



22207-01-002A
APOLLO SCAFFOLD SERVICES LTD
160MM LADDER BOX BEAM

CAPACITY SHEET

OCT 2022

REGISTERED IN SCOTLAND:
Company No. SC349820
17-19 Hill Street, Kilmarnock, KA3 1HA

PHONE: 01563 594621
FAX: 01563 593056
enquiry@alanwhitedesign.com
www.alanwhitedesign.com

DOCUMENT REVISION HISTORY

REV.	DESCRIPTION	AUTHOR	DATE	CHECKED	APPROVED
A	Initial Issue	PL	12-10-2022	MR	MR



Client: Apollo Scaff old Services Ltd
Project: 160mm Ladder Box Beam Capacity Calculations
Element: Results Summary
Job No: 22207-01 By: pl
Doc No: 001A Checked: mr Date: Oct-22



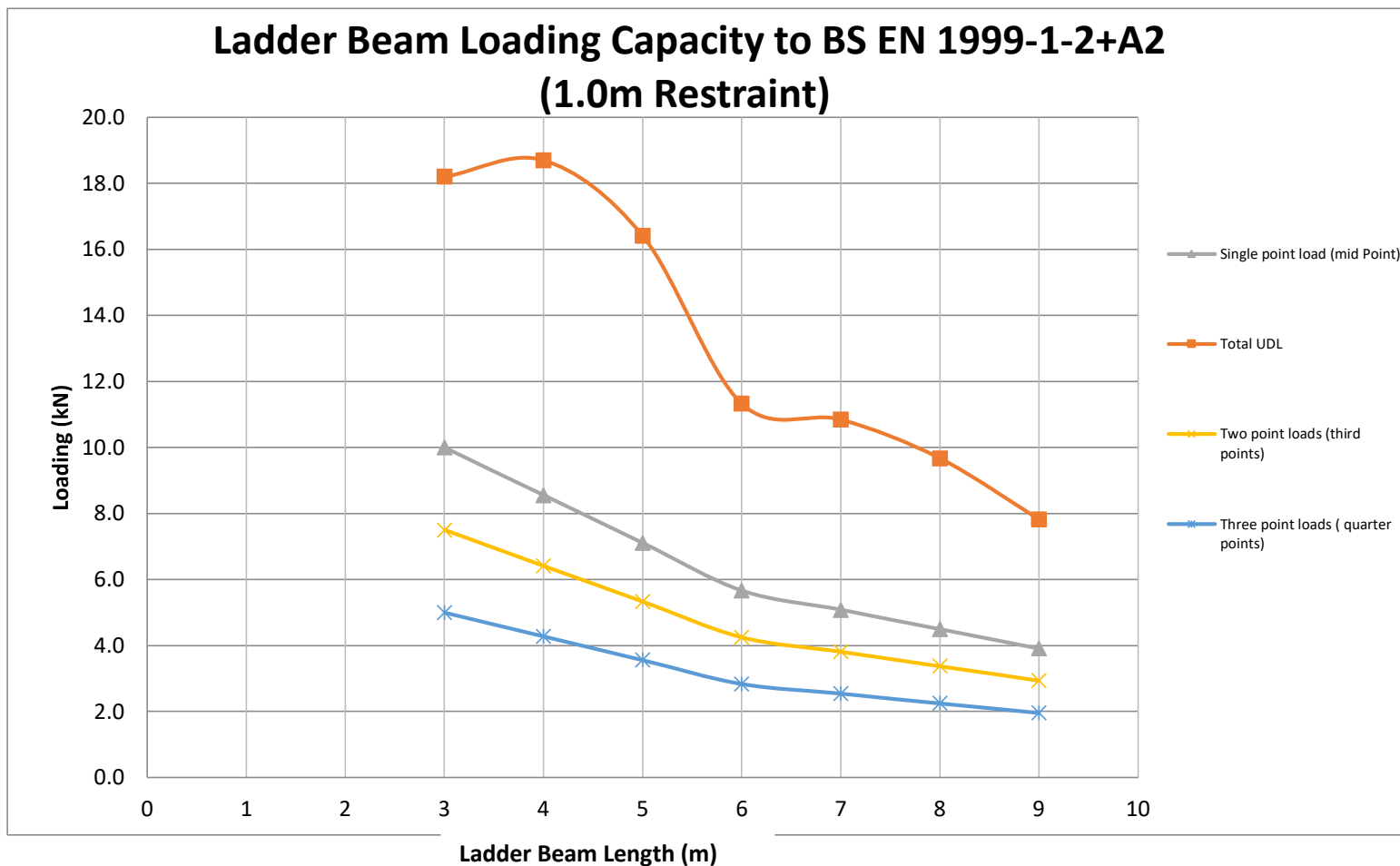
Results Summary

Type of Load		Clear span (m)						
		3	4	5	6	7	8	9
Uniformly Distributed load	kN/m	6.1	4.7	3.3	1.9	1.5	1.2	0.9
Total UDL	kN	18.2	18.7	16.4	11.3	10.8	9.7	7.8
Single point load (mid Point)	kN	10.0	8.6	7.1	5.7	5.1	4.5	3.9
Two point loads (third points)	Each kN	7.5	6.4	5.3	4.3	3.8	3.4	2.9
Three point loads (quarter points)	Each kN	5.0	4.3	3.6	2.8	2.5	2.2	2.0

	Span (m)		
	3	6	9
Allowable Moment	7.5	8.5	8.8
Allowable Shear (Load on Vertical)	9.1	8.9	8.7

- Notes:
1. Above allowable loads may be increased by 1.11 for **wind loading only**
 2. This table is provided as a guide only and assume all loads are applied at nodes. All scaffolds and structures should be checked by a qualified structural engineer.
 3. Maximum capacity of a point load mid way between nodes is 15kN but overall buckling of the top chord should be checked if loads are placed other than at restrained loads. Compression chord restraint required at 1.0m c/c
 4. Factor of Safety = 1.65
 5. Calculations as per BS EN 1999-1-2-A2
 6. All allowable loads below take the self weight of the beam into account.

Graph Summary of Allowable Working Loads for a Ladder Beam to BS EN 1999-1-2+A2





REGISTERED IN SCOTLAND:
Company No. SC349820
17-19 Hill Street, Kilmarnock, KA3 1HA

PHONE: 01563 594621
FAX: 01563 593056
enquiry@alanwhitedesign.com
www.alanwhitedesign.com