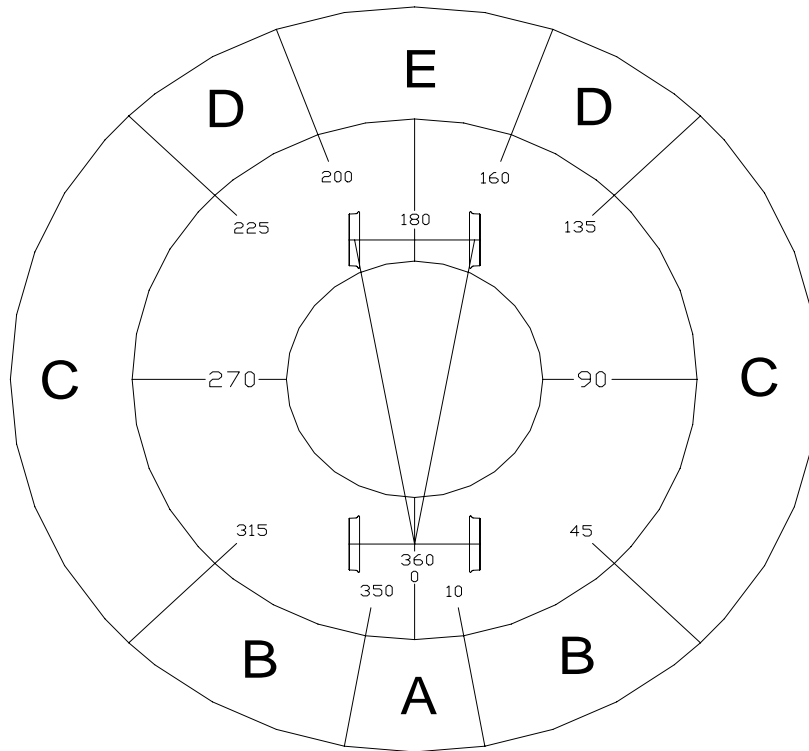


MEGARAILER

by REXQUOTE

Broadgauge Business Park
 Bishops Lydeard, Somerset. TA4 3RU
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 e-mail: sales@rexquote.co.uk Web: Rexquote.co.uk

Fixed Axle



Oscillating Axle

Machine Type:	_____	Case 988
Serial Number:	_____	CGG0232383
Rail Axle Number:	_____	1763
Equipment:	_____	Boom 1.8m Artic 3.13m Arm 2.1m
Date:	_____	10 December 2009
Issue:	_____	3
Software Version:	_____	V0.37a

This machine is equipped with a Rexquote Rated Capacity Indicator. This system is designed to comply with RAILWAY SAFETY STANDARD RIS-1530-PLT Issue 1

Radius / Height are given in METRES. Loads are given in TONNES, and assume that the load is suspended vertically below the lifting point with no other equipment attached. This machine is fitted with an hydraulically adjustable boom. This allows the machine to reach the same point in space with a variety of different equipment angles, each combination has a different safe working load. The charts above show both the upper & lower limits of the loads achievable. Loads marked 'b' boom, 'r' articulation, and 'a' arm are limited by hydraulic capacity.

All rail duties listed are valid for use on up to a 1:29 gradient, and with a maximum track twist of 27mm.

NETWORK RAIL DUTIES

SECTOR A

LOWER SAFE WORKING LOADS

UPPER SAFE WORKING LOADS

Road
 Unlocked

71% SWL



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.67a	4.94a	4.99a	-	-	-	-	-
6.0m	-	-	-	3.64a	3.99a	4.19b	4.31a	3.91	-	-	-
5.0m	-	-	-	3.24a	3.66a	4.00a	3.63b	3.91	3.48	-	-
4.0m	-	-	-	4.33a	4.44a	4.15b	3.62b	3.56r	3.45	3.1	-
3.0m	-	-	-	5.59b	4.74b	4.03r	2.99r	3.04r	3.4	3.07	-
2.0m	-	-	-	4.61r	3.79r	2.95r	2.49r	2.89r	3.34	3.03	2.76
1.0m	-	5.67r	4.42r	3.72r	3.25r	2.93r	2.79r	3.18r	3.29	2.99	2.74
0.0m	5.89a	6.46a	6.04r	4.64r	4.09r	3.56r	3.64r	3.62	3.27	2.98	-
-1.0m	5.15a	5.61a	6.34a	6.17	5.09r	4.56	4.03	3.61	3.27	-	-
-2.0m	10	9.6	7.59	6.27	5.33	4.63	4.11	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.77a	5.13a	5.08a	-	-	-	-	-
6.0m	-	-	-	3.68a	4.25a	4.58b	4.49	3.91	-	-	-
5.0m	-	-	-	3.46a	4.01a	4.38a	4.5	3.97	3.49	-	-
4.0m	-	-	-	4.34a	4.62a	4.78a	4.48	3.98	3.51	3.11	-
3.0m	-	-	-	5.96b	5.8	5.04	4.44	3.94	3.51	3.11	-
2.0m	-	-	-	6.67r	5.72	4.96	4.38	3.89	3.48	3.09	2.77
1.0m	-	5.67r	7.86r	6.61	5.63	4.89	4.31	3.85	3.43	3.05	2.75
0.0m	7.59a	9.97	7.91	6.55	5.58	4.84	4.28	3.79	3.37	3.02	-
-1.0m	10	9.93	7.92	6.54	5.57	4.84r	4.21	3.72	3.31	-	-
-2.0m	10	9.9	7.87	6.52	5.52	4.74	4.15	-	-	-	-

Road
 Locked

71% SWL



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.67a	4.94a	4.99a	-	-	-	-	-
6.0m	-	-	-	3.64a	3.99a	4.19b	4.31a	3.91	-	-	-
5.0m	-	-	-	3.24a	3.66a	4.00a	3.63b	3.91	3.48	-	-
4.0m	-	-	-	4.33a	4.44a	4.15b	3.62b	3.56r	3.45	3.1	-
3.0m	-	-	-	5.59b	4.74b	4.03r	2.99r	3.04r	3.4	3.07	-
2.0m	-	-	-	4.61r	3.79r	2.95r	2.49r	2.89r	3.34	3.03	2.76
1.0m	-	5.67r	4.42r	3.72r	3.25r	2.93r	2.79r	3.18r	3.29	2.99	2.74
0.0m	5.89a	6.46a	6.04r	4.64r	4.09r	3.56r	3.64r	3.62	3.27	2.98	-
-1.0m	5.15a	5.61a	6.34a	6.17	5.09r	4.56	4.03	3.61	3.27	-	-
-2.0m	10	9.6	7.59	6.27	5.33	4.63	4.11	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.77a	5.13a	5.08a	-	-	-	-	-
6.0m	-	-	-	3.68a	4.25a	4.58b	4.49	3.91	-	-	-
5.0m	-	-	-	3.46a	4.01a	4.38a	4.5	3.97	3.49	-	-
4.0m	-	-	-	4.34a	4.62a	4.78a	4.48	3.98	3.51	3.11	-
3.0m	-	-	-	5.96b	5.8	5.04	4.44	3.94	3.51	3.11	-
2.0m	-	-	-	6.67r	5.72	4.96	4.38	3.89	3.48	3.09	2.77
1.0m	-	5.67r	7.86r	6.61	5.63	4.89	4.31	3.85	3.43	3.05	2.75
0.0m	7.59a	9.97	7.91	6.55	5.58	4.84	4.28	3.79	3.37	3.02	-
-1.0m	10	9.93	7.92	6.54	5.57	4.84r	4.21	3.72	3.31	-	-
-2.0m	10	9.9	7.87	6.52	5.52	4.74	4.15	-	-	-	-

Level Rail
 0-50mm

67% SWL

Unlocked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.64a	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.19a	4.37b	4.01	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.64b	4	3.56	-	-
4.0m	-	-	-	4.72a	4.80b	4.14b	3.59r	3.21r	3.53	3.18	-
3.0m	-	-	-	5.58b	4.73b	3.85r	2.81r	2.71r	3.49	3.15	2.87
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.91r	3.43	3.12	2.85
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	3.61r	3.39	3.09	2.83
0.0m	5.73a	6.21a	6.26r	4.95r	4.16r	3.78r	3.84r	3.73	3.37	3.08	-
-1.0m	5.31a	5.75a	6.88a	6.37	5.41	4.7	4.16	3.73	3.39	-	-
-2.0m	10	9.89	7.83	6.46	5.5	4.79	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.96a	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.50a	4.59	4.02	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.41a	4.55a	4.07	3.59	-	-
4.0m	-	-	-	4.75a	4.89a	4.97a	4.57	4.06	3.61	3.2	-
3.0m	-	-	-	6.18b	5.91	5.14	4.52	4.02	3.6	3.2	2.87
2.0m	-	-	5.41r	6.83	5.82	5.06	4.46	3.97	3.56	3.18	2.85
1.0m	-	7.09r	8.13	6.74	5.75	4.99	4.41	3.93	3.51	3.13	2.83
0.0m	8.36a	10	8.1	6.69	5.7	4.96	4.38	3.88	3.45	3.1	-
-1.0m	10	10	8.09	6.7	5.7	4.96	4.31	3.81	3.42	-	-
-2.0m	10	10	8.09	6.65	5.63	4.85	-	-	-	-	-

Level Rail
 0-50mm

87% SWL

Locked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.64a	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.19a	4.37b	4.11a	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.64b	4.21b	4.15a	-	-
4.0m	-	-	-	4.72a	4.80b	4.14b	3.59r	3.21r	3.86a	3.86a	-
3.0m	-	-	-	5.58b	4.73b	3.85r	2.81r	2.71r	3.67r	3.88a	4.09a
Radius	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.91r	3.79r	4.02a	4.32a
the lifti	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	3.61r	4.26r	4.94a	4.50a
the ma	5.73a	6.21a	6.26r	4.95r	4.16r	3.78r	3.84r	4.79r	5.40b	4.81b	-
safe wd	5.31a	5.75a	6.88a	6.53r	5.65r	5.23r	6.16b	5.46b	4.96b	-	-
r' articu	10	10	10	9.48b	8.06b	7.02b	-	-	-	-	-


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.96a	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.50a	4.60a	4.59a	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.41a	4.55a	4.60a	4.57a	-	-
4.0m	-	-	-	4.75a	4.89a	4.97a	5.01a	4.98a	4.89a	4.66a	-
3.0m	-	-	-	6.18b	6.75b	6.87b	6.31b	5.76b	5.32b	4.98b	4.09a
2.0m	-	-	5.41r	7.00r	7.64b	7.36b	6.70b	6.05b	5.52b	5.08b	4.62a
1.0m	-	7.09r	8.89r	9.63b	8.70b	7.77b	6.88b	6.17b	5.59b	5.12b	4.50a
0.0m	8.36a	10	10	10	8.98b	7.82b	6.92b	6.21b	5.65b	4.99b	-
-1.0m	10	10	10	10	9.10b	7.93b	7.01b	6.18b	5.21b	-	-
-2.0m	10	10	10	10	9.06b	7.51b	-	-	-	-	-

NETWORK RAIL DUTIES

SECTOR A


LOWER SAFE WORKING LOADS

UPPER SAFE WORKING LOADS

Canted Rail
50-150mm
67% SWL
Unlocked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.63	3.97	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4	3.49	3.07	-	-	-
5.0m	-	-	-	3.23a	3.66a	3.94	3.46	3.07	2.73	-	-
4.0m	-	-	-	4.72a	4.46	3.84	3.39	3.02	2.7	2.43	-
3.0m	-	-	-	5.23	4.38	3.74	2.81r	2.71r	2.66	2.4	2.19
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.88	2.61	2.37	2.17
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	2.83	2.57	2.34	2.15
0.0m	5.73a	6.21a	5.63	4.69	4	3.5	3.12	2.81	2.55	2.33	-
-1.0m	5.31a	5.75a	5.55	4.65	3.99	3.5	3.12	2.81	2.56	-	-
-2.0m	9.02	6.96	5.64	4.74	4.08	3.58	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.66	3.98	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.06	3.53	3.08	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.05	3.58	3.13	2.75	-	-
4.0m	-	-	-	4.75a	4.6	4.02	3.57	3.15	2.77	2.45	-
3.0m	-	-	-	5.28	4.56	3.98	3.52	3.13	2.76	2.45	2.19
2.0m	-	-	5.41r	5.18	4.47	3.9	3.45	3.08	2.73	2.43	2.17
1.0m	-	7.09r	6.02	5.08	4.39	3.84	3.4	3.02	2.68	2.39	2.15
0.0m	8.36a	7.27	5.96	5.03	4.34	3.79	3.35	2.95	2.63	2.36	-
-1.0m	9.23	7.18	5.88	4.96	4.27	3.74	3.25	2.88	2.59	-	-
-2.0m	9.25	7.18	5.88	4.91	4.2	3.64	-	-	-	-	-

Canted Rail
50-150mm
90% SWL
Locked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.64a	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.19a	4.37b	4.11a	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.64b	4.21b	4.15a	-	-
4.0m	-	-	-	4.72a	4.80b	4.14b	3.59r	3.21r	3.86a	3.86a	-
3.0m	-	-	-	5.58b	4.73b	3.85r	2.81r	2.71r	3.67r	3.88a	3.78
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.91r	3.79r	4.02a	3.76
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	3.61r	4.26r	4.07	3.73
0.0m	5.73a	6.21a	6.26r	4.95r	4.16r	3.78r	3.84r	4.79r	4.45	4.06	-
-1.0m	5.31a	5.75a	6.88a	6.53r	5.65r	5.23r	5.51	4.93	4.48	-	-
-2.0m	10	10	10	8.62	7.32	6.36	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.96a	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.50a	4.60a	4.59a	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.41a	4.55a	4.60a	4.57a	-	-
4.0m	-	-	-	4.75a	4.89a	4.97a	5.01a	4.98a	4.73	4.23	-
3.0m	-	-	-	6.18b	6.75b	6.63	5.85	5.22	4.7	4.22	3.78
2.0m	-	-	5.41r	7.00r	7.57	6.59b	5.81	5.18	4.65	4.19	3.76
1.0m	-	7.09r	8.89r	8.85	7.52	6.52	5.75	5.13	4.62	4.14	3.73
0.0m	8.36a	10	10	8.82	7.49	6.49	5.73	5.1	4.57	4.1	-
-1.0m	10	10	10	8.85	7.49	6.49	5.71	5.04	4.52	-	-
-2.0m	10	10	10	8.88	7.49	6.44	-	-	-	-	-

Max Cant + Twist 150-177mm
67% SWL
Unlocked


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	3.24	2.65	2.19	-	-	-	-	-
6.0m	-	-	-	3.23	2.65	2.21	1.88	1.59	-	-	-
5.0m	-	-	-	3.11	2.57	2.16	1.84	1.58	1.37	-	-
4.0m	-	-	-	3.08	2.46	2.05	1.77	1.53	1.33	1.17	-
3.0m	-	-	-	2.98	2.37	1.94	1.67	1.46	1.29	1.14	1.01
2.0m	-	-	3.61	2.79	2.24	1.83	1.58	1.39	1.23	1.1	0.99
1.0m	-	4.34	3.26	2.56	2.08	1.72	1.51	1.34	1.19	1.07	0.97
0.0m	5.37	3.87	2.98	2.38	1.96	1.68	1.47	1.31	1.17	1.06	-
-1.0m	5.12	3.71	2.88	2.34	1.96	1.68	1.47	1.31	1.19	-	-
-2.0m	5.28	3.84	2.99	2.44	2.05	1.77	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	3.25	2.68	2.2	-	-	-	-	-
6.0m	-	-	-	3.24	2.7	2.29	1.92	1.6	-	-	-
5.0m	-	-	-	3.18	2.66	2.27	1.97	1.65	1.39	-	-
4.0m	-	-	-	3.1	2.61	2.24	1.96	1.68	1.41	1.19	-
3.0m	-	-	-	3.03	2.57	2.22	1.95	1.67	1.4	1.19	1.01
2.0m	-	-	3.64	3	2.55	2.21	1.9	1.61	1.36	1.16	0.99
1.0m	-	4.4	3.53	2.91	2.45	2.1	1.82	1.54	1.31	1.12	0.97
0.0m	5.6	4.19	3.35	2.76	2.34	2.01	1.73	1.46	1.26	1.09	-
-1.0m	5.52	4.1	3.25	2.69	2.26	1.94	1.62	1.39	1.22	-	-
-2.0m	5.55	4.1	3.25	2.62	2.18	1.83	-	-	-	-	-

Max Cant + Twist 150-177mm
90% SWL
Locked


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.13	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.17	3.53	3	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.48	2.99	2.58	-	-
4.0m	-	-	-	4.72a	4.73	3.92	3.37	2.91	2.53	2.19	-
3.0m	-	-	-	5.58b	4.6	3.76	2.81r	2.71r	2.45	2.14	1.87
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.71	2.37	2.08	1.84
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	2.62	2.3	2.03	1.81
0.0m	5.73a	6.21a	6.25	4.89	3.98	3.37	2.93	2.58	2.27	2.01	-
-1.0m	5.31a	5.75a	6.09	4.82	3.98	3.37	2.93	2.58	2.29	-	-
-2.0m	10	8.4	6.27	4.97	4.11	3.51	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.15	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.27	3.59	3.02	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.25	3.65	3.09	2.62	-	-
4.0m	-	-	-	4.75a	4.88a	4.2	3.63	3.12	2.65	2.22	-
3.0m	-	-	-	5.85	4.87	4.14	3.55	3.08	2.63	2.22	1.87
2.0m	-	-	5.41r	5.66	4.72r	4.01	3.47	3.02	2.57	2.18	1.84
1.0m	-	7.09r	6.85	5.52	4.59	3.91	3.38	2.92	2.5	2.11	1.81
0.0m	8.36a	8.99	6.78	5.43	4.52	3.84	3.3	2.81	2.4	2.06	-
-1.0m	10	8.83	6.68	5.36	4.43	3.76	3.15	2.71	2.34	-	-
-2.0m	10	8.83	6.69	5.27	4.31	3.59	-	-	-	-	-

NETWORK RAIL DUTIES

SECTOR B

LOWER SAFE WORKING LOADS

UPPER SAFE WORKING LOADS

Road
Unlocked
71% SWL



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.67a	3.99	3.32	-	-	-	-	-
6.0m	-	-	-	3.64a	3.99a	3.38	2.87	2.46	-	-	-
5.0m	-	-	-	3.24a	3.66a	3.32	2.85	2.47	2.15	-	-
4.0m	-	-	-	4.33a	3.81	3.21	2.77	2.41	2.13	1.88	-
3.0m	-	-	-	4.64	3.72	3.08	2.66	2.34	2.07	1.84	-
2.0m	-	-	-	4.44	3.58	2.95r	2.49r	2.26	2.01	1.81	1.62
1.0m	-	5.67r	4.42r	3.72r	3.25r	2.85	2.48	2.2	1.96	1.77	1.6
0.0m	5.89a	6.46a	4.96	3.95	3.26	2.78	2.44	2.16	1.94	1.75	-
-1.0m	5.15a	5.61a	4.8	3.86	3.22	2.77	2.43	2.16	1.94	-	-
-2.0m	9.03	6.39	4.9	3.96	3.31	2.85	2.5	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.77a	4.01	3.32	-	-	-	-	-
6.0m	-	-	-	3.68a	4.07	3.44	2.9	2.46	-	-	-
5.0m	-	-	-	3.46a	4.01a	3.44	2.97	2.53	2.16	-	-
4.0m	-	-	-	4.34a	3.98	3.41	2.97	2.56	2.19	1.89	-
3.0m	-	-	-	4.68	3.93	3.38	2.95	2.55	2.19	1.89	-
2.0m	-	-	-	4.62	3.89	3.33	2.89	2.51	2.15	1.86	1.63
1.0m	-	5.67r	5.49	4.49	3.77	3.24	2.81	2.44	2.11	1.83	1.61
0.0m	7.59a	6.88	5.36	4.39	3.68	3.16	2.72	2.34	2.04	1.79	-
-1.0m	9.39	6.75	5.25	4.27	3.6	3.07	2.61	2.27	1.98	-	-
-2.0m	9.38	6.71	5.21	4.23	3.52	2.96	2.55	-	-	-	-

