

4. FACILITIES

4.1 PORT OF NEWCASTLE

Chart:	AUS 207 & 208
Maximum sailing draught:	Promulgated Channel Depth + Tide – 10% UKC
Channel design depth:	15.2 m (subject to promulgation)
Tidal range:	0.1 m to 2.1m
Highest astronomical tide (HAT):	2.1m
Lowest astronomical tide (LAT):	0 m (Chart Datum)
Minimum Lower High Water (LHW):	1.1m
Water density:	1023kg/m ³ during typical weather Up to 1000kg/m ³ following heavy rains in river catchment area. See Section 9.11 for further information

4.2 CARRINGTON: BERTHS D4 AND D5

Layout:	Two berths, two shiploaders
Operating hours:	365 days/year, 24 hours/day
Typical vessel size:	30,000 to 180,000 dwt
Berth alignment:	175 ^o T
Berthing:	Starboard side-to
Berth design depth:	16.5 m (subject to promulgation)
Dredged length at berth face:	615 m

4.2.1 EQUIPMENT

Shiploader type:	Longitudinal travel, telescoping outreach, luffing type
Shiploaders per vessel:	Single or dual head loading
Maximum shiploading rate:	2,500 tph per shiploader
Typical gross shiploading rate:	Single shiploader: 2,000 to 2,300 tph Dual shiploader: 3,000 to 3,500 tph
Maximum shiploader outreach:	28.2 m from fender face line to spout centre line 31.3 m from fender face line to tip of shuttle
Shiploader travel distances:	Shiploader 4: 27.8 m to 472.1 m chainage Shiploader 5: 63.7 m to 508 m chainage (Distance along the berth apron measured from boom centre line)
Berth structure:	Reinforced concrete/steel piles, open deck layout
Fenders:	Bridgestone Super Cell
Mooring system:	Quick release hooks and capstan winches

4.2.2 VESSEL RESTRICTIONS

Minimum vessel size (PWCS):	30,000 dwt
Max. vessel LOA:	270 m (combined LOA 510 m) 275 m (with Harbour Master approval)
Max. vessel beam:	47 m
Minimum distance between berthed vessels:	30 m
Maximum air draught:	18.5 m from chart datum to top of hatch cover When within one metre of the air draught limitation vessels should maintain trim by the stern of at least 1% of LOA. See Section 9.8 and Appendices D.2 and E.7 for further information regarding air draught

4.3 KOORAGANG: BERTHS K4, K5, K6 AND K7

Layout:	Four berths operated continuously to accommodate up to five vessels, three shiploaders
Operating hours:	365 days/year, 24 hours/day
Typical vessel size:	70,000 to 210,000 dwt
Berth alignment:	111°T
Berthing:	Port side-to (or starboard side-to on berth K4 as required)
Berth design depth:	16.5 m (subject to promulgation)
Dredged length at berth face:	1396 m

4.3.1 EQUIPMENT

Shiploader type:	Longitudinal travel, telescoping outreach, luffing type
Shiploaders per vessel:	Single head loading
Maximum shiploading rate:	10,500 tph
Typical gross shiploading rate:	5,000 to 7,300 tph
Maximum shiploader outreach:	35 m from fender face line
Maximum shiploader coal throw:	55 m from fender face line
Shiploader travel distances:	Shiploader 7.08: 19 m to 599 m marks (berths K4 - K5) Shiploader 7.09: 81 m to 1068 m marks (berths K4 - K7) Shiploader 7.10: 327 m to 1315 m marks (berths K5 - K7) (Distance along the wharf measured from boom centre line)
Berth structure:	Reinforced concrete/steel piles, open deck layout
Fenders:	Seibu TTV (K4 berth) Bridgestone Super Cell (K5-K7 berths)
Mooring system:	Quick release hooks and capstan winches

4.3.2 VESSEL RESTRICTIONS

Maximum vessel LOA:	300 m
Maximum vessel beam:	50 m
Minimum distance between berthed vessels:	30 m
Maximum air draught:	20.5 m from chart datum to top of hatch cover See Section 9.8 and Appendices D.4 and E.8 for further information regarding air draught.