

20170215 Port of Townsville – Berth Load Limits Update

Berth No.	Deck RL at Face (m LAT)	UDL (t/m ²)	UDL (kPa)	Point Load (tonnes) (min. bearing area of 0.3m x 0.3m)	Forklift ^a Capacity (tonnes)	Container ^b Stacking	Displacement Weight Tonnage ⁱ (See note j regarding reference for accompanying vessel min/max dimensions)	Reference
1	5.4	See notes	See notes	See notes	See notes	N/A	90,000	<ul style="list-style-type: none"> 20151002 Berth 1 vehicle load limits - POTL Engineering For vehicle access see note i
2	6.0	3.7	37	55	23 ^c	20ft x 1 high ^d 40ft x 1 high ^d	90,000	<ul style="list-style-type: none"> 20020226 Berth2 Loading Capacities Report - Maunsell McIntyre P/L.
3	6.0	3.6	36	55 ^e	32	20ft x 2 high	90,000	<ul style="list-style-type: none"> 19990914 Berth3 - Stage 1 & 2 Slab Design Check Report -Maunsell McIntyre. B3 stage 2 area UDL reduced to 3.6 t/sqm for simplicity
4	6.0	4.8	48	60 ^e	45	40ft x 2 high	70,000 ^k	<ul style="list-style-type: none"> 20160223 Drw # X2250-002 Berth4 Upgrade General Notes Sheet 1- AECOM 20160223 Drw # X2250-003 Berth4 Upgrade General Notes Sheet 2- AECOM
8	5.8	3.5 (2.2)	35 (25)	40 (15)	32 (12)	20ft x 1 high 40ft x 1 high	70,000	<ul style="list-style-type: none"> 19921101 BHP Eng Strang Patrick No. 8 Berth-Townsville Port - Report on Stacking Shipping Containers on No. 8 Wharf 201307227 Berth 8 Grid P Beam – Berth 8 Notes - Drawing # TPIX-KBR-DRG-MAR92-0102 – KBR Pty Ltd Point Loads & Container Corners Must Not Be Located Over Pit Lids. 20130315 Refer to TPIX Design Basis Report ADM01-0001-6 - notes berth can accommodate outside limits provided appropriate controls in place when berthing (i.e. by approval)
9	5.8	3.8	38	40	32	20ft x 1 high 40ft x 1 high	90,000	<ul style="list-style-type: none"> 20000427 Berth 8 & 9 Slab Design Check Report - Maunsell McIntyre P/L. 20020424 Berth 9 Expansion Joint Review Draft Report - GHD P/L
10	5.8	5.0	50	100 ^f	38 ^g	40ft x 2 high	50,000	<ul style="list-style-type: none"> 20120321 Berth 10A General Notes- Drawing # TPIX-KBR-DRG-MAR12-0202 – KBR Pty Ltd 20130315 Refer to TPIX Design Basis Report ADM01-0001-6 - notes berth can accommodate outside limits provided appropriate controls in place when berthing (i.e. by approval)
11	9.4	1.0	10	30 ^h	4	Nil	55,000	<ul style="list-style-type: none"> 19961205 B11 Shiploading Facility General Notes SKM Drw # 8C115:330C002/2 X1892-002 T44 truck weights 44t and has a max double wheel load of 4.8t, max axle load of 9.6t (four wheels), wheel group load 9.6t two double wheels 1.2m apart. Point load 30t Ship Loader Maintenance Area Only

a. Forklift Capacity based on the following forklifts. Minimum clear distance to other load types 5m, minimum clear distance to other forklifts 3m UON. No limitations on clear spacing to containers.

45t	OMEGA 50E Forklift	(Max Axle Load = 96.3t)
42t	CATERPILLER V925 Forklift	(Max Axle Load = 120.5t)
32t	OMEGA 44C Forklift	(Max Axle Load = 78.4t)
12t	OMEGA 14-6 Forklift	(Max Axle Load = 27.9t)
4t	OMEGA SF-40 Forklift	(Max Axle Load = 10t)

b. Container loads have been based on the following. Minimum clear distance to other load types 5m. No limitations on clear spacing to forklifts. No limitation to minimum clear distance to adjacent containers.

40ft	(12.20m long x 2.440m wide)	(Total Load/Container = 30t)
20ft	(6.096m long x 2.440m wide)	(Total Load/Container = 24t)

c. Max forklift axle load of 59.6 tonne (forklift capacity ≈ 23 tonne).

d. Max container load = 34.2 tonne.

e. Point loads at 5m minimum centres.

f. Point load on at 1.0m x1.0m area with 7.0m minimum centre to centre spacing.

g. Max forklift axle load of 100 tonne (forklift capacity ≈ 38tonne).

h. Ship Loader Maintenance Area Only - refer drawing for load set out

i. Under normal operational conditions only vehicles up to light trucks, with not more than 8T GVM, should be permitted onto Berth 1, heavier vehicles by exception pending review by POTL Engineering.

j. Port users to confirm the latest declared depths and vessels LOA for Townsville Harbour via Maritime Safety Queensland's web site: <http://www.msq.qld.gov.au/Shipping/Port-procedures/Port-procedures-townsville>

k. Replacing existing Trelleborg SCN1000 fender cones with SCN1300 cones allows berthing of 140,000 Displacement Tonne vessel

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			Date	11/12/2018
			Page	1 of 1