Road
Locked
71% SWL



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.67a	4.78	4.09	-	-	-	-	-
6.0m	-	-	-	3.64a	3.99a	4.15	3.61	3.17	-	-	-
5.0m	-	-	-	3.24a	3.66a	4.00a	3.6	3.18	2.83	-	-
4.0m	-	-	-	4.33a	4.44a	4	3.52	3.13	2.81	2.52	-
3.0m	-	-	-	5.45	4.55	3.88	2.99r	3.04r	2.76	2.49	-
2.0m	-	-	-	4.61r	3.79r	2.95r	2.49r	2.89r	2.7	2.46	2.24
1.0m	-	5.67r	4.42r	3.72r	3.25r	2.93r	2.79r	2.94	2.66	2.42	2.22
0.0m	5.89a	6.46a	5.86	4.64r	4.09r	3.56r	3.22	2.9	2.63	2.41	-
-1.0m	5.15a	5.61a	5.73	4.79	4.12	3.61	3.21	2.9	2.63	-	-
-2.0m	9.3	7.17	5.81	4.87	4.19	3.68	3.29	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.77a	4.8	4.1	-	-	-	-	-
6.0m	-	-	-	3.68a	4.25a	4.2	3.64	3.17	-	-	-
5.0m	-	-	-	3.46a	4.01a	4.2	3.7	3.24	2.84	-	-
4.0m	-	-	-	4.34a	4.62a	4.17	3.69	3.26	2.86	2.53	-
3.0m	-	-	-	5.48	4.73	4.14	3.65	3.24r	2.86	2.53	-
2.0m	-	-	-	5.38r	4.63	4.05	3.58	3.19	2.83	2.51	2.25
1.0m	-	5.67r	6.24	5.27	4.54	3.98	3.53	3.15	2.79	2.48	2.23
0.0m	7.59a	7.56	6.18	5.20r	4.48	3.93r	3.48	3.06	2.73	2.44	-
-1.0m	9.56	7.45	6.1	5.14	4.44	3.88	3.38	3	2.67	-	-
-2.0m	9.56	7.43	6.06	5.1	4.37	3.78	3.33	-	-	-	-

Level Rail
0-50mm
67% SWL

Unlocked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.16	3.43	2.88	-	-	-	-	-
6.0m	-	-	-	3.54a	3.44	2.9	2.49	2.14	-	-	-
5.0m	-	-	-	3.23a	3.35	2.85	2.45	2.13	1.87	-	-
4.0m	-	-	-	4	3.24	2.74	2.38	2.08	1.83	1.63	-
3.0m	-	-	-	3.89	3.16	2.62	2.28	2.01	1.79	1.59	1.43
2.0m	-	-	4.71	3.71	3.02	2.52	2.19	1.94	1.73	1.56	1.41
1.0m	-	5.71	4.36	3.48	2.87	2.41	2.12	1.89	1.69	1.53	1.39
0.0m	5.73a	5.25	4.08	3.3	2.75	2.37	2.08	1.86	1.67	1.52	-
-1.0m	5.31a	5.09	3.98	3.25	2.74	2.37	2.08	1.86	1.69	-	-
-2.0m	7.11	5.22	4.09	3.35	2.83	2.46	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.16	3.46	2.88	-	-	-	-	-
6.0m	-	-	-	3.58a	3.48	2.97	2.53	2.15	-	-	-
5.0m	-	-	-	3.52a	3.45	2.96	2.58	2.2	1.89	-	-
4.0m	-	-	-	4.02	3.4	2.93	2.57	2.22	1.91	1.65	-
3.0m	-	-	-	3.95	3.35	2.9	2.56	2.22	1.9	1.64	1.43
2.0m	-	-	4.74	3.92	3.33	2.88	2.5	2.16	1.86	1.62	1.41
1.0m	-	5.77	4.62	3.82	3.24	2.79	2.43	2.09	1.81	1.58	1.39
0.0m	7.43	5.57	4.45	3.68	3.12	2.69	2.34	2.01	1.75	1.55	-
-1.0m	7.35	5.47	4.35	3.6	3.05	2.62	2.23	1.94	1.72	-	-
-2.0m	7.38	5.47	4.35	3.54	2.96	2.51	-	-	-	-	-

Level Rail
0-50mm
90% SWL

Locked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.64a	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.19a	4.37b	3.88	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.64b	3.87	3.38	-	-
4.0m	-	-	-	4.72a	4.80b	4.14b	3.59r	3.21r	3.34	2.96	-
3.0m	-	-	-	5.58b	4.73b	3.85r	2.81r	2.71r	3.27	2.92	2.61
Radius	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.91r	3.2	2.87	2.58
the lifti	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	3.51	3.14	2.83	2.55
the ma	5.73a	6.21a	6.26r	4.95r	4.16r	3.78r	3.84r	3.47	3.11	2.81	-
safe wd	5.31a	5.75a	6.88a	6.32	5.25	4.48	3.91	3.47	3.13	-	-
r' articu	10	10	8.08	6.47	5.39	4.62	-	-	-	-	-


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.96a	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.50a	4.55	3.89	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.41a	4.54	3.96	3.42	-	-
4.0m	-	-	-	4.75a	4.89a	4.97a	4.5	3.96	3.45	3	-
3.0m	-	-	-	6.18b	5.98	5.13	4.45	3.91	3.43	2.99	2.61
2.0m	-	-	5.41r	7.00r	5.86	5.01	4.36	3.84	3.38	2.96	2.59
1.0m	-	7.09r	8.52	6.87	5.75	4.93	4.29r	3.78	3.31	2.89	2.55
0.0m	8.36a	10	8.47r	6.82	5.68	4.87	4.24	3.69	3.23	2.85	-
-1.0m	10	10	8.49	6.83	5.68	4.86	4.13	3.59	3.17	-	-
-2.0m	10	10	8.49	6.76	5.58	4.7	-	-	-	-	-

NETWORK RAIL DUTIES

SECTOR B


LOWER SAFE WORKING LOADS

UPPER SAFE WORKING LOADS

Canted Rail
50-150mm
67% SWL
Unlocked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	3.63	2.98	2.47	-	-	-	-	-
6.0m	-	-	-	3.54a	2.98	2.5	2.13	1.82	-	-	-
5.0m	-	-	-	3.23a	2.9	2.44	2.09	1.81	1.57	-	-
4.0m	-	-	-	3.47	2.79	2.33	2.02	1.76	1.54	1.35	-
3.0m	-	-	-	3.37	2.7	2.22	1.92	1.68	1.49	1.32	1.18
2.0m	-	-	4.09	3.18	2.56	2.12	1.83	1.61	1.44	1.29	1.16
1.0m	-	4.94	3.73	2.95	2.41	2.01	1.76	1.56	1.4	1.26	1.14
0.0m	5.73a	4.47	3.45	2.77	2.29	1.96	1.72	1.53	1.37	1.24	-
-1.0m	5.31a	4.31	3.35	2.72	2.28	1.96	1.72	1.53	1.39	-	-
-2.0m	6.11	4.44	3.46	2.82	2.37	2.05	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	3.64	3.01	2.48	-	-	-	-	-
6.0m	-	-	-	3.58a	3.03	2.57	2.17	1.83	-	-	-
5.0m	-	-	-	3.52a	2.99	2.56	2.22	1.88	1.59	-	-
4.0m	-	-	-	3.49	2.94	2.53	2.21	1.9	1.61	1.37	-
3.0m	-	-	-	3.42	2.9	2.5	2.2	1.89	1.6	1.37	1.18
2.0m	-	-	4.11	3.39	2.88	2.5	2.15	1.84	1.57	1.35	1.16
1.0m	-	5.01	4	3.3	2.78	2.38	2.07	1.76	1.52	1.3	1.14
0.0m	6.44	4.8	3.82	3.15	2.67	2.29	1.98	1.68	1.46	1.27	-
-1.0m	6.36	4.7	3.72	3.07	2.59	2.22	1.87	1.61	1.42	-	-
-2.0m	6.39	4.7	3.73	3.01	2.5	2.11	-	-	-	-	-

Canted Rail
50-150mm
90% SWL
Locked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.57	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.19a	3.9	3.32	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.64b	3.31	2.87	-	-
4.0m	-	-	-	4.72a	4.80b	4.14b	3.59r	3.21r	2.83	2.47	-
3.0m	-	-	-	5.58b	4.73b	3.85r	2.81r	2.71r	2.76	2.41	2.12
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.91r	2.68	2.36	2.09
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	2.94	2.61	2.31	2.06
0.0m	5.73a	6.21a	6.26r	4.95r	4.16r	3.78r	3.29	2.9	2.57	2.29	-
-1.0m	5.31a	5.75a	6.88a	5.45	4.48	3.79	3.29	2.9	2.6	-	-
-2.0m	10	9.64	7.11	5.61	4.62	3.93	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.58	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.50a	3.96	3.34	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.41a	3.99	3.41	2.91	-	-
4.0m	-	-	-	4.75a	4.89a	4.60b	3.97	3.44	2.94	2.5	-
3.0m	-	-	-	6.18b	5.34	4.53	3.9	3.38	2.92	2.49	2.12
2.0m	-	-	5.41r	6.25	5.19	4.41	3.80r	3.32r	2.87	2.46	2.09
1.0m	-	7.09r	7.66	6.11r	5.06	4.31	3.72	3.24	2.8	2.39	2.06
0.0m	8.36a	10	7.59r	6.03	4.99	4.24	3.67	3.13	2.71	2.33	-
-1.0m	10	10	7.54	6.01	4.95	4.18	3.51	3.02	2.65	-	-
-2.0m	10	10	7.55	5.91	4.82	4.02	-	-	-	-	-

Max Cant + Twist
150-177mm
67% SWL
Unlocked


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	3.24	2.65	2.19	-	-	-	-	-
6.0m	-	-	-	3.23	2.65	2.21	1.88	1.59	-	-	-
5.0m	-	-	-	3.11	2.57	2.16	1.84	1.58	1.37	-	-
4.0m	-	-	-	3.08	2.46	2.05	1.77	1.53	1.33	1.17	-
3.0m	-	-	-	2.98	2.37	1.94	1.67	1.46	1.29	1.14	1.01
2.0m	-	-	3.61	2.79	2.24	1.83	1.58	1.39	1.23	1.1	0.99
1.0m	-	4.34	3.26	2.56	2.08	1.72	1.51	1.34	1.19	1.07	0.97
0.0m	5.37	3.87	2.98	2.38	1.96	1.68	1.47	1.31	1.17	1.06	-
-1.0m	5.12	3.71	2.88	2.34	1.96	1.68	1.47	1.31	1.19	-	-
-2.0m	5.28	3.84	2.99	2.44	2.05	1.77	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	3.25	2.68	2.2	-	-	-	-	-
6.0m	-	-	-	3.24	2.7	2.29	1.92	1.6	-	-	-
5.0m	-	-	-	3.18	2.66	2.27	1.97	1.65	1.39	-	-
4.0m	-	-	-	3.1	2.61	2.24	1.96	1.68	1.41	1.19	-
3.0m	-	-	-	3.03	2.57	2.22	1.95	1.67	1.4	1.19	1.01
2.0m	-	-	3.64	3	2.55	2.21	1.9	1.61	1.36	1.16	0.99
1.0m	-	4.4	3.53	2.91	2.45	2.1	1.82	1.54	1.31	1.12	0.97
0.0m	5.6	4.19	3.35	2.76	2.34	2.01	1.73	1.46	1.26	1.09	-
-1.0m	5.52	4.1	3.25	2.69	2.26	1.94	1.62	1.39	1.22	-	-
-2.0m	5.55	4.1	3.25	2.62	2.18	1.83	-	-	-	-	-

Max Cant + Twist
150-177mm
90% SWL
Locked


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.13	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.17	3.53	3	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.48	2.99	2.58	-	-
4.0m	-	-	-	4.72a	4.73	3.92	3.37	2.91	2.53	2.19	-
3.0m	-	-	-	5.58b	4.6	3.76	2.81r	2.71r	2.45	2.14	1.87
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.71	2.37	2.08	1.84
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	2.62	2.3	2.03	1.81
0.0m	5.73a	6.21a	6.25	4.89	3.98	3.37	2.93	2.58	2.27	2.01	-
-1.0m	5.31a	5.75a	6.09	4.82	3.98	3.37	2.93	2.58	2.29	-	-
-2.0m	10	8.4	6.27	4.97	4.11	3.51	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.15	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.27	3.59	3.02	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.25	3.65	3.09	2.62	-	-
4.0m	-	-	-	4.75a	4.88a	4.2	3.63	3.12	2.65	2.22	-
3.0m	-	-	-	5.85	4.87	4.14	3.55	3.08	2.63	2.22	1.87
2.0m	-	-	5.41r	5.66	4.72r	4.01	3.47	3.02	2.57	2.18	1.84
1.0m	-	7.09r	6.85	5.52	4.59	3.91	3.38	2.92	2.5	2.11	1.81
0.0m	8.36a	8.99	6.78	5.43	4.52	3.84	3.3	2.81	2.4	2.06	-
-1.0m	10	8.83	6.68	5.36	4.43	3.76	3.15	2.71	2.34	-	-
-2.0m	10	8.83	6.69	5.27	4.31	3.59	-	-	-	-	-

NETWORK RAIL DUTIES

SECTOR C

LOWER SAFE WORKING LOADS

UPPER SAFE WORKING LOADS

Road
Unlocked
71% SWL



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.67a	3.99	3.32	-	-	-	-	-
6.0m	-	-	-	3.64a	3.99a	3.38	2.87	2.46	-	-	-
5.0m	-	-	-	3.24a	3.66a	3.32	2.85	2.47	2.15	-	-
4.0m	-	-	-	4.33a	3.81	3.21	2.77	2.41	2.13	1.88	-
3.0m	-	-	-	4.64	3.72	3.08	2.66	2.34	2.07	1.85	-
2.0m	-	-	-	4.44	3.58	2.95r	2.49r	2.26	2.01	1.81	1.62
1.0m	-	5.67r	4.42r	3.72r	3.25r	2.85	2.48	2.2	1.96	1.77	1.6
0.0m	5.89a	6.46a	4.96	3.95	3.26	2.78	2.44	2.16	1.94	1.75	-
-1.0m	5.15a	5.61a	4.8	3.86	3.22	2.77	2.43	2.16	1.94	-	-
-2.0m	9.03	6.39	4.9	3.96	3.31	2.85	2.5	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.77a	4.01	3.32	-	-	-	-	-
6.0m	-	-	-	3.68a	4.07	3.44	2.9	2.46	-	-	-
5.0m	-	-	-	3.46a	4.01a	3.44	2.97	2.53	2.16	-	-
4.0m	-	-	-	4.34a	3.98	3.41	2.97	2.56	2.19	1.89	-
3.0m	-	-	-	4.68	3.93	3.38	2.95	2.55	2.19	1.89	-
2.0m	-	-	-	4.62	3.89	3.33	2.89	2.51	2.15	1.86	1.63
1.0m	-	5.67r	5.49	4.49	3.77	3.24	2.81	2.44	2.11	1.83	1.61
0.0m	7.59a	6.88	5.36	4.39	3.68	3.16	2.72	2.34	2.04	1.79	-
-1.0m	9.39	6.75	5.25	4.27	3.6	3.07	2.61	2.27	1.98	-	-
-2.0m	9.38	6.71	5.21	4.23	3.52	2.96	2.55	-	-	-	-

Road
Locked
71% SWL



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.67a	4.78	4.09	-	-	-	-	-
6.0m	-	-	-	3.64a	3.99a	4.15	3.61	3.17	-	-	-
5.0m	-	-	-	3.24a	3.66a	4.00a	3.6	3.18	2.83	-	-
4.0m	-	-	-	4.33a	4.44a	4	3.52	3.13	2.81	2.52	-
3.0m	-	-	-	5.45	4.55	3.88	2.99r	3.04r	2.76	2.49	-
2.0m	-	-	-	4.61r	3.79r	2.95r	2.49r	2.89r	2.7	2.46	2.24
1.0m	-	5.67r	4.42r	3.72r	3.25r	2.93r	2.79r	2.94	2.66	2.42	2.22
0.0m	5.89a	6.46a	5.86	4.64r	4.09r	3.56r	3.22	2.9	2.63	2.41	-
-1.0m	5.15a	5.61a	5.73	4.79	4.12	3.61	3.21	2.9	2.63	-	-
-2.0m	9.3	7.17	5.81	4.87	4.19	3.68	3.29	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.77a	4.8	4.1	-	-	-	-	-
6.0m	-	-	-	3.68a	4.25a	4.2	3.64	3.17	-	-	-
5.0m	-	-	-	3.46a	4.01a	4.2	3.7	3.24	2.84	-	-
4.0m	-	-	-	4.34a	4.62a	4.17	3.69	3.26	2.86	2.53	-
3.0m	-	-	-	5.48	4.73	4.14	3.65	3.24r	2.86	2.53	-
2.0m	-	-	-	5.38r	4.63	4.05	3.58	3.19	2.83	2.51	2.25
1.0m	-	5.67r	6.24	5.27	4.54	3.98	3.53	3.15	2.79	2.48	2.23
0.0m	7.59a	7.56	6.18	5.20r	4.48	3.93r	3.48	3.06	2.73	2.44	-
-1.0m	9.56	7.45	6.1	5.14	4.44	3.88	3.38	3	2.67	-	-
-2.0m	9.56	7.43	6.06	5.1	4.37	3.78	3.33	-	-	-	-

Level Rail
0-50mm
67% SWL

Unlocked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	3.83	3.14	2.61	-	-	-	-	-
6.0m	-	-	-	3.54a	3.15	2.64	2.25	1.93	-	-	-
5.0m	-	-	-	3.23a	3.06	2.58	2.22	1.92	1.67	-	-
4.0m	-	-	-	3.66	2.95	2.47	2.14	1.86	1.63	1.44	-
3.0m	-	-	-	3.56	2.86	2.36	2.04	1.79	1.59	1.41	1.26
2.0m	-	-	4.32	3.37	2.72	2.25	1.95	1.72	1.53	1.37	1.24
1.0m	-	5.25	3.96	3.14	2.56	2.14	1.88	1.67	1.49	1.34	1.22
0.0m	5.73a	4.78	3.68	2.96	2.44	2.1	1.84	1.64	1.47	1.33	-
-1.0m	5.31a	4.61	3.58	2.91	2.44	2.1	1.84	1.64	1.49	-	-
-2.0m	6.54	4.74	3.69	3.01	2.53	2.19	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	3.83	3.17	2.62	-	-	-	-	-
6.0m	-	-	-	3.58a	3.19	2.71	2.29	1.93	-	-	-
5.0m	-	-	-	3.52a	3.16	2.7	2.34	1.99	1.69	-	-
4.0m	-	-	-	3.69	3.1	2.67	2.33	2.01	1.71	1.46	-
3.0m	-	-	-	3.62	3.06	2.64	2.32	2	1.7	1.46	1.26
2.0m	-	-	4.35	3.58	3.04	2.64	2.28	1.95	1.66	1.44	1.24
1.0m	-	5.31	4.24	3.49	2.94	2.52	2.19	1.87	1.61	1.39	1.22
0.0m	6.88	5.1	4.06	3.34	2.83	2.43	2.1	1.79	1.55	1.36	-
-1.0m	6.79	5	3.96	3.26	2.75	2.36	1.99	1.72	1.52	-	-
-2.0m	6.82	5.01	3.96	3.2	2.66	2.25	-	-	-	-	-

