weight (Kgs)	Drawing Number
400	S Bend	620x260x40	3.1	H8/400
401	L Bend	790x450x40	3.1	H8/401
402	Hand Rail Post	1060x100x30	2.6	H8/402
403	Swivel Coupler	125x80x50	0.5	H8/403
404	Universal Bracket	310x170x160	3.8	H8/404
405	Gable Bracket	135x100x35	0.6	H8/405
406	Ladder Access	1200x620x30	4.3	H8/406
407	Z Bend	565x350x40	2.3	H8/407
408	Iron Roof Bracket	700x420x240	6.5	H8/408
409	WA Bracket	400x220x100	3.6	H8/409
410	4.0M Guard Rail	4000x30x30	4.0	H8/410
411	Double Coupler	125x80x50	0.5	H8/411
412	Retaining Wall Bracket	620x220x40	4.8	H8/412
054	S1 Stillage	680x680x695	17.	HS/S1

6.9 SIMPLE STEPS TO ERECTING AUSTRALIAN SCAFFOLD ROOF EDGE PROTECTION SYSTEM

Step 1
Start with the bracket to suit the system chosen, most commonly Universal Bracket. Attach to roof rafter or wall stud using the tightening bolts to position it and enable fitting either the L Bend, S Bend or Z Bend.

Step 2
* Secure the Universal Bracket to timber rafter / wall stud using three 10x50mm self-tapping roofing screws through the holes provided in the Universal Bracket.
* When anchoring to steel rafters or wall studs use 10x30mm self tapping drilling screws for metal.
* When anchoring to concrete use 10x30mm self tapping drilling screws for concrete.

Step 3
Select next rafter / wall stud anchor point no more than 2.4m span.

Step 4
Secure the next Universal Bracket and repeat along the perimeter of the roof.

Step 5
Insert extra Universal Brackets at corners to ensure span does not exceed 2.4 metres .

Step 6
Insert the L Bend or S Bend or Z Bend as system selected to be used to complete the mounting bracket

Step 7
Insert the Hand Rail Post into all completed mounting brackets around the perimeter of the roof with loops facing inward.

Step 8
Insert bottom Guard Rail sliding it through to the next Hand Rail Post. Repeat for mid and top Guard Rails

Step 9
Cut Guard Rail at corners to fit. Do not leave any protruding Guard Rails that could interfere with workers on the roof.

Step 10
Connect all mid span Guard Rails using a Double Coupler so that Guard Rails are joined by overlapping 300mm

Step 11
Connect all corner Guard Rails using a Swivel Coupler making sure internal protrusions are no more than 100mm

Step 12
Select and provide space for ladder access. Fit 3 x Ladder Access Brackets, one each to the top, middle and bottom guard rails, using Double Couplers. At no time should access be attempted through or over the Guard Rails.

Step 13
Tighten all hand bolts on Hand Rail Posts to make the complete system secure
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Step 14
Check when using the L Bend that more self-tapping roofing screws may be required in the holes provided for extra stability.

Step 15
Check all Universal Brackets and the completed mounting with the Hand Rail Posts in place are secure.

Step 16
Check all Guard Rails are secure and cannot slide.

Step 17
For gable ends, attach the Gable Bracket using 4 x 10x50mm self-tapping roofing screws and repeat steps above. Span not to exceed 2.4 metres. Check and follow Step 2 when installing on Steel or Concrete gable ends.

Step 18
For existing iron roofs use an Iron Roof Bracket placed on top of the existing roof cladding. Use spacer bar to correctly position bracket over the roof battens and secure by tek screw using 10x50mm roofing screws. Repeat steps above to achieve a secure roof edge protection. Span not to exceed 2.4 metres.

Step 19
For retaining wall protection, fit a Retaining Wall Bracket and repeat steps above to achieve a secure barrier edge protection. Span not to exceed 2.4 metres.

7. Safe Working Practice

7.1 Once the Roof Edge Protection system has been erected and accepted as a safety barrier, the users are responsible for using the barrier in a manner that minimises risk to themselves and others. Your employer must ensure you have sufficient knowledge or experience to do so.

7.2 Do not lean any working materials on the Guard Rail or use them for any sort of leverage.

7.3 Any building debris and waste material should be progressively removed. Debris generated during use should be confined within the working platform. **Working debris must not be allowed to fall from the working area.** Use chutes for debris or lower materials/debris by hoist.

7.4 Electrical leads or equipment used erecting the Roof Edge Protection system must be tagged with a recent date inspection tag and are in good working order.

7.5 Where the Roof Edge Protection is in close proximity to power lines, the handling of reinforcing steel rods and other long metal items should be carried in a manner that preserves the safe minimum distance of 4 metres from the power lines.

7.6 **Roof Edge Protection is made from steel and is electrically conductive. Any faulty electrical equipment used could result in a fatal injury.**

8. Adverse Weather

8.1 In adverse weather conditions such as rain or snow, special precautions should be taken to ensure that work can be done safely. You may need a safety harness when working on slippery surfaces.

