

TEST REPORT

Report Number

PRJ-107858 B

Date of Issue

5/22

Client

Roof safety Supplies
Unit 14
Enterprise Park
Leeds

Customer order N°

RSS100875

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1.0 Test Objective.

Carry Out Static Tests in accordance with BS13700:2021

2.0 Name of Test House.

Lloyds British a Division of Speedy Asset Services Limited
Unit 1 Kings Hill Business Park
Darlaston Road
Wednesbury
WS10 7SH
Tel: 0121 7263934

3.0 Accreditation Reference.

ISO 9001: 2008

4.0 Date of Test.

21/04/22

5.0 Witness Details.

Witnessed by Roof Safety Supplies.

6.0 Description of items tested.

Roof Safety Supplies Typical Eco Rail.

2.5 metre span, 3 bays with return ends

7.0 Test Type.

Static tests to BS13700:2021. Tests 2,4,6,8,& 9

Table 1 Serviceability and ultimate limit tests - condition dry

8.0 Equipment and Calibration.

Tractel 3.2t load link, Serial number 0801003TD, Calibration certificate 2105011
(24th May 2021)

9.0 Test Data

System- Permanent counterweighted guardrail system - Typical ECO Rail, 2.5 metre span, 3 bay with return ends

Four separate batch tests carried out in accordance with BS13700:2021 Table 1 Figures 2,4,6,8 & 9. No toe boards fitted.

Testing Carried out on single ply roofing membrane pitched at 5 degrees.

Figure 2 horizontal outwards guardrails and posts.

Test 1 and Test 1A

Guard rails tested Span A & B
Serviceability limit 300N applied.

Pre test dimensions -	685mm	685mm	685mm	685mm
Post test dimensions -	710mm	710mm	710mm	712mm
Deflection recorded -	25mm	25mm	25mm	26mm

Test 2 and Test 2A

Intermediate rails tested Span A & B
Serviceability limit 300N applied.

Pre test dimensions -	580mm	580mm	580mm	580mm
Post test dimensions -	585mm	586mm	586mm	586mm
Deflection recorded -	5mm	6mm	6mm	6mm

Test 3 and Test 3A

Guard rail top of Post tested A & B
Serviceability limit 300N applied.

Pre test dimensions -	593mm	595mm	590mm	585mm
Post test dimensions -	610mm	610mm	620mm	610mm
Deflection recorded -	17mm	15mm	30mm	25mm

Test 4 and Test 4A

Intermediate rail Post tested A & B
Serviceability limit 300N applied.

Pre test dimensions -	560mm	415mm	410mm	415mm
Post test dimensions -	570mm	420mm	420mm	420mm
Deflection recorded -	10mm	5mm	10mm	5mm

All Defections within allowable limits

Figure 2: Ultimate limit state tests - 495N applied to all tests. No identifiable yielding, fracture, or separation of any part of system.

Figure 4 vertical downwards guardrails and posts.

Test 5 and Test 5A

Guard rails tested Span A & B
Serviceability limit 300N applied.

Pre test dimensions -	510mm	520mm	505mm	505mm
Post test dimensions -	525mm	525mm	525mm	525mm
Deflection recorded -	15mm	5mm	20mm	20mm

Test 6 and Test 6A

Intermediate rails tested Span A & B
Serviceability limit 300N applied.

Pre test dimensions -	400mm	400mm	400mm	400mm
Post test dimensions -	390mm	390mm	389mm	388mm
Deflection recorded -	10mm	10mm	11mm	12mm

Test 7 and Test 7A

Guard rail Post tested Span A & B
Serviceability limit 300N applied.

Pre test dimensions -	583mm	585mm	585mm	585mm
Post test dimensions -	570mm	570mm	570mm	569mm
Deflection recorded -	13mm	15mm	15mm	16mm

Test 8 and Test 8A

Intermediate rail Post tested A & B
Serviceability limit 300N applied.

Pre test dimensions -	455mm	455mm	455mm	455mm
Post test dimensions -	450mm	450mm	450mm	450mm
Deflection recorded -	5mm	5mm	5mm	5mm

Test 9 and Test 9A

End of D return test.
Serviceability limit 300N applied.

Pre test dimensions -	462mm	462mm	460mm	461mm
Post test dimensions -	460mm	460mm	460mm	460mm
Deflection recorded -	2mm	2mm	0mm	0mm

All Defections within allowable limits

Figure 4: Ultimate limit state tests - 1250N applied to all tests. No identifiable yielding, fracture, or separation of any part of system. No Displacement.

Figure 6 Horizontally Parallel guardrails and posts.

4 tests ultimate limit state

Test 10 and Test 10A

End of D return test.
Ultimate limit 330N applied to top and bottom of D return.

Figure 6: Ultimate limit state tests - 330N applied to all tests. No identifiable yielding, fracture, or separation of any part of system. No Displacement

Figure 8 Vertically upwards system.

4 tests serviceability limit state

Test 11

End of D return test.
Serviceability limit 300N applied to top of D return.

No part of the system became detached.

Test 12 and Test 12A

Guard rail top of Post tested Span A & B
Serviceability limit 300N applied.

No part of the system became detached

Test 13 and Test 13A

Guard rail span tested Span A & B
Serviceability limit 300N applied.

No part of the system became detached

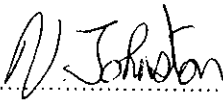
Figure 9 Working wind and horizontal outward load(principal guard rail only)

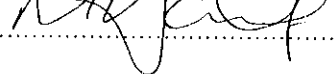
4 tests ultimate limit state

Test 14

Principal guard rail
Ultimate state 495N applied.

No identifiable yielding, fracture, or separation of any part of system.

Test Conducted By: 

Report Reviewed By: 
Site Service Manager