Level Rail
0-50mm
75% SWL

Locked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.64a	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.19a	4	3.44	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.64b	3.42	2.99	-	-
4.0m	-	-	-	4.72a	4.80b	4.14b	3.59r	3.21r	2.95	2.62	-
3.0m	-	-	-	5.58b	4.73b	3.85r	2.81r	2.71r	2.89	2.58	2.31
Radius	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.91r	2.83	2.54	2.29
the lift	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	3.12	2.78	2.5	2.27
the ma	5.73a	6.21a	6.26r	4.95r	4.16r	3.78r	3.49	3.08	2.75	2.48	-
safe wd	5.31a	5.75a	6.88a	5.76	4.74	4.02	3.49	3.08	2.77	-	-
r' artic	10	10	7.46	5.89	4.85	4.13	-	-	-	-	-


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.68	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.50a	4.05	3.44	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.41a	4.07	3.51	3.02	-	-
4.0m	-	-	-	4.75a	4.89a	4.68	4.05	3.52	3.04	2.64	-
3.0m	-	-	-	6.18b	5.45	4.63	3.99	3.48	3.03	2.64	2.31
2.0m	-	-	5.41r	6.41	5.32	4.52	3.92	3.43	2.99	2.61	2.29
1.0m	-	7.09r	7.9	6.28r	5.22	4.44	3.84r	3.37	2.93	2.56	2.27
0.0m	8.36a	10	7.85	6.22	5.15	4.38	3.81	3.27	2.85	2.52	-
-1.0m	10	10	7.82	6.22	5.13	4.35	3.67	3.18	2.81	-	-
-2.0m	10	10	7.82	6.14	5.02	4.21	-	-	-	-	-

NETWORK RAIL DUTIES

SECTOR C


LOWER SAFE WORKING LOADS

UPPER SAFE WORKING LOADS

Canted Rail
50-150mm
67% SWL
Unlocked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	3.37	2.76	2.28	-	-	-	-	-
6.0m	-	-	-	3.36	2.76	2.31	1.96	1.67	-	-	-
5.0m	-	-	-	3.23a	2.68	2.25	1.93	1.66	1.44	-	-
4.0m	-	-	-	3.21	2.57	2.15	1.85	1.61	1.41	1.23	-
3.0m	-	-	-	3.11	2.48	2.03	1.75	1.54	1.36	1.2	1.06
2.0m	-	-	3.76	2.92	2.35	1.93	1.66	1.47	1.3	1.17	1.05
1.0m	-	4.53	3.41	2.69	2.19	1.82	1.59	1.41	1.26	1.14	1.03
0.0m	5.62	4.06	3.13	2.51	2.07	1.77	1.56	1.39	1.24	1.12	-
-1.0m	5.31a	3.91	3.03	2.47	2.07	1.78	1.56	1.39	1.26	-	-
-2.0m	5.53	4.03	3.15	2.56	2.16	1.87	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	3.37	2.79	2.29	-	-	-	-	-
6.0m	-	-	-	3.37	2.81	2.38	2	1.68	-	-	-
5.0m	-	-	-	3.31	2.77	2.37	2.05	1.73	1.46	-	-
4.0m	-	-	-	3.23	2.72	2.34	2.04	1.75	1.48	1.25	-
3.0m	-	-	-	3.16	2.68	2.31	2.03	1.74	1.47	1.25	1.06
2.0m	-	-	3.79	3.13	2.66	2.31	1.99	1.69	1.43	1.23	1.05
1.0m	-	4.59	3.68	3.04	2.56	2.19	1.9	1.61	1.38	1.18	1.03
0.0m	5.86	4.39	3.5	2.89	2.45	2.1	1.81	1.54	1.33	1.15	-
-1.0m	5.78	4.29	3.4	2.81	2.37	2.03	1.7	1.47	1.29	-	-
-2.0m	5.81	4.29	3.41	2.75	2.29	1.92	-	-	-	-	-

Canted Rail
50-150mm
90% SWL
Locked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.3	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.19a	3.67	3.13	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.62	3.12	2.71	-	-
4.0m	-	-	-	4.72a	4.80b	4.09	3.51	3.04	2.66	2.3	-
3.0m	-	-	-	5.58b	4.73b	3.85r	2.81r	2.71r	2.58	2.25	1.98
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.84	2.5	2.2	1.94
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	2.76	2.43	2.15	1.92
0.0m	5.73a	6.21a	6.26r	4.95r	4.16r	3.54	3.08	2.72	2.4	2.13	-
-1.0m	5.31a	5.75a	6.37	5.05	4.17	3.54	3.08	2.72	2.42	-	-
-2.0m	10	8.77	6.55	5.2	4.3	3.67	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.31	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.42	3.73	3.14	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.4	3.79	3.22	2.74	-	-
4.0m	-	-	-	4.75a	4.89a	4.35	3.77	3.24	2.77	2.34	-
3.0m	-	-	-	6.06	5.05b	4.29	3.69	3.21r	2.76	2.33	1.98
2.0m	-	-	5.41r	5.87	4.89	4.16	3.6	3.14	2.7	2.3	1.95
1.0m	-	7.09r	7.11	5.73	4.77	4.07	3.53	3.05	2.62	2.23	1.92
0.0m	8.36a	9.34	7.04	5.64	4.7	3.99	3.45	2.94	2.53	2.17	-
-1.0m	10	9.2	6.96	5.59	4.62	3.92	3.29	2.84	2.47	-	-
-2.0m	10	9.2	6.97	5.49	4.5	3.76	-	-	-	-	-

Max Cant + Twist
150-177mm
67% SWL
Unlocked


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	3.24	2.65	2.19	-	-	-	-	-
6.0m	-	-	-	3.23	2.65	2.21	1.88	1.59	-	-	-
5.0m	-	-	-	3.11	2.57	2.16	1.84	1.58	1.37	-	-
4.0m	-	-	-	3.08	2.46	2.05	1.77	1.53	1.33	1.17	-
3.0m	-	-	-	2.98	2.37	1.94	1.67	1.46	1.29	1.14	1.01
2.0m	-	-	3.61	2.79	2.24	1.83	1.58	1.39	1.23	1.1	0.99
1.0m	-	4.34	3.26	2.56	2.08	1.72	1.51	1.34	1.19	1.07	0.97
0.0m	5.37	3.87	2.98	2.38	1.96	1.68	1.47	1.31	1.17	1.06	-
-1.0m	5.12	3.71	2.88	2.34	1.96	1.68	1.47	1.31	1.19	-	-
-2.0m	5.28	3.84	2.99	2.44	2.05	1.77	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	3.25	2.68	2.2	-	-	-	-	-
6.0m	-	-	-	3.24	2.7	2.29	1.92	1.6	-	-	-
5.0m	-	-	-	3.18	2.66	2.27	1.97	1.65	1.39	-	-
4.0m	-	-	-	3.1	2.61	2.24	1.96	1.68	1.41	1.19	-
3.0m	-	-	-	3.03	2.57	2.22	1.95	1.67	1.4	1.19	1.01
2.0m	-	-	3.64	3	2.55	2.21	1.9	1.61	1.36	1.16	0.99
1.0m	-	4.4	3.53	2.91	2.45	2.1	1.82	1.54	1.31	1.12	0.97
0.0m	5.6	4.19	3.35	2.76	2.34	2.01	1.73	1.46	1.26	1.09	-
-1.0m	5.52	4.1	3.25	2.69	2.26	1.94	1.62	1.39	1.22	-	-
-2.0m	5.55	4.1	3.25	2.62	2.18	1.83	-	-	-	-	-

Max Cant + Twist
150-177mm
90% SWL
Locked


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.13	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.17	3.53	3	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.48	2.99	2.58	-	-
4.0m	-	-	-	4.72a	4.73	3.92	3.37	2.91	2.53	2.19	-
3.0m	-	-	-	5.58b	4.6	3.76	2.81r	2.71r	2.45	2.14	1.87
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.71	2.37	2.08	1.84
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	2.62	2.3	2.03	1.81
0.0m	5.73a	6.21a	6.25	4.89	3.98	3.37	2.93	2.58	2.27	2.01	-
-1.0m	5.31a	5.75a	6.09	4.82	3.98	3.37	2.93	2.58	2.29	-	-
-2.0m	10	8.4	6.27	4.97	4.11	3.51	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.15	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.27	3.59	3.02	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.25	3.65	3.09	2.62	-	-
4.0m	-	-	-	4.75a	4.88a	4.2	3.63	3.12	2.65	2.22	-
3.0m	-	-	-	5.85	4.87	4.14	3.55	3.08	2.63	2.22	1.87
2.0m	-	-	5.41r	5.66	4.72r	4.01	3.47	3.02	2.57	2.18	1.84
1.0m	-	7.09r	6.85	5.52	4.59	3.91	3.38	2.92	2.5	2.11	1.81
0.0m	8.36a	8.99	6.78	5.43	4.52	3.84	3.3	2.81	2.4	2.06	-
-1.0m	10	8.83	6.68	5.36	4.43	3.76	3.15	2.71	2.34	-	-
-2.0m	10	8.83	6.69	5.27	4.31	3.59	-	-	-	-	-

NETWORK RAIL DUTIES

SECTOR D

LOWER SAFE WORKING LOADS

UPPER SAFE WORKING LOADS

Road
 Unlocked
 71% SWL



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.67a	3.99	3.32	-	-	-	-	-
6.0m	-	-	-	3.64a	3.99a	3.38	2.87	2.46	-	-	-
5.0m	-	-	-	3.24a	3.66a	3.32	2.85	2.47	2.15	-	-
4.0m	-	-	-	4.33a	3.81	3.21	2.77	2.41	2.13	1.88	-
3.0m	-	-	-	4.64	3.72	3.08	2.66	2.34	2.07	1.85	-
2.0m	-	-	-	4.44	3.58	2.95r	2.49r	2.26	2.01	1.81	1.62
1.0m	-	5.67r	4.42r	3.72r	3.25r	2.85	2.48	2.2	1.96	1.77	1.6
0.0m	5.89a	6.46a	4.96	3.95	3.26	2.78	2.44	2.16	1.94	1.75	-
-1.0m	5.15a	5.61a	4.8	3.86	3.22	2.77	2.43	2.16	1.94	-	-
-2.0m	9.03	6.39	4.9	3.96	3.31	2.85	2.5	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.77a	4.01	3.32	-	-	-	-	-
6.0m	-	-	-	3.68a	4.07	3.44	2.9	2.46	-	-	-
5.0m	-	-	-	3.46a	4.01a	3.44	2.97	2.53	2.17	-	-
4.0m	-	-	-	4.34a	3.98	3.41	2.97	2.56	2.19	1.89	-
3.0m	-	-	-	4.68	3.93	3.38	2.95	2.55	2.19	1.89	-
2.0m	-	-	-	4.62	3.89	3.33	2.89	2.51	2.15	1.86	1.63
1.0m	-	5.67r	5.49	4.49	3.77	3.24	2.81	2.44	2.11	1.83	1.61
0.0m	7.59a	6.88	5.36	4.39	3.68	3.16	2.72	2.34	2.04	1.79	-
-1.0m	9.39	6.75	5.25	4.27	3.6	3.07	2.61	2.27	1.98	-	-
-2.0m	9.38	6.71	5.21	4.23	3.52	2.96	2.55	-	-	-	-

Road
 Locked
 71% SWL



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.67a	4.78	4.09	-	-	-	-	-
6.0m	-	-	-	3.64a	3.99a	4.15	3.61	3.17	-	-	-
5.0m	-	-	-	3.24a	3.66a	4.00a	3.6	3.18	2.83	-	-
4.0m	-	-	-	4.33a	4.44a	4	3.52	3.13	2.81	2.52	-
3.0m	-	-	-	5.45	4.55	3.88	2.99r	3.04r	2.76	2.49	-
2.0m	-	-	-	4.61r	3.79r	2.95r	2.49r	2.89r	2.7	2.46	2.24
1.0m	-	5.67r	4.42r	3.72r	3.25r	2.93r	2.79r	2.94	2.66	2.42	2.22
0.0m	5.89a	6.46a	5.86	4.64r	4.09r	3.56r	3.22	2.9	2.63	2.41	-
-1.0m	5.15a	5.61a	5.73	4.79	4.12	3.61	3.21	2.9	2.63	-	-
-2.0m	9.3	7.17	5.81	4.87	4.19	3.68	3.29	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.77a	4.8	4.1	-	-	-	-	-
6.0m	-	-	-	3.68a	4.25a	4.2	3.64	3.17	-	-	-
5.0m	-	-	-	3.46a	4.01a	4.2	3.7	3.24	2.84	-	-
4.0m	-	-	-	4.34a	4.62a	4.17	3.69	3.26	2.86	2.53	-
3.0m	-	-	-	5.48	4.73	4.14	3.65	3.24r	2.86	2.53	-
2.0m	-	-	-	5.38r	4.63	4.05	3.58	3.19	2.83	2.51	2.25
1.0m	-	5.67r	6.24	5.27	4.54	3.98	3.53	3.15	2.79	2.48	2.23
0.0m	7.59a	7.56	6.18	5.20r	4.48	3.93r	3.48	3.06	2.73	2.44	-
-1.0m	9.56	7.45	6.1	5.14	4.44	3.88	3.38	3	2.67	-	-
-2.0m	9.56	7.43	6.06	5.1	4.37	3.78	3.33	-	-	-	-

Level Rail
 0-50mm
 67% SWL

Unlocked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.35	3.71	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	3.74	3.25	2.85	-	-	-
5.0m	-	-	-	3.23a	3.66a	3.68	3.22	2.84	2.52	-	-
4.0m	-	-	-	4.72a	4.17	3.58	3.15	2.79	2.49	2.23	-
3.0m	-	-	-	4.93	4.09	3.47	2.81r	2.71r	2.44	2.2	2
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.65	2.39	2.17	1.98
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	2.6	2.35	2.14	1.96
0.0m	5.73a	6.21a	5.29	4.37	3.7	3.23	2.86	2.57	2.33	2.13	-
-1.0m	5.31a	5.75a	5.2	4.33	3.7	3.23	2.87	2.57	2.35	-	-
-2.0m	8.68	6.6	5.3	4.42	3.78	3.31	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.38	3.72	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	3.8	3.29	2.85	-	-	-
5.0m	-	-	-	3.52a	4.05a	3.79	3.34	2.9	2.54	-	-
4.0m	-	-	-	4.75a	4.32	3.76	3.33	2.93	2.56	2.25	-
3.0m	-	-	-	4.98	4.28	3.74	3.29	2.91	2.55	2.25	2
2.0m	-	-	5.41r	4.9	4.2	3.66	3.23	2.87	2.52	2.23	1.98
1.0m	-	7.05	5.71	4.79	4.12r	3.59	3.17	2.79	2.47	2.19	1.96
0.0m	8.36a	6.92	5.63	4.73	4.06	3.54	3.11	2.72	2.41	2.15	-
-1.0m	8.89	6.83	5.54	4.65	3.99	3.47	3.01	2.65	2.38	-	-
-2.0m	8.92	6.83	5.54	4.6	3.91	3.37	-	-	-	-	-

Level Rail
 0-50mm
 75% SWL

Locked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.64a	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.19a	4.37b	4.11a	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.64b	4.21b	4.12	-	-
4.0m	-	-	-	4.72a	4.80b	4.14b	3.59r	3.21r	3.86a	3.67	-
3.0m	-	-	-	5.58b	4.73b	3.85r	2.81r	2.71r	3.67r	3.63	3.3
Radius	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.91r	3.79r	3.59	3.27
the lifti	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	3.61r	3.92	3.56	3.25
the ma	5.73a	6.21a	6.26r	4.95r	4.16r	3.78r	3.84r	4.32	3.89	3.54	-
safe wd	5.31a	5.75a	6.88a	6.53r	5.65r	5.23r	4.84	4.32	3.91	-	-
r' articu	10	10	9.35	7.65	6.46	5.59	-	-	-	-	-


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.96a	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.50a	4.60a	4.59a	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.41a	4.55a	4.60a	4.14	-	-
4.0m	-	-	-	4.75a	4.89a	4.97a	5.01a	4.65	4.16	3.69	-
3.0m	-	-	-	6.18b	6.75b	5.91	5.2	4.62	4.13	3.69	3.3
2.0m	-	-	5.41r	7.00r	6.76	5.85	5.14	4.57	4.09	3.66	3.28
1.0m	-	7.09r	8.89r	7.89	6.68	5.78	5.08	4.52	4.06	3.61	3.25
0.0m	8.36a	10	9.6	7.87r	6.65	5.74	5.05	4.49	3.99	3.57	-
-1.0m	10	10	9.63	7.87	6.65	5.76	5	4.41	3.95	-	-
-2.0m	10	10	9.67	7.87	6.61	5.66	-	-	-	-	-

NETWORK RAIL DUTIES

SECTOR D


LOWER SAFE WORKING LOADS

UPPER SAFE WORKING LOADS

Canted Rail
50-150mm
67% SWL
Unlocked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.15	3.48	2.96	-	-	-	-	-
6.0m	-	-	-	3.54a	3.49	2.98	2.58	2.25	-	-	-
5.0m	-	-	-	3.23a	3.41	2.93	2.55	2.24	1.98	-	-
4.0m	-	-	-	4	3.31	2.83	2.48	2.19	1.95	1.74	-
3.0m	-	-	-	3.91	3.23	2.72	2.39	2.13	1.9	1.71	1.54
2.0m	-	-	4.64	3.74	3.1	2.63	2.3	2.06	1.85	1.68	1.53
1.0m	-	5.49	4.32	3.53	2.96	2.53	2.24	2.01	1.82	1.65	1.51
0.0m	5.73a	5.09	4.07	3.37	2.85	2.48	2.21	1.98	1.8	1.64	-
-1.0m	5.31a	4.95	3.99	3.33	2.85	2.49	2.21	1.98	1.81	-	-
-2.0m	6.6	5.06	4.09	3.42	2.93	2.57	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.15	3.51	2.97	-	-	-	-	-
6.0m	-	-	-	3.58a	3.53	3.05	2.62	2.26	-	-	-
5.0m	-	-	-	3.52a	3.5	3.04	2.67	2.31	2	-	-
4.0m	-	-	-	4.02	3.45	3.01	2.66	2.33	2.02	1.76	-
3.0m	-	-	-	3.96	3.41	2.98	2.65	2.32	2.01	1.76	1.54
2.0m	-	-	4.66	3.93	3.39	2.95	2.6	2.27	1.98	1.74	1.53
1.0m	-	5.55	4.56	3.84	3.3	2.87	2.53	2.2	1.93	1.69	1.51
0.0m	6.87	5.37	4.4	3.71	3.2	2.79	2.44	2.12	1.87	1.66	-
-1.0m	6.8	5.28	4.32	3.64	3.12	2.72	2.34	2.06	1.84	-	-
-2.0m	6.83	5.29	4.32	3.59	3.05	2.62	-	-	-	-	-