8.2 **DO NOT** work installing Roof Edge Protection in high winds.

9. Dismantling

9.1 Once finished with the Roof Edge Protection make sure any unused material, debris and rubble are cleaned or removed to ensure a clear working area

9.2 When dismantling the Roof Edge Protection work from top to bottom starting at one end and working towards the other end one bay at a time. All pieces must be passed or lowered down one bay at a time.

9.3 **Do not drop or throw scaffolding as it could result in the injury of others or damage to the equipment.**

9.4 The first items removed should be the top guard rails, followed by the mid guard rails and the bottom guard rails.

9.5 The Hand Rail Posts are removed and lowered down followed by the L Bend, S Bend or Z Bend whichever was used.

9.6 The Universal Bracket can now be detached and lowered.

Safety glasses are recommended to avoid loose debris getting into your eyes and helmets must be worn.

Complete the removal of all items from one level before starting on the lower levels. The remainder of the scaffold is dismantled following this pattern, working from one end to the other and then going down to the next level.

Disclaimer

This guide provides general information about the obligations of employers and users of Australian Scaffold's Edge Protection Systems to maintain safe work practices. However, this guide is not intended to represent a comprehensive statement of the law or substitute for legal advice. Should legal advice be required you should contact WorkCover / Worksafe in your state.

SAMPLE ONLY

APPENDIX A

HANDOVER CERTIFICATE

(Informative)

ROOF EDGE PROTECTION
COMPLETION OF INSTALLATION

Issued date ..... No. .....

Inspection date ..... Time ..... am/pm

Name and address of person or organization requiring the roof edge protection:

.....

.....

.....

Site address .....

Location on site .....

Installer organization name .....

Phone no. .....

Address .....

Type of roof edge protection: ☐ Prefabricated proprietary system
☐ Scaffolding

Name of system .....

Type of scaffolding .....

Name of person in charge of installation .....

Installer's statement:
All relevant inspections and checks have been carried out prior to the issue of this Certificate.

Certified issued on behalf of .....

By ....
(Print name) (Signature)

Certified received on behalf of .....

By ....
(Print name) (Signature)

Melbourne Testing Services

Unit 1/15 Pickering Road
MULGRAVE Victoria 3170
Telephone 03 9560 2759
Mobile 0419 116 733

COMPLIANCE CERTIFICATE

REPORT NO. MT-10/484

CLIENT: GLOBAL SCAFFOLD SALES
208 GNANGARA ROAD
LANDSDALE WA 6065

The following guardrail systems have been tested by Melbourne Testing Services and have passed the specified requirements as detailed below.

GLOBAL SCAFFOLD SALES Guardrail Type	Compliant with AS/NZS 4994.1-2009	MTS Report No.
Type 1: L-Bend Exposed Eaves	Appendix A, B,C & D	MT-10/484-A
Type 2: Wall Stud / S-Bend	Appendix A, B,C & D	MT-10/484-B
Type 3: Iron Roof	Appendix A, B,C & D	MT-10/484-C
Type 4: Gable End	Appendix B & C	MT-10/484-D
Type 5: Z-Bend with Eaves	Appendix A, B,C & D	MT-10/484-E
Type 6: Tile Roof with Eaves	Appendix A, B,C & D	MT-10/484-F

CONDITIONS:

Notes:

1) Melbourne Testing Services Pty Ltd shall not be liable for loss, cost, damages or expenses incurred by the client or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Melbourne Testing Services Pty Ltd be liable for consequential damages including, but not limited to, lost profit, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested.
2) This report only indicates compliance of the guardrail temporary roof edge protection system in its state at the time of testing. It should not be taken as a statement that all similar temporary roof edge protection systems or components of temporary roof edge protection systems in all states of repair, would also be found to comply.
3) The structural integrity and compliance of the roof edge protection is strictly limited to the conditions as used for testing and whereby the performance attributes are specific to connections made with self-drilling screws into rigidly secured timber roof or walling members. Where connections are made to materials other than timber or not as specifically described herein the performance of the system may differ. With this in mind, MTS shall take no responsibility for the performance and/or compliance of the roof edge protection systems where connection to materials other than those used in the tests described herein apply.
4) It remains the responsibility of the client to ensure that the guardrail temporary roof edge protection system is representative of production batches.
5) This report only covers the structural integrity of the guardrail temporary roof edge protection assembly in accordance with the specific requirements of AS/NZS 4994.1:2009 Section 4
6) MTS shall take no responsibility for the installation and usage of the guardrail temporary roof edge protection system as reported herein.
7) MTS shall take no responsibility for the interpretation or misinterpretation of the procedures outlined in AS/NZS 4994.1:2009 Section 4.

R. Wilkie

RODNEY WILKIE
TEST ENGINEER
LABORATORY MANAGER
DATE: 16/10/2010