Canted Rail
50-150mm
75% SWL
Locked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.64a	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.19a	4.37b	4.1	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.64b	4.09	3.62	-	-
4.0m	-	-	-	4.72a	4.80b	4.14b	3.59r	3.21r	3.59	3.22	-
3.0m	-	-	-	5.58b	4.73b	3.85r	2.81r	2.71r	3.54	3.18	2.88
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.91r	3.47	3.14	2.86
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	3.61r	3.43	3.11	2.84
0.0m	5.73a	6.21a	6.26r	4.95r	4.16r	3.78r	3.84r	3.78	3.4	3.1	-
-1.0m	5.31a	5.75a	6.88a	6.53r	5.57	4.81	4.23	3.78	3.42	-	-
-2.0m	10	10	8.24	6.72	5.67	4.91	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.96a	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.50a	4.60a	4.11	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.41a	4.55a	4.17	3.65	-	-
4.0m	-	-	-	4.75a	4.89a	4.97a	4.69	4.16	3.68	3.24	-
3.0m	-	-	-	6.18b	6.13b	5.3	4.64	4.11	3.67	3.24	2.88
2.0m	-	-	5.41r	7.00r	6.04	5.22	4.57	4.06r	3.62	3.21	2.87
1.0m	-	7.09r	8.57	7.03r	5.94	5.14	4.51	4.02	3.57	3.16	2.84
0.0m	8.36a	10	8.53	6.98	5.9	5.1	4.48	3.95	3.5	3.13	-
-1.0m	10	10	8.55	6.99	5.91	5.11	4.4	3.87	3.46	-	-
-2.0m	10	10	8.55	6.95	5.83	4.98	-	-	-	-	-

Max Cant + Twist 150-177mm
67% SWL
Unlocked


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	3.24	2.65	2.19	-	-	-	-	-
6.0m	-	-	-	3.23	2.65	2.21	1.88	1.59	-	-	-
5.0m	-	-	-	3.11	2.57	2.16	1.84	1.58	1.37	-	-
4.0m	-	-	-	3.08	2.46	2.05	1.77	1.53	1.33	1.17	-
3.0m	-	-	-	2.98	2.37	1.94	1.67	1.46	1.29	1.14	1.01
2.0m	-	-	3.61	2.79	2.24	1.83	1.58	1.39	1.23	1.1	0.99
1.0m	-	4.34	3.26	2.56	2.08	1.72	1.51	1.34	1.19	1.07	0.97
0.0m	5.37	3.87	2.98	2.38	1.96	1.68	1.47	1.31	1.17	1.06	-
-1.0m	5.12	3.71	2.88	2.34	1.96	1.68	1.47	1.31	1.19	-	-
-2.0m	5.28	3.84	2.99	2.44	2.05	1.77	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	3.25	2.68	2.2	-	-	-	-	-
6.0m	-	-	-	3.24	2.7	2.29	1.92	1.6	-	-	-
5.0m	-	-	-	3.18	2.66	2.27	1.97	1.65	1.39	-	-
4.0m	-	-	-	3.1	2.61	2.24	1.96	1.68	1.41	1.19	-
3.0m	-	-	-	3.03	2.57	2.22	1.95	1.67	1.4	1.19	1.01
2.0m	-	-	3.64	3	2.55	2.21	1.9	1.61	1.36	1.16	0.99
1.0m	-	4.4	3.53	2.91	2.45	2.1	1.82	1.54	1.31	1.12	0.97
0.0m	5.6	4.19	3.35	2.76	2.34	2.01	1.73	1.46	1.26	1.09	-
-1.0m	5.52	4.1	3.25	2.69	2.26	1.94	1.62	1.39	1.22	-	-
-2.0m	5.55	4.1	3.25	2.62	2.18	1.83	-	-	-	-	-

Max Cant + Twist 150-177mm
90% SWL
Locked


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.13	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.17	3.53	3	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.48	2.99	2.58	-	-
4.0m	-	-	-	4.72a	4.73	3.92	3.37	2.91	2.53	2.19	-
3.0m	-	-	-	5.58b	4.6	3.76	2.81r	2.71r	2.45	2.14	1.87
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.71	2.37	2.08	1.84
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	2.62	2.3	2.03	1.81
0.0m	5.73a	6.21a	6.25	4.89	3.98	3.37	2.93	2.58	2.27	2.01	-
-1.0m	5.31a	5.75a	6.09	4.82	3.98	3.37	2.93	2.58	2.29	-	-
-2.0m	10	8.4	6.27	4.97	4.11	3.51	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.15	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.27	3.59	3.02	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.25	3.65	3.09	2.62	-	-
4.0m	-	-	-	4.75a	4.88a	4.2	3.63	3.12	2.65	2.22	-
3.0m	-	-	-	5.85	4.87	4.14	3.55	3.08	2.63	2.22	1.87
2.0m	-	-	5.41r	5.66	4.72r	4.01	3.47	3.02	2.57	2.18	1.84
1.0m	-	7.09r	6.85	5.52	4.59	3.91	3.38	2.92	2.5	2.11	1.81
0.0m	8.36a	8.99	6.78	5.43	4.52	3.84	3.3	2.81	2.4	2.06	-
-1.0m	10	8.83	6.68	5.36	4.43	3.76	3.15	2.71	2.34	-	-
-2.0m	10	8.83	6.69	5.27	4.31	3.59	-	-	-	-	-

NETWORK RAIL DUTIES

SECTOR E

LOWER SAFE WORKING LOADS

UPPER SAFE WORKING LOADS

Road
 Unlocked

71% SWL



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.67a	4.94a	4.99a	-	-	-	-	-
6.0m	-	-	-	3.64a	3.99a	4.19b	4.31a	3.91	-	-	-
5.0m	-	-	-	3.24a	3.66a	4.00a	3.63b	3.91	3.48	-	-
4.0m	-	-	-	4.33a	4.44a	4.15b	3.62b	3.56r	3.45	3.1	-
3.0m	-	-	-	5.59b	4.74b	4.03r	2.99r	3.04r	3.4	3.07	-
2.0m	-	-	-	4.61r	3.79r	2.95r	2.49r	2.89r	3.34	3.03	2.76
1.0m	-	5.67r	4.42r	3.72r	3.25r	2.93r	2.79r	3.18r	3.29	2.99	2.74
0.0m	5.89a	6.46a	6.04r	4.64r	4.09r	3.56r	3.64r	3.62	3.27	2.98	-
-1.0m	5.15a	5.61a	6.34a	6.17	5.09r	4.56	4.03	3.61	3.27	-	-
-2.0m	10	9.6	7.59	6.26	5.33	4.63	4.11	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.77a	5.13a	5.08a	-	-	-	-	-
6.0m	-	-	-	3.68a	4.25a	4.58b	4.49	3.91	-	-	-
5.0m	-	-	-	3.46a	4.01a	4.38a	4.5	3.97	3.49	-	-
4.0m	-	-	-	4.34a	4.62a	4.78a	4.48	3.98	3.51	3.11	-
3.0m	-	-	-	5.96b	5.8	5.04	4.44	3.94	3.51	3.11	-
2.0m	-	-	-	6.67r	5.72	4.96	4.38	3.89	3.48	3.09	2.77
1.0m	-	5.67r	7.86r	6.61	5.63	4.89	4.31	3.85	3.43	3.05	2.75
0.0m	7.59a	9.97	7.91	6.55	5.58	4.84	4.28	3.79	3.37	3.02	-
-1.0m	10	9.93	7.91	6.54	5.57	4.84r	4.21	3.72	3.31	-	-
-2.0m	10	9.9	7.87	6.51	5.52	4.74	4.15	-	-	-	-

Road
 Locked

71% SWL



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.67a	4.94a	4.99a	-	-	-	-	-
6.0m	-	-	-	3.64a	3.99a	4.19b	4.31a	3.91	-	-	-
5.0m	-	-	-	3.24a	3.66a	4.00a	3.63b	3.91	3.48	-	-
4.0m	-	-	-	4.33a	4.44a	4.15b	3.62b	3.56r	3.45	3.1	-
3.0m	-	-	-	5.59b	4.74b	4.03r	2.99r	3.04r	3.4	3.07	-
2.0m	-	-	-	4.61r	3.79r	2.95r	2.49r	2.89r	3.34	3.03	2.76
1.0m	-	5.67r	4.42r	3.72r	3.25r	2.93r	2.79r	3.18r	3.29	2.99	2.74
0.0m	5.89a	6.46a	6.04r	4.64r	4.09r	3.56r	3.64r	3.62	3.27	2.98	-
-1.0m	5.15a	5.61a	6.34a	6.17	5.09r	4.56	4.03	3.61	3.27	-	-
-2.0m	10	9.6	7.59	6.26	5.33	4.63	4.11	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.77a	5.13a	5.08a	-	-	-	-	-
6.0m	-	-	-	3.68a	4.25a	4.58b	4.49	3.91	-	-	-
5.0m	-	-	-	3.46a	4.01a	4.38a	4.5	3.97	3.49	-	-
4.0m	-	-	-	4.34a	4.62a	4.78a	4.48	3.98	3.51	3.11	-
3.0m	-	-	-	5.96b	5.8	5.04	4.44	3.94	3.51	3.11	-
2.0m	-	-	-	6.67r	5.72	4.96	4.38	3.89	3.48	3.09	2.77
1.0m	-	5.67r	7.86r	6.61	5.63	4.89	4.31	3.85	3.43	3.05	2.75
0.0m	7.59a	9.97	7.91	6.55	5.58	4.84	4.28	3.79	3.37	3.02	-
-1.0m	10	9.93	7.91	6.54	5.57	4.84r	4.21	3.72	3.31	-	-
-2.0m	10	9.9	7.87	6.51	5.52	4.74	4.15	-	-	-	-

Level Rail
 0-50mm

87% SWL

Unlocked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.64a	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.19a	4.37b	4.11a	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.64b	4.21b	4.15a	-	-
4.0m	-	-	-	4.72a	4.80b	4.14b	3.59r	3.21r	3.86a	3.86a	-
3.0m	-	-	-	5.58b	4.73b	3.85r	2.81r	2.71r	3.67r	3.88a	4.09a
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.91r	3.79r	4.02a	4.32a
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	3.61r	4.26r	4.94a	4.50a
0.0m	5.73a	6.21a	6.26r	4.95r	4.16r	3.78r	3.84r	4.79r	5.40b	4.81b	-
-1.0m	5.31a	5.75a	6.88a	6.53r	5.65r	5.23r	6.16b	5.46b	4.96b	-	-
-2.0m	10	10	10	9.48b	8.06b	7.02b	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.96a	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.50a	4.60a	4.59a	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.41a	4.55a	4.60a	4.57a	-	-
4.0m	-	-	-	4.75a	4.89a	4.97a	5.01a	4.98a	4.89a	4.66a	-
3.0m	-	-	-	6.18b	6.75b	6.87b	6.31b	5.76b	5.32b	4.98b	4.09a
2.0m	-	-	5.41r	7.00r	7.64b	7.36b	6.70b	6.05b	5.52b	5.08b	4.62a
1.0m	-	7.09r	8.89r	9.63b	8.70b	7.77b	6.88b	6.17b	5.59b	5.12b	4.50a
0.0m	8.36a	10	10	10	8.98b	7.82b	6.92b	6.21b	5.65b	4.99b	-
-1.0m	10	10	10	10	9.10b	7.93b	7.01b	6.18b	5.21b	-	-
-2.0m	10	10	10	10	9.06b	7.51b	-	-	-	-	-

Level Rail
 0-50mm

87% SWL

Locked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.64a	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.19a	4.37b	4.11a	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.64b	4.21b	4.15a	-	-
4.0m	-	-	-	4.72a	4.80b	4.14b	3.59r	3.21r	3.86a	3.86a	-
3.0m	-	-	-	5.58b	4.73b	3.85r	2.81r	2.71r	3.67r	3.88a	4.09a
Radius	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.91r	3.79r	4.02a	4.32a
the lifti	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	3.61r	4.26r	4.94a	4.50a
the ma	5.73a	6.21a	6.26r	4.95r	4.16r	3.78r	3.84r	4.79r	5.40b	4.81b	-
safe wd	5.31a	5.75a	6.88a	6.53r	5.65r	5.23r	6.16b	5.46b	4.96b	-	-
r' articu	10	10	10	9.48b	8.06b	7.02b	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.96a	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.50a	4.60a	4.59a	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.41a	4.55a	4.60a	4.57a	-	-
4.0m	-	-	-	4.75a	4.89a	4.97a	5.01a	4.98a	4.89a	4.66a	-
3.0m	-	-	-	6.18b	6.75b	6.87b	6.31b	5.76b	5.32b	4.98b	4.09a
2.0m	-	-	5.41r	7.00r	7.64b	7.36b	6.70b	6.05b	5.52b	5.08b	4.62a
1.0m	-	7.09r	8.89r	9.63b	8.70b	7.77b	6.88b	6.17b	5.59b	5.12b	4.50a
0.0m	8.36a	10	10	10	8.98b	7.82b	6.92b	6.21b	5.65b	4.99b	-
-1.0m	10	10	10	10	9.10b	7.93b	7.01b	6.18b	5.21b	-	-
-2.0m	10	10	10	10	9.06b	7.51b	-	-	-	-	-

NETWORK RAIL DUTIES

SECTOR E

LOWER SAFE WORKING LOADS

UPPER SAFE WORKING LOADS

Canted Rail

50-150mm

87% SWL

Unlocked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.64a	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.19a	4.37b	4.11a	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.64b	4.21b	4.15a	-	-
4.0m	-	-	-	4.72a	4.80b	4.14b	3.59r	3.21r	3.86a	3.86a	-
3.0m	-	-	-	5.58b	4.73b	3.85r	2.81r	2.71r	3.67r	3.88a	4.09a
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.91r	3.79r	4.02a	4.32a
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	3.61r	4.26r	4.94a	4.50a
0.0m	5.73a	6.21a	6.26r	4.95r	4.16r	3.78r	3.84r	4.79r	5.40b	4.81b	-
-1.0m	5.31a	5.75a	6.88a	6.53r	5.65r	5.23r	6.16b	5.46b	4.96b	-	-
-2.0m	10	10	10	9.48b	8.06b	7.02b	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.96a	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.50a	4.60a	4.59a	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.41a	4.55a	4.60a	4.57a	-	-
4.0m	-	-	-	4.75a	4.89a	4.97a	5.01a	4.98a	4.89a	4.66a	-
3.0m	-	-	-	6.18b	6.75b	6.87b	6.31b	5.76b	5.32b	4.98b	4.09a
2.0m	-	-	5.41r	7.00r	7.64b	7.36b	6.70b	6.05b	5.52b	5.08b	4.62a
1.0m	-	7.09r	8.89r	9.63b	8.70b	7.77b	6.88b	6.17b	5.59b	5.12b	4.50a
0.0m	8.36a	10	10	10	8.98b	7.82b	6.92b	6.21b	5.65b	4.99b	-
-1.0m	10	10	10	10	9.10b	7.93b	7.01b	6.18b	5.21b	-	-
-2.0m	10	10	10	10	9.06b	7.51b	-	-	-	-	-

Canted Rail

50-150mm

87% SWL

Locked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.64a	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.19a	4.37b	4.11a	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.64b	4.21b	4.15a	-	-
4.0m	-	-	-	4.72a	4.80b	4.14b	3.59r	3.21r	3.86a	3.86a	-
3.0m	-	-	-	5.58b	4.73b	3.85r	2.81r	2.71r	3.67r	3.88a	4.09a
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.91r	3.79r	4.02a	4.32a
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	3.61r	4.26r	4.94a	4.50a
0.0m	5.73a	6.21a	6.26r	4.95r	4.16r	3.78r	3.84r	4.79r	5.40b	4.81b	-
-1.0m	5.31a	5.75a	6.88a	6.53r	5.65r	5.23r	6.16b	5.46b	4.96b	-	-
-2.0m	10	10	10	9.48b	8.06b	7.02b	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.96a	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.50a	4.60a	4.59a	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.41a	4.55a	4.60a	4.57a	-	-
4.0m	-	-	-	4.75a	4.89a	4.97a	5.01a	4.98a	4.89a	4.66a	-
3.0m	-	-	-	6.18b	6.75b	6.87b	6.31b	5.76b	5.32b	4.98b	4.09a
2.0m	-	-	5.41r	7.00r	7.64b	7.36b	6.70b	6.05b	5.52b	5.08b	4.62a
1.0m	-	7.09r	8.89r	9.63b	8.70b	7.77b	6.88b	6.17b	5.59b	5.12b	4.50a
0.0m	8.36a	10	10	10	8.98b	7.82b	6.92b	6.21b	5.65b	4.99b	-
-1.0m	10	10	10	10	9.10b	7.93b	7.01b	6.18b	5.21b	-	-
-2.0m	10	10	10	10	9.06b	7.51b	-	-	-	-	-

Max Cant

+ Twist

150-177mm

67% SWL

Unlocked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	3.24	2.65	2.19	-	-	-	-	-
6.0m	-	-	-	3.23	2.65	2.21	1.88	1.59	-	-	-
5.0m	-	-	-	3.11	2.57	2.16	1.84	1.58	1.37	-	-
4.0m	-	-	-	3.08	2.46	2.05	1.77	1.53	1.33	1.17	-
3.0m	-	-	-	2.98	2.37	1.94	1.67	1.46	1.29	1.14	1.01
2.0m	-	-	3.61	2.79	2.24	1.83	1.58	1.39	1.23	1.1	0.99
1.0m	-	4.34	3.26	2.56	2.08	1.72	1.51	1.34	1.19	1.07	0.97
0.0m	5.37	3.87	2.98	2.38	1.96	1.68	1.47	1.31	1.17	1.06	-
-1.0m	5.12	3.71	2.88	2.34	1.96	1.68	1.47	1.31	1.19	-	-
-2.0m	5.28	3.84	2.99	2.44	2.05	1.77	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	3.25	2.68	2.2	-	-	-	-	-
6.0m	-	-	-	3.24	2.7	2.29	1.92	1.6	-	-	-
5.0m	-	-	-	3.18	2.66	2.27	1.97	1.65	1.39	-	-
4.0m	-	-	-	3.1	2.61	2.24	1.96	1.68	1.41	1.19	-
3.0m	-	-	-	3.03	2.57	2.22	1.95	1.67	1.4	1.19	1.01
2.0m	-	-	3.64	3	2.55	2.21	1.9	1.61	1.36	1.16	0.99
1.0m	-	4.4	3.53	2.91	2.45	2.1	1.82	1.54	1.31	1.12	0.97
0.0m	5.6	4.19	3.35	2.76	2.34	2.01	1.73	1.46	1.26	1.09	-
-1.0m	5.52	4.1	3.25	2.69	2.26	1.94	1.62	1.39	1.22	-	-
-2.0m	5.55	4.1	3.25	2.62	2.18	1.83	-	-	-	-	-

Max Cant

+ Twist

150-177mm

90% SWL

Locked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.13	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.17	3.53	3	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.48	2.99	2.58	-	-
4.0m	-	-	-	4.72a	4.73	3.92	3.37	2.91	2.53	2.19	-
3.0m	-	-	-	5.58b	4.6	3.76	2.81r	2.71r	2.45	2.14	1.87
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.71	2.37	2.08	1.84
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	2.62	2.3	2.03	1.81
0.0m	5.73a	6.21a	6.25	4.89	3.98	3.37	2.93	2.58	2.27	2.01	-
-1.0m	5.31a	5.75a	6.09	4.82	3.98	3.37	2.93	2.58	2.29	-	-
-2.0m	10	8.4	6.27	4.97	4.11	3.51	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.15	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.27	3.59	3.02	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.25	3.65	3.09	2.62	-	-
4.0m	-	-	-	4.75a	4.88a	4.2	3.63	3.12	2.65	2.22	-
3.0m	-	-	-	5.85	4.87	4.14	3.55	3.08	2.63	2.22	1.87
2.0m	-	-	5.41r	5.66	4.72r	4.01	3.47	3.02	2.57	2.18	1.84
1.0m	-	7.09r	6.85	5.52	4.59	3.91	3.38	2.92	2.5	2.11	1.81
0.0m	8.36a	8.99	6.78	5.43	4.52	3.84	3.3	2.81	2.4	2.06	-
-1.0m	10	8.83	6.68	5.36	4.43	3.76	3.15	2.71	2.34	-	-
-2.0m	10	8.83	6.69	5.27	4.31	3.59	-	-	-	-	-

LUL DUTIES

SECTOR A

LOWER SAFE WORKING LOADS

UPPER SAFE WORKING LOADS

Road
Unlocked

75% SWL



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.67a	4.94a	4.99a	-	-	-	-	-
6.0m	-	-	-	3.64a	3.99a	4.19b	4.31a	4.13	-	-	-
5.0m	-	-	-	3.24a	3.66a	4.00a	3.63b	4.13	3.67	-	-
4.0m	-	-	-	4.33a	4.44a	4.15b	3.62b	3.56r	3.65	3.27	-
3.0m	-	-	-	5.59b	4.74b	4.03r	2.99r	3.04r	3.59	3.24	-
2.0m	-	-	-	4.61r	3.79r	2.95r	2.49r	2.89r	3.53	3.2	2.91
1.0m	-	5.67r	4.42r	3.72r	3.25r	2.93r	2.79r	3.18r	3.48	3.16	2.89
0.0m	5.89a	6.46a	6.04r	4.64r	4.09r	3.56r	3.64r	3.82	3.46	3.15	-
-1.0m	5.15a	5.61a	6.35a	6.39r	5.09r	4.82	4.26	3.82	3.45	-	-
-2.0m	10	10	8.02	6.62	5.63	4.89	4.34	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.77a	5.13a	5.08a	-	-	-	-	-
6.0m	-	-	-	3.68a	4.25a	4.58b	4.63a	4.13	-	-	-
5.0m	-	-	-	3.46a	4.01a	4.38a	4.54b	4.19	3.68	-	-
4.0m	-	-	-	4.34a	4.62a	4.78a	4.71	4.2	3.71	3.29	-
3.0m	-	-	-	5.96b	6.1	5.3	4.67	4.15	3.7	3.29	-
2.0m	-	-	-	6.67r	6.02	5.22	4.61	4.1	3.67	3.26	2.92
1.0m	-	5.67r	7.86r	6.96	5.92	5.15	4.55	4.05r	3.62	3.22	2.9
0.0m	7.59a	10	8.35	6.9	5.88	5.11	4.51	4	3.56	3.19	-
-1.0m	10	10	8.35	6.9	5.87	5.1	4.45	3.93	3.5	-	-
-2.0m	10	10	8.32	6.88	5.84	5.01	4.38	-	-	-	-

Road
Locked

75% SWL



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.67a	4.94a	4.99a	-	-	-	-	-
6.0m	-	-	-	3.64a	3.99a	4.19b	4.31a	4.13	-	-	-
5.0m	-	-	-	3.24a	3.66a	4.00a	3.63b	4.13	3.67	-	-
4.0m	-	-	-	4.33a	4.44a	4.15b	3.62b	3.56r	3.65	3.27	-
3.0m	-	-	-	5.59b	4.74b	4.03r	2.99r	3.04r	3.59	3.24	-
2.0m	-	-	-	4.61r	3.79r	2.95r	2.49r	2.89r	3.53	3.2	2.91
1.0m	-	5.67r	4.42r	3.72r	3.25r	2.93r	2.79r	3.18r	3.48	3.16	2.89
0.0m	5.89a	6.46a	6.04r	4.64r	4.09r	3.56r	3.64r	3.82	3.46	3.15	-
-1.0m	5.15a	5.61a	6.35a	6.39r	5.09r	4.82	4.26	3.82	3.45	-	-
-2.0m	10	10	8.02	6.62	5.63	4.89	4.34	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.77a	5.13a	5.08a	-	-	-	-	-
6.0m	-	-	-	3.68a	4.25a	4.58b	4.63a	4.13	-	-	-
5.0m	-	-	-	3.46a	4.01a	4.38a	4.54b	4.19	3.68	-	-
4.0m	-	-	-	4.34a	4.62a	4.78a	4.71	4.2	3.71	3.29	-
3.0m	-	-	-	5.96b	6.1	5.3	4.67	4.15	3.7	3.29	-
2.0m	-	-	-	6.67r	6.02	5.22	4.61	4.1	3.67	3.26	2.92
1.0m	-	5.67r	7.86r	6.96	5.92	5.15	4.55	4.05r	3.62	3.22	2.9
0.0m	7.59a	10	8.34	6.9	5.88	5.11	4.51	4	3.56	3.19	-
-1.0m	10	10	8.35	6.9	5.87	5.1	4.45	3.93	3.5	-	-
-2.0m	10	10	8.32	6.88	5.84	5.01	4.38	-	-	-	-

Level Rail
0-50mm

75% SWL

Unlocked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.64a	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.19a	4.37b	4.11a	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.64b	4.21b	3.99	-	-
4.0m	-	-	-	4.72a	4.80b	4.14b	3.59r	3.21r	3.86a	3.56	-
3.0m	-	-	-	5.58b	4.73b	3.85r	2.81r	2.71r	3.67r	3.53	3.21
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.91r	3.79r	3.49	3.19
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	3.61r	3.8	3.45	3.17
0.0m	5.73a	6.21a	6.26r	4.95r	4.16r	3.78r	3.84r	4.17	3.77	3.44	-
-1.0m	5.31a	5.75a	6.88a	6.53r	5.65r	5.23r	4.66	4.17	3.79	-	-
-2.0m	10	10	8.76	7.24	6.16	5.36	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.96a	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.50a	4.60a	4.5	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.41a	4.55a	4.53	4.02	-	-
4.0m	-	-	-	4.75a	4.89a	4.97a	5.01a	4.52	4.03	3.59	-
3.0m	-	-	-	6.18b	6.54	5.69	5.03	4.48	4.01	3.58	3.21
2.0m	-	-	5.41r	7.00r	6.47	5.62	4.96	4.42	3.98	3.56	3.19
1.0m	-	7.09r	8.89r	7.49	6.39	5.56r	4.9	4.38	3.93	3.51	3.17
0.0m	8.36a	10	9.02	7.46	6.35	5.52	4.87	4.34	3.87	3.47	-
-1.0m	10	10	9.04	7.48	6.35	5.52	4.82	4.26	3.83	-	-
-2.0m	10	10	9.05	7.45	6.3	5.43	-	-	-	-	-

Level Rail
0-50mm

75% SWL

Locked




	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.64a	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.19a	4.37b	4.11a	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.64b	4.21b	4.15a	-	-
4.0m	-	-	-	4.72a	4.80b	4.14b	3.59r	3.21r	3.86a	3.86a	-
3.0m	-	-	-	5.58b	4.73b	3.85r	2.81r	2.71r	3.67r	3.88a	4.09a
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.91r	3.79r	4.02a	4.32a
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	3.61r	4.26r	4.94a	4.50a
0.0m	5.73a	6.21a	6.26r	4.95r	4.16r	3.78r	3.84r	4.79r	5.40b	4.81b	-
-1.0m	5.31a	5.75a	6.88a	6.53r	5.65r	5.23r	4.66	4.17	3.79	-	-
-2.0m	10	10	10	9.48b	8.06b	7.02b	-	-	-	-	-


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.96a	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.50a	4.60a	4.59a	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.41a	4.55a	4.60a	4.57a	-	-
4.0m	-	-	-	4.75a	4.89a	4.97a	5.01a	4.98a	4.89a	4.66a	-
3.0m	-	-	-	6.18b	6.75b	6.87b	6.31b	5.76b	5.32b	4.98b	4.09a
2.0m	-	-	5.41r	7.00r	7.64b	7.36b	6.70b	6.05b	5.52b	5.08b	4.62a
1.0m	-	7.09r	8.89r	9.63b	8.70b	7.77b	6.88b	6.17b	5.59b	5.12b	4.50a
0.0m	8.36a	10	10	10	8.98b	7.82b	6.92b	6.21b	5.65b	4.99b	-
-1.0m	10	10	10	10	9.10b	7.93b	7.01b	6.18b	5.21b	-	-
-2.0m	10	10	10	10	9.06b	7.51b	-	-	-	-	-


LUL DUTIES
SECTOR A


LOWER SAFE WORKING LOADS


UPPER SAFE WORKING LOADS


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
Canted Rail	7.0m	-	-	-	4.43a	4.71a	4.45	-	-	-	-
	6.0m	-	-	-	3.54a	3.89a	4.19a	3.91	3.44	-	-
50-150mm	5.0m	-	-	-	3.23a	3.66a	4.02a	3.64b	3.43	3.06	-
	4.0m	-	-	-	4.72a	4.80b	4.14b	3.59r	3.21r	3.02	2.72
75% SWL	3.0m	-	-	-	5.58b	4.73b	3.85r	2.81r	2.71r	2.97	2.69
	2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.91r	2.92	2.65
Unlocked	1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	3.17	2.87	2.62
	0.0m	5.73a	6.21a	6.26r	4.95r	4.16r	3.78r	3.49	3.14	2.85	2.61
	-1.0m	5.31a	5.75a	6.21	5.2	4.47	3.92	3.49	3.14	2.87	-
	-2.0m	10	7.79	6.32	5.3	4.56	4.01	-	-	-	-


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
Canted Rail	7.0m	-	-	-	4.48a	4.98a	4.46	-	-	-	-
	6.0m	-	-	-	3.58a	4.15a	4.50a	3.95	3.45	-	-
50-150mm	5.0m	-	-	-	3.52a	4.05a	4.41a	3.98	3.5	3.08	-
	4.0m	-	-	-	4.75a	4.89a	4.47	3.96	3.51	3.1	2.75
75% SWL	3.0m	-	-	-	5.88	5.06	4.42	3.91	3.48	3.09	2.74
	2.0m	-	-	5.41r	5.75	4.96	4.34	3.84	3.43	3.05	2.72
Unlocked	1.0m	-	7.09r	6.7	5.65	4.87	4.27	3.79	3.38	3	2.67
	0.0m	8.36a	8.13	6.65	5.59	4.82	4.22	3.75	3.3	2.94	2.64
	-1.0m	10	8.04	6.58	5.56	4.78	4.18	3.64	3.23	2.9	-
	-2.0m	10	8.04	6.58	5.49	4.7	4.07	-	-	-	-


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
Canted Rail	7.0m	-	-	-	4.43a	4.71a	4.64a	-	-	-	-
	6.0m	-	-	-	3.54a	3.89a	4.19a	4.37b	4.11a	-	-
50-150mm	5.0m	-	-	-	3.23a	3.66a	4.02a	3.64b	4.21b	3.93	-
	4.0m	-	-	-	4.72a	4.80b	4.14b	3.59r	3.21r	3.86a	3.5
75% SWL	3.0m	-	-	-	5.58b	4.73b	3.85r	2.81r	2.71r	3.67r	3.47
	2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.91r	3.78	3.43
Locked	1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	3.61r	3.74	3.4
	0.0m	5.73a	6.21a	6.26r	4.95r	4.16r	3.78r	3.84r	4.11	3.71	3.38
	-1.0m	5.31a	5.75a	6.88a	6.53r	5.65r	5.2	4.59	4.11	3.73	-
	-2.0m	10	10	8.73	7.18	6.1	5.3	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
Canted Rail	7.0m	-	-	-	4.48a	4.98a	4.96a	-	-	-	-
	6.0m	-	-	-	3.58a	4.15a	4.50a	4.60a	4.44	-	-
50-150mm	5.0m	-	-	-	3.52a	4.05a	4.41a	4.55a	4.48	3.96	-
	4.0m	-	-	-	4.75a	4.89a	4.97a	5.01a	4.46b	3.97	3.53
75% SWL	3.0m	-	-	-	6.18b	6.49b	5.64b	4.97	4.42r	3.95	3.53
	2.0m	-	-	5.41r	7.00r	6.41	5.57	4.91	4.36	3.92	3.5
Locked	1.0m	-	7.09r	8.89r	7.44	6.33	5.5	4.85	4.32	3.87	3.45
	0.0m	8.36a	10	8.99	7.41	6.29	5.47	4.81	4.28	3.8	3.41
	-1.0m	10	10	9.01r	7.42	6.29	5.46	4.76	4.2	3.77	-
	-2.0m	10	10	9.03	7.4	6.24	5.36	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
Max Cant + Twist	7.0m	-	-	-	3.63	2.96	2.45	-	-	-	-
150-177mm	6.0m	-	-	-	3.54a	2.97	2.48	2.1	1.78	-	-
	5.0m	-	-	-	3.23a	2.87	2.42	2.06	1.77	1.53	-
	4.0m	-	-	-	3.45	2.75	2.29	1.98	1.71	1.49	1.31
75% SWL	3.0m	-	-	-	3.33	2.66	2.17	1.87	1.64	1.44	1.27
	2.0m	-	-	4.04	3.12	2.5	2.05	1.76	1.56	1.38	1.23
Unlocked	1.0m	-	4.85	3.65	2.87	2.33	1.93	1.69	1.5	1.34	1.2
	0.0m	5.73a	4.33	3.33	2.67	2.2	1.88	1.65	1.47	1.31	1.19
	-1.0m	5.31a	4.16	3.22	2.62	2.19	1.88	1.65	1.47	1.33	-
	-2.0m	5.91	4.3	3.35	2.73	2.29	1.98	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
Max Cant + Twist	7.0m	-	-	-	3.63	2.99	2.46	-	-	-	-
150-177mm	6.0m	-	-	-	3.58a	3.02	2.56	2.15	1.79	-	-
	5.0m	-	-	-	3.52a	2.98	2.54	2.2	1.85	1.56	-
	4.0m	-	-	-	3.47	2.92	2.51	2.19	1.88	1.58	1.33
75% SWL	3.0m	-	-	-	3.39	2.87	2.48	2.18	1.86	1.57	1.33
	2.0m	-	-	4.07	3.36	2.85	2.47	2.13	1.81	1.53	1.3
Unlocked	1.0m	-	4.92	3.95	3.25	2.74	2.35	2.03	1.72	1.47	1.25
	0.0m	6.27	4.69	3.75	3.09	2.62	2.25	1.93	1.63	1.41	1.22
	-1.0m	6.18	4.58	3.64	3.01	2.53	2.17	1.81	1.56	1.37	-
	-2.0m	6.21	4.59	3.64	2.94	2.44	2.04	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
Max Cant + Twist	7.0m	-	-	-	4.43a	4.18	3.44	-	-	-	-
150-177mm	6.0m	-	-	-	3.54a	3.89a	3.47	2.94	2.5	-	-
	5.0m	-	-	-	3.23a	3.66a	3.41	2.9	2.49	2.16	-
	4.0m	-	-	-	4.72a	3.95	3.27	2.81	2.43	2.12	1.86
75% SWL	3.0m	-	-	-	4.85	3.84	3.13	2.68	2.34	2.06	1.83
	2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.26	2	1.79
Locked	1.0m	-	6.20r	4.64r	3.91r	3.44r	2.87	2.49	2.19	1.95	1.75
	0.0m	5.73a	6.21a	5.2	4.08	3.32	2.81	2.44	2.16	1.93	1.74
	-1.0m	5.31a	5.75a	5.08	4.02	3.31	2.81	2.44	2.16	1.94	-
	-2.0m	10	7	5.22	4.15	3.43	2.92	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
Max Cant + Twist	7.0m	-	-	-	4.48a	4.22	3.45	-	-	-	-
150-177mm	6.0m	-	-	-	3.58a	4.15a	3.56	2.99	2.51	-	-
	5.0m	-	-	-	3.52a	4.05a	3.55	3.05	2.58	2.19	-
	4.0m	-	-	-	4.75a	4.14	3.51	3.04	2.6	2.21	1.89
75% SWL	3.0m	-	-	-	4.92	4.08	3.48	3.01	2.59	2.2	1.89
	2.0m	-	-	5.41r	4.81r	4	3.4	2.93	2.53	2.16	1.86
Locked	1.0m	-	7.09r	5.81	4.67	3.89	3.31	2.86r	2.44	2.1	1.81
	0.0m	8.36a	7.49	5.7	4.57	3.8	3.22	2.75	2.34	2.02	1.77
	-1.0m	10	7.36	5.57	4.47	3.69	3.13	2.62	2.26	1.98	-
	-2.0m	10	7.36	5.57	4.39	3.59	2.99	-	-	-	-

LUL DUTIES

SECTOR B

LOWER SAFE WORKING LOADS

UPPER SAFE WORKING LOADS

Road
 Unlocked

75% SWL



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.67a	4.22	3.5	-	-	-	-	-
6.0m	-	-	-	3.64a	3.99a	3.57	3.03	2.6	-	-	-
5.0m	-	-	-	3.24a	3.66a	3.51	3.01	2.6	2.27	-	-
4.0m	-	-	-	4.33a	4.03	3.39	2.93	2.55	2.25	1.98	-
3.0m	-	-	-	4.9	3.93	3.25	2.81	2.47	2.19	1.95	-
2.0m	-	-	-	4.61r	3.78	2.95r	2.49r	2.39	2.13	1.91	1.71
1.0m	-	5.67r	4.42r	3.72r	3.25r	2.93r	2.62	2.32	2.07	1.87	1.69
0.0m	5.89a	6.46a	5.24	4.18	3.44	2.93	2.57	2.28	2.05	1.85	-
-1.0m	5.15a	5.61a	5.07	4.08	3.41	2.93	2.56	2.28	2.05	-	-
-2.0m	9.54	6.75	5.18	4.18	3.5	3.01	2.64	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.77a	4.24	3.51	-	-	-	-	-
6.0m	-	-	-	3.68a	4.25a	3.64	3.07	2.6	-	-	-
5.0m	-	-	-	3.46a	4.01a	3.63	3.14	2.67	2.29	-	-
4.0m	-	-	-	4.34a	4.21	3.6	3.13	2.7	2.31	2	-
3.0m	-	-	-	4.94	4.15	3.57	3.11	2.69	2.31	1.99	-
2.0m	-	-	-	4.86r	4.09	3.5	3.03	2.65	2.28	1.97	1.72
1.0m	-	5.67r	5.77	4.71	3.97	3.41	2.96r	2.58	2.22	1.93	1.7
0.0m	7.59a	7.27	5.67	4.64	3.89	3.34	2.88	2.47	2.16	1.89	-
-1.0m	9.92	7.13	5.55	4.51	3.8	3.25	2.76	2.39	2.09	-	-
-2.0m	9.91	7.09	5.5	4.46	3.72	3.13	2.69	-	-	-	-

Road
 Locked

75% SWL



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.67a	4.94a	4.32	-	-	-	-	-
6.0m	-	-	-	3.64a	3.99a	4.19b	3.82	3.35	-	-	-
5.0m	-	-	-	3.24a	3.66a	4.00a	3.63b	3.36	2.99	-	-
4.0m	-	-	-	4.33a	4.44a	4.15b	3.62b	3.31	2.96	2.66	-
3.0m	-	-	-	5.59b	4.74b	4.03r	2.99r	3.04r	2.91	2.63	-
2.0m	-	-	-	4.61r	3.79r	2.95r	2.49r	2.89r	2.85	2.59	2.36
1.0m	-	5.67r	4.42r	3.72r	3.25r	2.93r	2.79r	3.1	2.81	2.56	2.35
0.0m	5.89a	6.46a	6.04r	4.64r	4.09r	3.56r	3.41	3.06	2.78	2.54	-
-1.0m	5.15a	5.61a	6.05	5.06	4.35	3.81	3.4	3.06	2.78	-	-
-2.0m	9.83	7.58	6.14	5.15	4.43	3.88	3.47	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.77a	5.07	4.33	-	-	-	-	-
6.0m	-	-	-	3.68a	4.25a	4.43	3.85	3.35	-	-	-
5.0m	-	-	-	3.46a	4.01a	4.38a	3.9	3.42	3	-	-
4.0m	-	-	-	4.34a	4.62a	4.39	3.88	3.44	3.03	2.68	-
3.0m	-	-	-	5.77	4.97	4.36	3.84r	3.41	3.03	2.67	-
2.0m	-	-	-	5.65	4.87	4.26	3.78	3.37	2.99	2.65	2.37
1.0m	-	5.67r	6.57	5.54	4.78	4.19	3.72	3.32	2.94	2.62	2.35
0.0m	7.59a	7.98	6.51r	5.48	4.72	4.13	3.66	3.24	2.88	2.58	-
-1.0m	10	7.87	6.44	5.43	4.69	4.1	3.57	3.16	2.82	-	-
-2.0m	10	7.85	6.4	5.39	4.62	3.99	3.51	-	-	-	-

Level Rail
 0-50mm

75% SWL

Unlocked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	3.84	3.22	-	-	-	-	-
6.0m	-	-	-	3.54a	3.85	3.25	2.78	2.4	-	-	-
5.0m	-	-	-	3.23a	3.66a	3.19	2.75	2.39	2.09	-	-
4.0m	-	-	-	4.47	3.63	3.06	2.66	2.33	2.05	1.82	-
3.0m	-	-	-	4.36	3.54	2.94	2.55	2.25	2	1.78	1.6
2.0m	-	-	5.14r	4.15	3.38	2.70r	2.45	2.17	1.94	1.75	1.58
1.0m	-	6.20r	4.64r	3.9	3.21	2.7	2.37	2.11	1.9	1.71	1.56
0.0m	5.73a	5.87	4.56	3.69	3.07	2.65	2.33	2.08	1.87	1.7	-
-1.0m	5.31a	5.69	4.46	3.64	3.07	2.65	2.33	2.08	1.89	-	-
-2.0m	7.96	5.84	4.58	3.75	3.17	2.75	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	3.87	3.23	-	-	-	-	-
6.0m	-	-	-	3.58a	3.9	3.33	2.83	2.41	-	-	-
5.0m	-	-	-	3.52a	3.86	3.31	2.88	2.47	2.12	-	-
4.0m	-	-	-	4.5	3.8	3.28	2.87	2.49	2.14	1.84	-
3.0m	-	-	-	4.42	3.75	3.25	2.85	2.48	2.13	1.84	1.6
2.0m	-	-	5.28r	4.37	3.71	3.2	2.78	2.42	2.09	1.81	1.58
1.0m	-	6.43	5.13r	4.24	3.6	3.12	2.72	2.34	2.03	1.77	1.56
0.0m	8.32	6.23	4.98	4.12	3.5	3.01	2.62	2.25	1.96	1.73	-
-1.0m	8.23	6.12	4.87	4.03	3.41	2.94	2.5	2.17	1.93	-	-
-2.0m	8.26	6.12	4.87	3.96	3.32	2.81	-	-	-	-	-

Level Rail
 0-50mm

75% SWL

Locked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.36	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.19a	3.75	3.23	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.64b	3.22	2.82	-	-
4.0m	-	-	-	4.72a	4.80b	4.14b	3.59r	3.16	2.78	2.47	-
3.0m	-	-	-	5.58b	4.73b	3.85r	2.81r	2.71r	2.73	2.43	2.18
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.91r	2.66	2.39	2.16
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	2.92	2.61	2.36	2.14
0.0m	5.73a	6.21a	6.26r	4.95r	4.16r	3.73	3.26	2.89	2.59	2.34	-
-1.0m	5.31a	5.75a	6.59	5.27	4.38	3.74	3.26	2.89	2.61	-	-
-2.0m	10	8.92	6.74	5.39	4.49	3.85	-	-	-	-	-


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.37	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.46	3.8	3.24	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.41a	3.84	3.3	2.85	-	-
4.0m	-	-	-	4.75a	4.89a	4.4	3.82	3.32	2.87	2.5	-
3.0m	-	-	-	6.08	5.09	4.34	3.76	3.29	2.86	2.49	2.18
2.0m	-	-	5.41r	5.93	4.97	4.24	3.68	3.23	2.82	2.46	2.17
1.0m	-	7.09r	7.2	5.81	4.86	4.16	3.62	3.16	2.76	2.41	2.14
0.0m	8.36a	9.37	7.13	5.75	4.8	4.11	3.57	3.07	2.69	2.37	-
-1.0m	10	9.26	7.07	5.71	4.75	4.05	3.44	2.99	2.65	-	-
-2.0m	10	9.26	7.08	5.63	4.65	3.92	-	-	-	-	-


LUL DUTIES


SECTOR B


LOWER SAFE WORKING LOADS


UPPER SAFE WORKING LOADS


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
Canted Rail	7.0m	-	-	-	4.07	3.33	2.77	-	-	-	-
	6.0m	-	-	-	3.54a	3.34	2.8	2.38	2.04	-	-
50-150mm	5.0m	-	-	-	3.23a	3.24	2.74	2.34	2.03	1.76	-
	4.0m	-	-	-	3.89	3.12	2.61	2.26	1.97	1.72	1.51
75% SWL	3.0m	-	-	-	3.77	3.02	2.49	2.15	1.89	1.67	1.48
	2.0m	-	-	4.58	3.56	2.87	2.37	2.04	1.81	1.61	1.44
Unlocked	1.0m	-	5.53	4.17	3.3	2.69	2.25	1.97	1.75	1.56	1.41
	0.0m	5.73a	5.01	3.86	3.1	2.56	2.19	1.93	1.71	1.54	1.39
	-1.0m	5.31a	4.83	3.75	3.05	2.56	2.2	1.93	1.71	1.56	-
	-2.0m	6.84	4.97	3.87	3.16	2.66	2.3	-	-	-	-


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
Canted Rail	7.0m	-	-	-	4.07	3.37	2.78	-	-	-	-
	6.0m	-	-	-	3.58a	3.39	2.88	2.43	2.04	-	-
50-150mm	5.0m	-	-	-	3.52a	3.35	2.87	2.48	2.1	1.78	-
	4.0m	-	-	-	3.91	3.29	2.83	2.47	2.13	1.81	1.54
75% SWL	3.0m	-	-	-	3.83	3.24	2.8	2.46	2.12	1.79	1.54
	2.0m	-	-	4.61	3.8	3.22	2.78	2.41	2.06	1.75	1.51
Unlocked	1.0m	-	5.6	4.48	3.69	3.11	2.67	2.32	1.97	1.7	1.46
	0.0m	7.21	5.37	4.28	3.53	2.99	2.56	2.21	1.88	1.63	1.42
	-1.0m	7.12	5.26	4.17	3.44	2.9	2.49	2.09	1.81	1.59	-
	-2.0m	7.15	5.26	4.17	3.37	2.8	2.36	-	-	-	-


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
Canted Rail	7.0m	-	-	-	4.43a	4.62	3.81	-	-	-	-
	6.0m	-	-	-	3.54a	3.89a	3.84	3.25	2.77	-	-
50-150mm	5.0m	-	-	-	3.23a	3.66a	3.77	3.2	2.76	2.39	-
	4.0m	-	-	-	4.72a	4.38	3.63	3.11	2.69	2.36	2.07
75% SWL	3.0m	-	-	-	5.4	4.27	3.49	2.81r	2.61	2.3	2.04
	2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.52	2.23	1.99
Locked	1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.79	2.45	2.18	1.96
	0.0m	5.73a	6.21a	5.91	4.61	3.74	3.16	2.74	2.42	2.16	1.94
	-1.0m	5.31a	5.75a	5.77	4.54	3.73	3.16	2.74	2.42	2.18	-
	-2.0m	10	8.03	5.93	4.67	3.85	3.27	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
Canted Rail	7.0m	-	-	-	4.48a	4.66	3.82	-	-	-	-
	6.0m	-	-	-	3.58a	4.15a	3.93	3.3	2.78	-	-
50-150mm	5.0m	-	-	-	3.52a	4.05a	3.92	3.36	2.84	2.42	-
	4.0m	-	-	-	4.75a	4.58	3.88	3.35	2.87	2.45	2.1
75% SWL	3.0m	-	-	-	5.47	4.52	3.84	3.3	2.85	2.43	2.1
	2.0m	-	-	5.41r	5.31	4.4	3.74	3.22	2.8	2.39	2.07
Locked	1.0m	-	7.09r	6.47	5.17	4.28	3.64	3.15	2.7	2.33	2.01
	0.0m	8.36a	8.55	6.4	5.1	4.21	3.57	3.06	2.6	2.26	1.98
	-1.0m	10	8.4	6.29	5.01	4.12	3.49	2.93	2.52	2.21	-
	-2.0m	10	8.4	6.29	4.93	4.02	3.35	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
Max Cant + Twist	7.0m	-	-	-	3.63	2.96	2.45	-	-	-	-
150-177mm	6.0m	-	-	-	3.54a	2.97	2.48	2.1	1.78	-	-
	5.0m	-	-	-	3.23a	2.87	2.42	2.06	1.77	1.53	-
	4.0m	-	-	-	3.45	2.75	2.29	1.98	1.71	1.49	1.31
75% SWL	3.0m	-	-	-	3.33	2.66	2.17	1.87	1.64	1.44	1.27
	2.0m	-	-	4.04	3.12	2.5	2.05	1.76	1.56	1.38	1.23
Unlocked	1.0m	-	4.85	3.65	2.87	2.33	1.93	1.69	1.5	1.34	1.2
	0.0m	5.73a	4.33	3.33	2.67	2.2	1.88	1.65	1.47	1.31	1.19
	-1.0m	5.31a	4.16	3.22	2.62	2.19	1.88	1.65	1.47	1.33	-
	-2.0m	5.91	4.3	3.35	2.73	2.29	1.98	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
Max Cant + Twist	7.0m	-	-	-	3.63	2.99	2.46	-	-	-	-
150-177mm	6.0m	-	-	-	3.58a	3.02	2.56	2.15	1.79	-	-
	5.0m	-	-	-	3.52a	2.98	2.54	2.2	1.85	1.56	-
	4.0m	-	-	-	3.47	2.92	2.51	2.19	1.88	1.58	1.33
75% SWL	3.0m	-	-	-	3.39	2.87	2.48	2.18	1.86	1.57	1.33
	2.0m	-	-	4.07	3.36	2.85	2.47	2.13	1.81	1.53	1.3
Unlocked	1.0m	-	4.92	3.95	3.25	2.74	2.35	2.03	1.72	1.47	1.25
	0.0m	6.27	4.69	3.75	3.09	2.62	2.25	1.93	1.63	1.41	1.22
	-1.0m	6.18	4.58	3.64	3.01	2.53	2.17	1.81	1.56	1.37	-
	-2.0m	6.21	4.59	3.64	2.94	2.44	2.04	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
Max Cant + Twist	7.0m	-	-	-	4.43a	4.18	3.44	-	-	-	-
150-177mm	6.0m	-	-	-	3.54a	3.89a	3.47	2.94	2.5	-	-
	5.0m	-	-	-	3.23a	3.66a	3.41	2.9	2.49	2.16	-
	4.0m	-	-	-	4.72a	3.95	3.27	2.81	2.43	2.12	1.86
75% SWL	3.0m	-	-	-	4.85	3.84	3.13	2.68	2.34	2.06	1.83
	2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.26	2	1.79
Locked	1.0m	-	6.20r	4.64r	3.91r	3.44r	2.87	2.49	2.19	1.95	1.75
	0.0m	5.73a	6.21a	5.2	4.08	3.32	2.81	2.44	2.16	1.93	1.74
	-1.0m	5.31a	5.75a	5.08	4.02	3.31	2.81	2.44	2.16	1.94	-
	-2.0m	10	7	5.22	4.15	3.43	2.92	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
Max Cant + Twist	7.0m	-	-	-	4.48a	4.22	3.45	-	-	-	-
150-177mm	6.0m	-	-	-	3.58a	4.15a	3.56	2.99	2.51	-	-
	5.0m	-	-	-	3.52a	4.05a	3.55	3.05	2.58	2.19	-
	4.0m	-	-	-	4.75a	4.14	3.51	3.04	2.6	2.21	1.89
75% SWL	3.0m	-	-	-	4.92	4.08	3.48	3.01	2.59	2.2	1.89
	2.0m	-	-	5.41r	4.81r	4	3.4	2.93	2.53	2.16	1.86
Locked	1.0m	-	7.09r	5.81	4.67	3.89	3.31	2.86r	2.44	2.1	1.81
	0.0m	8.36a	7.49	5.7	4.57	3.8	3.22	2.75	2.34	2.02	1.77
	-1.0m	10	7.36	5.57	4.47	3.69	3.13	2.62	2.26	1.98	-
	-2.0m	10	7.36	5.57	4.39	3.59	2.99	-	-	-	-

LUL DUTIES

SECTOR C

LOWER SAFE WORKING LOADS

UPPER SAFE WORKING LOADS

Road
 Unlocked

75% SWL



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.67a	4.22	3.5	-	-	-	-	-
6.0m	-	-	-	3.64a	3.99a	3.57	3.03	2.6	-	-	-
5.0m	-	-	-	3.24a	3.66a	3.51	3.01	2.6	2.27	-	-
4.0m	-	-	-	4.33a	4.03	3.39	2.93	2.55	2.25	1.98	-
3.0m	-	-	-	4.9	3.93	3.25	2.81	2.47	2.19	1.95	-
2.0m	-	-	-	4.61r	3.78	2.95r	2.49r	2.39	2.13	1.91	1.71
1.0m	-	5.67r	4.42r	3.72r	3.25r	2.93r	2.62	2.32	2.07	1.87	1.69
0.0m	5.89a	6.46a	5.24	4.18	3.44	2.93	2.57	2.28	2.05	1.85	-
-1.0m	5.15a	5.61a	5.07	4.08	3.41	2.93	2.56	2.28	2.05	-	-
-2.0m	9.54	6.75	5.18	4.18	3.5	3.01	2.64	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.77a	4.24	3.51	-	-	-	-	-
6.0m	-	-	-	3.68a	4.25a	3.64	3.07	2.6	-	-	-
5.0m	-	-	-	3.46a	4.01a	3.63	3.14	2.67	2.29	-	-
4.0m	-	-	-	4.34a	4.21	3.6	3.13	2.7	2.31	2	-
3.0m	-	-	-	4.94	4.15	3.57	3.11	2.69	2.31	1.99	-
2.0m	-	-	-	4.86r	4.09	3.5	3.03	2.65	2.28	1.97	1.72
1.0m	-	5.67r	5.77	4.71	3.97	3.41	2.96r	2.58	2.22	1.93	1.7
0.0m	7.59a	7.27	5.67	4.64	3.89	3.34	2.88	2.47	2.16	1.89	-
-1.0m	9.92	7.13	5.55	4.51	3.8	3.25	2.76	2.39	2.09	-	-
-2.0m	9.91	7.09	5.5	4.46	3.72	3.13	2.69	-	-	-	-

Road
 Locked

75% SWL



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.67a	4.94a	4.32	-	-	-	-	-
6.0m	-	-	-	3.64a	3.99a	4.19b	3.82	3.35	-	-	-
5.0m	-	-	-	3.24a	3.66a	4.00a	3.63b	3.36	2.99	-	-
4.0m	-	-	-	4.33a	4.44a	4.15b	3.62b	3.31	2.96	2.66	-
3.0m	-	-	-	5.59b	4.74b	4.03r	2.99r	3.04r	2.91	2.63	-
2.0m	-	-	-	4.61r	3.79r	2.95r	2.49r	2.89r	2.85	2.59	2.36
1.0m	-	5.67r	4.42r	3.72r	3.25r	2.93r	2.79r	3.1	2.81	2.56	2.35
0.0m	5.89a	6.46a	6.04r	4.64r	4.09r	3.56r	3.41	3.06	2.78	2.54	-
-1.0m	5.15a	5.61a	6.05	5.06	4.35	3.81	3.4	3.06	2.78	-	-
-2.0m	9.83	7.58	6.14	5.15	4.43	3.88	3.47	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.77a	5.07	4.33	-	-	-	-	-
6.0m	-	-	-	3.68a	4.25a	4.43	3.85	3.35	-	-	-
5.0m	-	-	-	3.46a	4.01a	4.38a	3.9	3.42	3	-	-
4.0m	-	-	-	4.34a	4.62a	4.39	3.88	3.44	3.03	2.68	-
3.0m	-	-	-	5.77	4.97	4.36	3.84r	3.41	3.03	2.67	-
2.0m	-	-	-	5.65	4.87	4.26	3.78	3.37	2.99	2.65	2.37
1.0m	-	5.67r	6.57	5.54	4.78	4.19	3.72	3.32	2.94	2.62	2.35
0.0m	7.59a	7.98	6.51r	5.48	4.72	4.13	3.66	3.24	2.88	2.58	-
-1.0m	10	7.87	6.44	5.43	4.69	4.1	3.57	3.16	2.82	-	-
-2.0m	10	7.85	6.4	5.39	4.62	3.99	3.51	-	-	-	-

Level Rail
 0-50mm

75% SWL

Unlocked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.28	3.51	2.93	-	-	-	-	-
6.0m	-	-	-	3.54a	3.52	2.95	2.52	2.16	-	-	-
5.0m	-	-	-	3.23a	3.42	2.89	2.48	2.15	1.86	-	-
4.0m	-	-	-	4.1	3.3	2.77	2.4	2.09	1.83	1.61	-
3.0m	-	-	-	3.98	3.2	2.64	2.28	2.01	1.78	1.58	1.41
2.0m	-	-	4.84	3.77	3.05	2.52	2.18	1.93	1.72	1.54	1.38
1.0m	-	5.88	4.44	3.51	2.87	2.4	2.1	1.87	1.67	1.5	1.37
0.0m	5.73a	5.35	4.12	3.31	2.74	2.35	2.06	1.83	1.65	1.49	-
-1.0m	5.31a	5.16	4.01	3.26	2.73	2.35	2.06	1.83	1.67	-	-
-2.0m	7.32	5.31	4.13	3.37	2.83	2.45	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.29	3.55	2.93	-	-	-	-	-
6.0m	-	-	-	3.58a	3.57	3.03	2.56	2.16	-	-	-
5.0m	-	-	-	3.52a	3.53	3.02	2.62	2.22	1.89	-	-
4.0m	-	-	-	4.13	3.47	2.99	2.61	2.25	1.91	1.64	-
3.0m	-	-	-	4.05	3.42	2.96	2.6	2.24	1.9	1.63	1.41
2.0m	-	-	4.87	4.01	3.4	2.93r	2.54	2.18	1.86	1.61	1.39
1.0m	-	5.95	4.73	3.9	3.29	2.82	2.45	2.09	1.81	1.56	1.37
0.0m	7.7	5.71	4.54	3.74	3.17	2.72	2.35	2	1.74	1.52	-
-1.0m	7.6	5.6	4.43	3.65	3.08	2.64	2.23	1.93	1.7	-	-
-2.0m	7.64	5.6	4.43	3.58	2.98	2.51	-	-	-	-	-

Level Rail
 0-50mm

75% SWL

Locked




	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.04	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.07	3.45	2.95	-	-	-
5.0m	-	-	-	3.23a	3.66a	4	3.41	2.94	2.55	-	-
4.0m	-	-	-	4.72a	4.66	3.86	3.31	2.87	2.51	2.22	-
3.0m	-	-	-	5.58b	4.55	3.72	2.81r	2.71r	2.45	2.18	1.94
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.7	2.39	2.14	1.92
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	2.63	2.34	2.1	1.9
0.0m	5.73a	6.21a	6.26r	4.94	4.01	3.39	2.94	2.59	2.31	2.09	-
-1.0m	5.31a	5.75a	6.2	4.88	4.01	3.39	2.94	2.59	2.33	-	-
-2.0m	10	8.63	6.36	5.01	4.12	3.51	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.94	4.05	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.17	3.5	2.96	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.15	3.56	3.02	2.58	-	-
4.0m	-	-	-	4.75a	4.85	4.11	3.55	3.05	2.61	2.24	-
3.0m	-	-	-	5.78	4.79	4.06	3.48	3.02	2.59	2.24	1.94
2.0m	-	-	5.41r	5.62	4.65	3.95	3.41	2.96	2.55	2.21	1.93
1.0m	-	7.09r	6.87	5.48	4.54r	3.86	3.34	2.88	2.49	2.16	1.9
0.0m	8.36a	9.16	6.8	5.41	4.48	3.79	3.26	2.78	2.42	2.12	-
-1.0m	10	9.01	6.72	5.35	4.4	3.72	3.13	2.7	2.37	-	-
-2.0m	10	9.01	6.73	5.26	4.29	3.58	-	-	-	-	-

LUL DUTIES
SECTOR C


LOWER SAFE WORKING LOADS

UPPER SAFE WORKING LOADS

Canted Rail
50-150mm
75% SWL
Unlocked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	3.77	3.08	2.56	-	-	-	-	-
6.0m	-	-	-	3.54a	3.09	2.59	2.2	1.87	-	-	-
5.0m	-	-	-	3.23a	3	2.52	2.16	1.86	1.61	-	-
4.0m	-	-	-	3.59	2.87	2.4	2.07	1.8	1.57	1.38	-
3.0m	-	-	-	3.48	2.78	2.28	1.96	1.72	1.52	1.34	1.19
2.0m	-	-	4.21	3.27	2.63	2.16	1.86	1.64	1.46	1.31	1.17
1.0m	-	5.07	3.82	3.01	2.45	2.04	1.78	1.58	1.41	1.27	1.15
0.0m	5.73a	4.55	3.5	2.81	2.32	1.99	1.74	1.55	1.39	1.26	-
-1.0m	5.31a	4.37	3.4	2.76	2.31	1.99	1.75	1.55	1.41	-	-
-2.0m	6.2	4.52	3.52	2.87	2.42	2.09	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	3.78	3.12	2.57	-	-	-	-	-
6.0m	-	-	-	3.58a	3.14	2.67	2.24	1.88	-	-	-
5.0m	-	-	-	3.52a	3.1	2.65	2.3	1.94	1.63	-	-
4.0m	-	-	-	3.61	3.05	2.62	2.28	1.96	1.66	1.4	-
3.0m	-	-	-	3.54	3	2.59	2.27	1.95	1.65	1.4	1.19
2.0m	-	-	4.24	3.5	2.98	2.58	2.22	1.89	1.6	1.37	1.18
1.0m	-	5.14	4.12	3.4	2.87	2.46	2.13	1.81	1.55	1.32	1.15
0.0m	6.56	4.91	3.92	3.24	2.74	2.35	2.03	1.72	1.48	1.29	-
-1.0m	6.47	4.8	3.81	3.15	2.65	2.28	1.91	1.64	1.44	-	-
-2.0m	6.5	4.8	3.81	3.08	2.56	2.15	-	-	-	-	-

Canted Rail
50-150mm
75% SWL
Locked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.34	3.58	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	3.61	3.06	2.61	-	-	-
5.0m	-	-	-	3.23a	3.66a	3.54	3.02	2.6	2.25	-	-
4.0m	-	-	-	4.72a	4.1	3.41	2.93	2.54	2.22	1.95	-
3.0m	-	-	-	5.03	4	3.27	2.8	2.45	2.16	1.91	1.71
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.36	2.1	1.87	1.68
1.0m	-	6.20r	4.64r	3.91r	3.44r	3	2.61	2.3	2.05	1.84	1.66
0.0m	5.73a	6.21a	5.44	4.27	3.48	2.95	2.56	2.26	2.02	1.82	-
-1.0m	5.31a	5.75a	5.31	4.21	3.47	2.95	2.56	2.26	2.04	-	-
-2.0m	10	7.31	5.46	4.33	3.59	3.06	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.38	3.59	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	3.7	3.11	2.62	-	-	-
5.0m	-	-	-	3.52a	4.05a	3.69	3.17	2.68	2.28	-	-
4.0m	-	-	-	4.75a	4.3	3.65	3.16	2.71	2.31	1.98	-
3.0m	-	-	-	5.11	4.24	3.61	3.12	2.7	2.3	1.97	1.71
2.0m	-	-	5.41r	4.98	4.15	3.52	3.04	2.64	2.25	1.95	1.69
1.0m	-	7.09r	6.02r	4.84	4.03	3.43	2.97	2.54	2.19	1.89	1.66
0.0m	8.36a	7.8	5.93	4.76	3.95	3.35	2.87	2.45	2.12	1.86	-
-1.0m	10	7.66	5.8	4.66	3.85	3.27	2.74	2.36	2.08	-	-
-2.0m	10	7.66	5.81	4.58	3.75	3.13	-	-	-	-	-

Max Cant + Twist 150-177mm
75% SWL
Unlocked


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	3.63	2.96	2.45	-	-	-	-	-
6.0m	-	-	-	3.54a	2.97	2.48	2.1	1.78	-	-	-
5.0m	-	-	-	3.23a	2.87	2.42	2.06	1.77	1.53	-	-
4.0m	-	-	-	3.45	2.75	2.29	1.98	1.71	1.49	1.31	-
3.0m	-	-	-	3.33	2.66	2.17	1.87	1.64	1.44	1.27	1.13
2.0m	-	-	4.04	3.12	2.5	2.05	1.76	1.56	1.38	1.23	1.1
1.0m	-	4.85	3.65	2.87	2.33	1.93	1.69	1.5	1.34	1.2	1.09
0.0m	5.73a	4.33	3.33	2.67	2.2	1.88	1.65	1.47	1.31	1.19	-
-1.0m	5.31a	4.16	3.22	2.62	2.19	1.88	1.65	1.47	1.33	-	-
-2.0m	5.91	4.3	3.35	2.73	2.29	1.98	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	3.63	2.99	2.46	-	-	-	-	-
6.0m	-	-	-	3.58a	3.02	2.56	2.15	1.79	-	-	-
5.0m	-	-	-	3.52a	2.98	2.54	2.2	1.85	1.56	-	-
4.0m	-	-	-	3.47	2.92	2.51	2.19	1.88	1.58	1.33	-
3.0m	-	-	-	3.39	2.87	2.48	2.18	1.86	1.57	1.33	1.13
2.0m	-	-	4.07	3.36	2.85	2.47	2.13	1.81	1.53	1.3	1.11
1.0m	-	4.92	3.95	3.25	2.74	2.35	2.03	1.72	1.47	1.25	1.09
0.0m	6.27	4.69	3.75	3.09	2.62	2.25	1.93	1.63	1.41	1.22	-
-1.0m	6.18	4.58	3.64	3.01	2.53	2.17	1.81	1.56	1.37	-	-
-2.0m	6.21	4.59	3.64	2.94	2.44	2.04	-	-	-	-	-

Max Cant + Twist 150-177mm
75% SWL
Locked


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.18	3.44	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	3.47	2.94	2.5	-	-	-
5.0m	-	-	-	3.23a	3.66a	3.41	2.9	2.49	2.16	-	-
4.0m	-	-	-	4.72a	3.95	3.27	2.81	2.43	2.12	1.86	-
3.0m	-	-	-	4.85	3.84	3.13	2.68	2.34	2.06	1.83	1.63
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.26	2	1.79	1.6
1.0m	-	6.20r	4.64r	3.91r	3.44r	2.87	2.49	2.19	1.95	1.75	1.58
0.0m	5.73a	6.21a	5.2	4.08	3.32	2.81	2.44	2.16	1.93	1.74	-
-1.0m	5.31a	5.75a	5.08	4.02	3.31	2.81	2.44	2.16	1.94	-	-
-2.0m	10	7	5.22	4.15	3.43	2.92	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.22	3.45	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	3.56	2.99	2.51	-	-	-
5.0m	-	-	-	3.52a	4.05a	3.55	3.05	2.58	2.19	-	-
4.0m	-	-	-	4.75a	4.14	3.51	3.04	2.6	2.21	1.89	-
3.0m	-	-	-	4.92	4.08	3.48	3.01	2.59	2.2	1.89	1.63
2.0m	-	-	5.41r	4.81r	4	3.4	2.93	2.53	2.16	1.86	1.61
1.0m	-	7.09r	5.81	4.67	3.89	3.31	2.86r	2.44	2.1	1.81	1.58
0.0m	8.36a	7.49	5.7	4.57	3.8	3.22	2.75	2.34	2.02	1.77	-
-1.0m	10	7.36	5.57	4.47	3.69	3.13	2.62	2.26	1.98	-	-
-2.0m	10	7.36	5.57	4.39	3.59	2.99	-	-	-	-	-

LUL DUTIES

SECTOR D

LOWER SAFE WORKING LOADS

UPPER SAFE WORKING LOADS

Road
 Unlocked
 75% SWL



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.67a	4.22	3.5	-	-	-	-	-
6.0m	-	-	-	3.64a	3.99a	3.57	3.03	2.6	-	-	-
5.0m	-	-	-	3.24a	3.66a	3.51	3.01	2.6	2.27	-	-
4.0m	-	-	-	4.33a	4.03	3.39	2.93	2.55	2.25	1.98	-
3.0m	-	-	-	4.9	3.93	3.25	2.81	2.47	2.19	1.95	-
2.0m	-	-	-	4.61r	3.78	2.95r	2.49r	2.39	2.13	1.91	1.71
1.0m	-	5.67r	4.42r	3.72r	3.25r	2.93r	2.62	2.32	2.07	1.87	1.69
0.0m	5.89a	6.46a	5.24	4.18	3.44	2.93	2.57	2.28	2.05	1.85	-
-1.0m	5.15a	5.61a	5.07	4.08	3.41	2.93	2.56	2.28	2.05	-	-
-2.0m	9.54	6.75	5.18	4.18	3.5	3.01	2.64	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.77a	4.24	3.51	-	-	-	-	-
6.0m	-	-	-	3.68a	4.25a	3.64	3.07	2.6	-	-	-
5.0m	-	-	-	3.46a	4.01a	3.63	3.14	2.67	2.29	-	-
4.0m	-	-	-	4.34a	4.21	3.6	3.13	2.7	2.31	2	-
3.0m	-	-	-	4.94	4.15	3.57	3.11	2.69	2.31	1.99	-
2.0m	-	-	-	4.86r	4.09	3.5	3.03	2.65	2.28	1.97	1.72
1.0m	-	5.67r	5.77	4.71	3.97	3.41	2.96r	2.58	2.22	1.93	1.7
0.0m	7.59a	7.27	5.67	4.64	3.89	3.34	2.88	2.47	2.16	1.89	-
-1.0m	9.92	7.13	5.55	4.51	3.8	3.25	2.76	2.39	2.09	-	-
-2.0m	9.91	7.09	5.5	4.46	3.72	3.13	2.69	-	-	-	-

Road
 Locked
 75% SWL



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.67a	4.94a	4.32	-	-	-	-	-
6.0m	-	-	-	3.64a	3.99a	4.19b	3.82	3.35	-	-	-
5.0m	-	-	-	3.24a	3.66a	4.00a	3.63b	3.36	2.99	-	-
4.0m	-	-	-	4.33a	4.44a	4.15b	3.62b	3.31	2.96	2.66	-
3.0m	-	-	-	5.59b	4.74b	4.03r	2.99r	3.04r	2.91	2.63	-
2.0m	-	-	-	4.61r	3.79r	2.95r	2.49r	2.89r	2.85	2.59	2.36
1.0m	-	5.67r	4.42r	3.72r	3.25r	2.93r	2.79r	3.1	2.81	2.56	2.35
0.0m	5.89a	6.46a	6.04r	4.64r	4.09r	3.56r	3.41	3.06	2.78	2.54	-
-1.0m	5.15a	5.61a	6.05	5.06	4.35	3.81	3.4	3.06	2.78	-	-
-2.0m	9.83	7.58	6.14	5.15	4.43	3.88	3.47	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.77a	5.07	4.33	-	-	-	-	-
6.0m	-	-	-	3.68a	4.25a	4.43	3.85	3.35	-	-	-
5.0m	-	-	-	3.46a	4.01a	4.38a	3.9	3.42	3	-	-
4.0m	-	-	-	4.34a	4.62a	4.39	3.88	3.44	3.03	2.68	-
3.0m	-	-	-	5.77	4.97	4.36	3.84r	3.41	3.03	2.67	-
2.0m	-	-	-	5.65	4.87	4.26	3.78	3.37	2.99	2.65	2.37
1.0m	-	5.67r	6.57	5.54	4.78	4.19	3.72	3.32	2.94	2.62	2.35
0.0m	7.59a	7.98	6.51r	5.48	4.72	4.13	3.66	3.24	2.88	2.58	-
-1.0m	10	7.87	6.44	5.43	4.69	4.1	3.57	3.16	2.82	-	-
-2.0m	10	7.85	6.4	5.39	4.62	3.99	3.51	-	-	-	-

Level Rail
 0-50mm
 75% SWL
 Unlocked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.16	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.18	3.64	3.19	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.6	3.18	2.82	-	-
4.0m	-	-	-	4.72a	4.67	4.01	3.52	3.12	2.78	2.5	-
3.0m	-	-	-	5.52	4.58	3.85r	2.81r	2.71r	2.73	2.47	2.23
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.91r	2.68	2.43	2.21
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	2.91	2.63	2.39	2.2
0.0m	5.73a	6.21a	5.92	4.89	4.14	3.61	3.21	2.88	2.61	2.38	-
-1.0m	5.31a	5.75a	5.82	4.84	4.14	3.61	3.21	2.88	2.63	-	-
-2.0m	9.71	7.39	5.94	4.95	4.24	3.71	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.9	4.16	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.25	3.68	3.19	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.24	3.73	3.25	2.84	-	-
4.0m	-	-	-	4.75a	4.82	4.21	3.71	3.27	2.87	2.52	-
3.0m	-	-	-	5.57	4.78	4.16	3.66	3.24	2.86	2.52	2.23
2.0m	-	-	5.41r	5.44	4.67	4.07	3.59	3.19	2.82	2.49	2.22
1.0m	-	7.09r	6.35	5.33	4.57	3.99	3.53	3.13	2.76	2.45	2.2
0.0m	8.36a	7.75	6.29	5.27	4.52	3.95	3.48	3.04	2.7	2.41	-
-1.0m	9.95	7.65	6.2	5.21	4.46	3.89	3.36	2.97	2.66	-	-
-2.0m	9.98	7.65	6.21	5.15	4.37	3.77	-	-	-	-	-

Level Rail
 0-50mm
 75% SWL
 Locked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.64a	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.19a	4.37b	4.11a	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.64b	4.21b	3.89	-	-
4.0m	-	-	-	4.72a	4.80b	4.14b	3.59r	3.21r	3.86a	3.47	-
3.0m	-	-	-	5.58b	4.73b	3.85r	2.81r	2.71r	3.67r	3.43	3.11
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.91r	3.74	3.39	3.09
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	3.61r	3.7	3.35	3.07
0.0m	5.73a	6.21a	6.26r	4.95r	4.16r	3.78r	3.84r	4.07	3.67	3.34	-
-1.0m	5.31a	5.75a	6.88a	6.53r	5.65r	5.18	4.56	4.07	3.69	-	-
-2.0m	10	10	8.85	7.23	6.1	5.29	-	-	-	-	-


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.96a	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.50a	4.60a	4.41	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.41a	4.55a	4.45	3.92	-	-
4.0m	-	-	-	4.75a	4.89a	4.97a	4.99	4.44	3.94	3.49	-
3.0m	-	-	-	6.18b	6.51	5.64	4.95	4.39	3.92r	3.49	3.11
2.0m	-	-	5.41r	7.00r	6.43	5.56	4.88	4.33	3.88	3.46	3.09
1.0m	-	7.09r	8.89r	7.5	6.35	5.49	4.83	4.29	3.84	3.41	3.07
0.0m	8.36a	10	9.11	7.46	6.31	5.46	4.8	4.25	3.77	3.37	-
-1.0m	10	10	9.14	7.48	6.31	5.45	4.73	4.17	3.73	-	-
-2.0m	10	10	9.16	7.45	6.26	5.35	-	-	-	-	-

LUL DUTIES

SECTOR D


LOWER SAFE WORKING LOADS

UPPER SAFE WORKING LOADS

Canted Rail



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	3.9	3.31	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	3.34	2.89	2.52	-	-	-
5.0m	-	-	-	3.23a	3.66a	3.28	2.86	2.51	2.21	-	-
4.0m	-	-	-	4.48	3.7	3.17	2.78	2.45	2.18	1.95	-
3.0m	-	-	-	4.37	3.61	3.05	2.67	2.38	2.13	1.92	1.73
2.0m	-	-	5.14r	4.18	3.47	2.70r	2.48r	2.31	2.08	1.88	1.71
1.0m	-	6.15	4.64r	3.91r	3.31	2.83	2.51	2.25	2.03	1.85	1.69
0.0m	5.73a	5.7	4.56	3.77	3.19	2.78	2.47	2.22	2.01	1.83	-
-1.0m	5.31a	5.54	4.46	3.72	3.19	2.78	2.47	2.22	2.03	-	-
-2.0m	7.39	5.67	4.57	3.82	3.28	2.87	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	3.93	3.32	-	-	-	-	-
6.0m	-	-	-	3.58a	3.95	3.41	2.94	2.53	-	-	-
5.0m	-	-	-	3.52a	3.91	3.4	2.99	2.58	2.24	-	-
4.0m	-	-	-	4.5	3.86	3.37	2.98	2.61	2.26	1.97	-
3.0m	-	-	-	4.43	3.81	3.34	2.95	2.6	2.25	1.97	1.73
2.0m	-	-	5.21	4.39	3.77	3.28	2.89	2.54	2.21	1.94	1.71
1.0m	-	6.20r	5.07	4.27	3.67	3.21	2.83	2.46	2.16	1.9	1.69
0.0m	7.69	6.01	4.93	4.16	3.58	3.12	2.74	2.38	2.1	1.86	-
-1.0m	7.61	5.92	4.83	4.08	3.5	3.05	2.62	2.31	2.06	-	-
-2.0m	7.64	5.92	4.84	4.01	3.41	2.93	-	-	-	-	-

Canted Rail



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.64a	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.19a	4.11	3.58	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.64b	3.57	3.15	-	-
4.0m	-	-	-	4.72a	4.80b	4.14b	3.59r	3.21r	3.11	2.78	-
3.0m	-	-	-	5.58b	4.73b	3.85r	2.81r	2.71r	3.06	2.75	2.48
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.91r	3	2.71	2.46
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	3.28	2.95	2.67	2.44
0.0m	5.73a	6.21a	6.26r	4.95r	4.16r	3.78r	3.65	3.25	2.93	2.66	-
-1.0m	5.31a	5.75a	6.88a	5.72	4.81	4.15	3.65	3.25	2.95	-	-
-2.0m	10	9.21	7.15	5.83	4.91	4.25	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.75	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.50a	4.16	3.59	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.41a	4.18	3.65	3.18	-	-
4.0m	-	-	-	4.75a	4.89a	4.74	4.15	3.66	3.2	2.81	-
3.0m	-	-	-	6.18b	5.45	4.7	4.1	3.62	3.19	2.81	2.48
2.0m	-	-	5.41r	6.3	5.33	4.59	4.03	3.56	3.15	2.78	2.46
1.0m	-	7.09r	7.54	6.19	5.24	4.53	3.97	3.51	3.09	2.73	2.44
0.0m	8.36a	9.6	7.5	6.14	5.18	4.48	3.92	3.42	3.02	2.69	-
-1.0m	10	9.52	7.46	6.13	5.16	4.45	3.82	3.35	2.98	-	-
-2.0m	10	9.52	7.47	6.05	5.07	4.32	-	-	-	-	-

Max Cant + Twist 150-177mm


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	3.63	2.96	2.45	-	-	-	-	-
6.0m	-	-	-	3.54a	2.97	2.48	2.1	1.78	-	-	-
5.0m	-	-	-	3.23a	2.87	2.42	2.06	1.77	1.53	-	-
4.0m	-	-	-	3.45	2.75	2.29	1.98	1.71	1.49	1.31	-
3.0m	-	-	-	3.33	2.66	2.17	1.87	1.64	1.44	1.27	1.13
2.0m	-	-	4.04	3.12	2.5	2.05	1.76	1.56	1.38	1.23	1.1
1.0m	-	4.85	3.65	2.87	2.33	1.93	1.69	1.5	1.34	1.2	1.09
0.0m	5.73a	4.33	3.33	2.67	2.2	1.88	1.65	1.47	1.31	1.19	-
-1.0m	5.31a	4.16	3.22	2.62	2.19	1.88	1.65	1.47	1.33	-	-
-2.0m	5.91	4.3	3.35	2.73	2.29	1.98	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	3.63	2.99	2.46	-	-	-	-	-
6.0m	-	-	-	3.58a	3.02	2.56	2.15	1.79	-	-	-
5.0m	-	-	-	3.52a	2.98	2.54	2.2	1.85	1.56	-	-
4.0m	-	-	-	3.47	2.92	2.51	2.19	1.88	1.58	1.33	-
3.0m	-	-	-	3.39	2.87	2.48	2.18	1.86	1.57	1.33	1.13
2.0m	-	-	4.07	3.36	2.85	2.47	2.13	1.81	1.53	1.3	1.11
1.0m	-	4.92	3.95	3.25	2.74	2.35	2.03	1.72	1.47	1.25	1.09
0.0m	6.27	4.69	3.75	3.09	2.62	2.25	1.93	1.63	1.41	1.22	-
-1.0m	6.18	4.58	3.64	3.01	2.53	2.17	1.81	1.56	1.37	-	-
-2.0m	6.21	4.59	3.64	2.94	2.44	2.04	-	-	-	-	-

Max Cant + Twist 150-177mm


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.18	3.44	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	3.47	2.94	2.5	-	-	-
5.0m	-	-	-	3.23a	3.66a	3.41	2.9	2.49	2.16	-	-
4.0m	-	-	-	4.72a	3.95	3.27	2.81	2.43	2.12	1.86	-
3.0m	-	-	-	4.85	3.84	3.13	2.68	2.34	2.06	1.83	1.63
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.26	2	1.79	1.6
1.0m	-	6.20r	4.64r	3.91r	3.44r	2.87	2.49	2.19	1.95	1.75	1.58
0.0m	5.73a	6.21a	5.2	4.08	3.32	2.81	2.44	2.16	1.93	1.74	-
-1.0m	5.31a	5.75a	5.08	4.02	3.31	2.81	2.44	2.16	1.94	-	-
-2.0m	10	7	5.22	4.15	3.43	2.92	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.22	3.45	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	3.56	2.99	2.51	-	-	-
5.0m	-	-	-	3.52a	4.05a	3.55	3.05	2.58	2.19	-	-
4.0m	-	-	-	4.75a	4.14	3.51	3.04	2.6	2.21	1.89	-
3.0m	-	-	-	4.92	4.08	3.48	3.01	2.59	2.2	1.89	1.63
2.0m	-	-	5.41r	4.81r	4	3.4	2.93	2.53	2.16	1.86	1.61
1.0m	-	7.09r	5.81	4.67	3.89	3.31	2.86r	2.44	2.1	1.81	1.58
0.0m	8.36a	7.49	5.7	4.57	3.8	3.22	2.75	2.34	2.02	1.77	-
-1.0m	10	7.36	5.57	4.47	3.69	3.13	2.62	2.26	1.98	-	-
-2.0m	10	7.36	5.57	4.39	3.59	2.99	-	-	-	-	-

LUL DUTIES

SECTOR E

LOWER SAFE WORKING LOADS

UPPER SAFE WORKING LOADS

Road
 Unlocked

75% SWL



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.67a	4.94a	4.99a	-	-	-	-	-
6.0m	-	-	-	3.64a	3.99a	4.19b	4.31a	4.13	-	-	-
5.0m	-	-	-	3.24a	3.66a	4.00a	3.63b	4.13	3.67	-	-
4.0m	-	-	-	4.33a	4.44a	4.15b	3.62b	3.56r	3.65	3.27	-
3.0m	-	-	-	5.59b	4.74b	4.03r	2.99r	3.04r	3.59	3.24	-
2.0m	-	-	-	4.61r	3.79r	2.95r	2.49r	2.89r	3.53	3.2	2.91
1.0m	-	5.67r	4.42r	3.72r	3.25r	2.93r	2.79r	3.18r	3.48	3.16	2.89
0.0m	5.89a	6.46a	6.04r	4.64r	4.09r	3.56r	3.64r	3.82	3.46	3.15	-
-1.0m	5.15a	5.61a	6.35a	6.39r	5.09r	4.82	4.26	3.82	3.45	-	-
-2.0m	10	10	8.02	6.62	5.63	4.89	4.34	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.77a	5.13a	5.08a	-	-	-	-	-
6.0m	-	-	-	3.68a	4.25a	4.58b	4.63a	4.13	-	-	-
5.0m	-	-	-	3.46a	4.01a	4.38a	4.54b	4.19	3.68	-	-
4.0m	-	-	-	4.34a	4.62a	4.78a	4.71	4.2	3.71	3.29	-
3.0m	-	-	-	5.96b	6.1	5.3	4.67	4.15	3.7	3.29	-
2.0m	-	-	-	6.67r	6.02	5.22	4.61	4.1	3.67	3.26	2.92
1.0m	-	5.67r	7.86r	6.96	5.92	5.15	4.55	4.05r	3.62	3.22	2.9
0.0m	7.59a	10	8.35	6.9	5.88	5.11	4.51	4	3.56	3.19	-
-1.0m	10	10	8.35	6.9	5.87	5.1	4.45	3.93	3.5	-	-
-2.0m	10	10	8.32	6.88	5.84	5.01	4.38	-	-	-	-

Road
 Locked

75% SWL



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.67a	4.94a	4.99a	-	-	-	-	-
6.0m	-	-	-	3.64a	3.99a	4.19b	4.31a	4.13	-	-	-
5.0m	-	-	-	3.24a	3.66a	4.00a	3.63b	4.13	3.67	-	-
4.0m	-	-	-	4.33a	4.44a	4.15b	3.62b	3.56r	3.65	3.27	-
3.0m	-	-	-	5.59b	4.74b	4.03r	2.99r	3.04r	3.59	3.24	-
2.0m	-	-	-	4.61r	3.79r	2.95r	2.49r	2.89r	3.53	3.2	2.91
1.0m	-	5.67r	4.42r	3.72r	3.25r	2.93r	2.79r	3.18r	3.48	3.16	2.89
0.0m	5.89a	6.46a	6.04r	4.64r	4.09r	3.56r	3.64r	3.82	3.46	3.15	-
-1.0m	5.15a	5.61a	6.35a	6.39r	5.09r	4.82	4.26	3.82	3.45	-	-
-2.0m	10	10	8.02	6.62	5.63	4.89	4.34	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.77a	5.13a	5.08a	-	-	-	-	-
6.0m	-	-	-	3.68a	4.25a	4.58b	4.63a	4.13	-	-	-
5.0m	-	-	-	3.46a	4.01a	4.38a	4.54b	4.19	3.69	-	-
4.0m	-	-	-	4.34a	4.62a	4.78a	4.71	4.2	3.71	3.29	-
3.0m	-	-	-	5.96b	6.1	5.3	4.67	4.15	3.7	3.29	-
2.0m	-	-	-	6.67r	6.02	5.22	4.61	4.1	3.67	3.26	2.92
1.0m	-	5.67r	7.86r	6.96	5.92	5.15	4.55	4.05r	3.62	3.22	2.9
0.0m	7.59a	10	8.35	6.9	5.88	5.11	4.51	4	3.56	3.19	-
-1.0m	10	10	8.35	6.9	5.87	5.1	4.45	3.93	3.5	-	-
-2.0m	10	10	8.32	6.88	5.84	5.01	4.38	-	-	-	-

Level Rail
 0-50mm

75% SWL

Unlocked



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.64a	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.19a	4.37b	4.11a	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.64b	4.21b	4.15a	-	-
4.0m	-	-	-	4.72a	4.80b	4.14b	3.59r	3.21r	3.86a	3.86a	-
3.0m	-	-	-	5.58b	4.73b	3.85r	2.81r	2.71r	3.67r	3.88a	4.09a
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.91r	3.79r	4.02a	4.32a
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	3.61r	4.26r	4.94a	4.50a
0.0m	5.73a	6.21a	6.26r	4.95r	4.16r	3.78r	3.84r	4.79r	5.40b	4.81b	-
-1.0m	5.31a	5.75a	6.88a	6.53r	5.65r	5.23r	6.16b	5.46b	4.96b	-	-
-2.0m	10	10	10	9.48b	8.06b	7.02b	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.96a	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.50a	4.60a	4.59a	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.41a	4.55a	4.60a	4.57a	-	-
4.0m	-	-	-	4.75a	4.89a	4.97a	5.01a	4.98a	4.89a	4.66a	-
3.0m	-	-	-	6.18b	6.75b	6.87b	6.31b	5.76b	5.32b	4.98b	4.09a
2.0m	-	-	5.41r	7.00r	7.64b	7.36b	6.70b	6.05b	5.52b	5.08b	4.62a
1.0m	-	7.09r	8.89r	9.63b	8.70b	7.77b	6.88b	6.17b	5.59b	5.12b	4.50a
0.0m	8.36a	10	10	10	8.98b	7.82b	6.92b	6.21b	5.65b	4.99b	-
-1.0m	10	10	10	10	9.10b	7.93b	7.01b	6.18b	5.21b	-	-
-2.0m	10	10	10	10	9.06b	7.51b	-	-	-	-	-

Level Rail
 0-50mm

75% SWL

Locked




	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.64a	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.19a	4.37b	4.11a	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.64b	4.21b	4.15a	-	-
4.0m	-	-	-	4.72a	4.80b	4.14b	3.59r	3.21r	3.86a	3.86a	-
3.0m	-	-	-	5.58b	4.73b	3.85r	2.81r	2.71r	3.67r	3.88a	4.09a
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.91r	3.79r	4.02a	4.32a
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	3.61r	4.26r	4.94a	4.50a
0.0m	5.73a	6.21a	6.26r	4.95r	4.16r	3.78r	3.84r	4.79r	5.40b	4.81b	-
-1.0m	5.31a	5.75a	6.88a	6.53r	5.65r	5.23r	6.16b	5.46b	4.96b	-	-
-2.0m	10	10	10	9.48b	8.06b	7.02b	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.96a	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.50a	4.60a	4.59a	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.41a	4.55a	4.60a	4.57a	-	-
4.0m	-	-	-	4.75a	4.89a	4.97a	5.01a	4.98a	4.89a	4.66a	-
3.0m	-	-	-	6.18b	6.75b	6.87b	6.31b	5.76b	5.32b	4.98b	4.09a
2.0m	-	-	5.41r	7.00r	7.64b	7.36b	6.70b	6.05b	5.52b	5.08b	4.62a
1.0m	-	7.09r	8.89r	9.63b	8.70b	7.77b	6.88b	6.17b	5.59b	5.12b	4.50a
0.0m	8.36a	10	10	10	8.98b	7.82b	6.92b	6.21b	5.65b	4.99b	-
-1.0m	10	10	10	10	9.10b	7.93b	7.01b	6.18b	5.21b	-	-
-2.0m	10	10	10	10	9.06b	7.51b	-	-	-	-	-

LUL DUTIES
SECTOR E


LOWER SAFE WORKING LOADS

UPPER SAFE WORKING LOADS

Canted Rail



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.64a	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.19a	4.37b	4.11a	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.64b	4.21b	4.15a	-	-
4.0m	-	-	-	4.72a	4.80b	4.14b	3.59r	3.21r	3.86a	3.86a	-
3.0m	-	-	-	5.58b	4.73b	3.85r	2.81r	2.71r	3.67r	3.88a	4.09a
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.91r	3.79r	4.02a	4.32a
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	3.61r	4.26r	4.94a	4.50a
0.0m	5.73a	6.21a	6.26r	4.95r	4.16r	3.78r	3.84r	4.79r	5.40b	4.81b	-
-1.0m	5.31a	5.75a	6.88a	6.53r	5.65r	5.23r	6.16b	5.46b	4.96b	-	-
-2.0m	10	10	10	9.48b	8.06b	7.02b	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.96a	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.50a	4.60a	4.59a	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.41a	4.55a	4.60a	4.57a	-	-
4.0m	-	-	-	4.75a	4.89a	4.97a	5.01a	4.98a	4.89a	4.66a	-
3.0m	-	-	-	6.18b	6.75b	6.87b	6.31b	5.76b	5.32b	4.98b	4.09a
2.0m	-	-	5.41r	7.00r	7.64b	7.36b	6.70b	6.05b	5.52b	5.08b	4.62a
1.0m	-	7.09r	8.89r	9.63b	8.70b	7.77b	6.88b	6.17b	5.59b	5.12b	4.50a
0.0m	8.36a	10	10	10	8.98b	7.82b	6.92b	6.21b	5.65b	4.99b	-
-1.0m	10	10	10	10	9.10b	7.93b	7.01b	6.18b	5.21b	-	-
-2.0m	10	10	10	10	9.06b	7.51b	-	-	-	-	-

Canted Rail



	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.71a	4.64a	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	4.19a	4.37b	4.11a	-	-	-
5.0m	-	-	-	3.23a	3.66a	4.02a	3.64b	4.21b	4.15a	-	-
4.0m	-	-	-	4.72a	4.80b	4.14b	3.59r	3.21r	3.86a	3.86a	-
3.0m	-	-	-	5.58b	4.73b	3.85r	2.81r	2.71r	3.67r	3.88a	4.09a
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.91r	3.79r	4.02a	4.32a
1.0m	-	6.20r	4.64r	3.91r	3.44r	3.13r	2.86r	3.61r	4.26r	4.94a	4.50a
0.0m	5.73a	6.21a	6.26r	4.95r	4.16r	3.78r	3.84r	4.79r	5.40b	4.81b	-
-1.0m	5.31a	5.75a	6.88a	6.53r	5.65r	5.23r	6.16b	5.46b	4.96b	-	-
-2.0m	10	10	10	9.48b	8.06b	7.02b	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.98a	4.96a	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	4.50a	4.60a	4.59a	-	-	-
5.0m	-	-	-	3.52a	4.05a	4.41a	4.55a	4.60a	4.57a	-	-
4.0m	-	-	-	4.75a	4.89a	4.97a	5.01a	4.98a	4.89a	4.66a	-
3.0m	-	-	-	6.18b	6.75b	6.87b	6.31b	5.76b	5.32b	4.98b	4.09a
2.0m	-	-	5.41r	7.00r	7.64b	7.36b	6.70b	6.05b	5.52b	5.08b	4.62a
1.0m	-	7.09r	8.89r	9.63b	8.70b	7.77b	6.88b	6.17b	5.59b	5.12b	4.50a
0.0m	8.36a	10	10	10	8.98b	7.82b	6.92b	6.21b	5.65b	4.99b	-
-1.0m	10	10	10	10	9.10b	7.93b	7.01b	6.18b	5.21b	-	-
-2.0m	10	10	10	10	9.06b	7.51b	-	-	-	-	-

Max Cant + Twist 150-177mm


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	3.63	2.96	2.45	-	-	-	-	-
6.0m	-	-	-	3.54a	2.97	2.48	2.1	1.78	-	-	-
5.0m	-	-	-	3.23a	2.87	2.42	2.06	1.77	1.53	-	-
4.0m	-	-	-	3.45	2.75	2.29	1.98	1.71	1.49	1.31	-
3.0m	-	-	-	3.33	2.66	2.17	1.87	1.64	1.44	1.27	1.13
2.0m	-	-	4.04	3.12	2.5	2.05	1.76	1.56	1.38	1.23	1.1
1.0m	-	4.85	3.65	2.87	2.33	1.93	1.69	1.5	1.34	1.2	1.09
0.0m	5.73a	4.33	3.33	2.67	2.2	1.88	1.65	1.47	1.31	1.19	-
-1.0m	5.31a	4.16	3.22	2.62	2.19	1.88	1.65	1.47	1.33	-	-
-2.0m	5.91	4.3	3.35	2.73	2.29	1.98	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	3.63	2.99	2.46	-	-	-	-	-
6.0m	-	-	-	3.58a	3.02	2.56	2.15	1.79	-	-	-
5.0m	-	-	-	3.52a	2.98	2.54	2.2	1.85	1.56	-	-
4.0m	-	-	-	3.47	2.92	2.51	2.19	1.88	1.58	1.33	-
3.0m	-	-	-	3.39	2.87	2.48	2.18	1.86	1.57	1.33	1.13
2.0m	-	-	4.07	3.36	2.85	2.47	2.13	1.81	1.53	1.3	1.11
1.0m	-	4.92	3.95	3.25	2.74	2.35	2.03	1.72	1.47	1.25	1.09
0.0m	6.27	4.69	3.75	3.09	2.62	2.25	1.93	1.63	1.41	1.22	-
-1.0m	6.18	4.58	3.64	3.01	2.53	2.17	1.81	1.56	1.37	-	-
-2.0m	6.21	4.59	3.64	2.94	2.44	2.04	-	-	-	-	-

Max Cant + Twist 150-177mm


	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.43a	4.18	3.44	-	-	-	-	-
6.0m	-	-	-	3.54a	3.89a	3.47	2.94	2.5	-	-	-
5.0m	-	-	-	3.23a	3.66a	3.41	2.9	2.49	2.16	-	-
4.0m	-	-	-	4.72a	3.95	3.27	2.81	2.43	2.12	1.86	-
3.0m	-	-	-	4.85	3.84	3.13	2.68	2.34	2.06	1.83	1.63
2.0m	-	-	5.14r	4.32r	3.53r	2.70r	2.48r	2.26	2	1.79	1.6
1.0m	-	6.20r	4.64r	3.91r	3.44r	2.87	2.49	2.19	1.95	1.75	1.58
0.0m	5.73a	6.21a	5.2	4.08	3.32	2.81	2.44	2.16	1.93	1.74	-
-1.0m	5.31a	5.75a	5.08	4.02	3.31	2.81	2.44	2.16	1.94	-	-
-2.0m	10	7	5.22	4.15	3.43	2.92	-	-	-	-	-

	2.0m	2.5m	3.0m	3.5m	4.0m	4.5m	5.0m	5.5m	6.0m	6.5m	7.0m
7.0m	-	-	-	4.48a	4.22	3.45	-	-	-	-	-
6.0m	-	-	-	3.58a	4.15a	3.56	2.99	2.51	-	-	-
5.0m	-	-	-	3.52a	4.05a	3.55	3.05	2.58	2.19	-	-
4.0m	-	-	-	4.75a	4.14	3.51	3.04	2.6	2.21	1.89	-
3.0m	-	-	-	4.92	4.08	3.48	3.01	2.59	2.2	1.89	1.63
2.0m	-	-	5.41r	4.81r	4	3.4	2.93	2.53	2.16	1.86	1.61
1.0m	-	7.09r	5.81	4.67	3.89	3.31	2.86r	2.44	2.1	1.81	1.58
0.0m	8.36a	7.49	5.7	4.57	3.8	3.22	2.75	2.34	2.02	1.77	-
-1.0m	10	7.36	5.57	4.47	3.69	3.13	2.62	2.26	1.98	-	-
-2.0m	10	7.36	5.57	4.39	3.59	2.99	-	-	-	-	-