FINAL REPORT ON THE AUDIT OF CRITICAL TRANSPORT AND POWER INFRASTRUCTURE IN NORTHERN AUSTRALIA

AIRPORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	DETAILS
Northern Territory	**Borroloola**	Runway: 4,670 x 100 ft (1,423 x 30 m) — other (PER) — lighted Type: local airport(light traffic) Scheduled airline service: no Latitude: -12.658300 | 12 39.498024 S | S12 39 29 Longitude: 132.893005 | 132 53.580322 E | E132 53 34 Field elevation: 85 ft/26 m MSL
	Groote Eylandt	Runway: 6,237 x 98 ft (1,901 x 30 m) — paved — lighted Type: regional airport Scheduled airline service: yes Latitude: -13.975000 | 13 58.500023 S | S13 58 30 Longitude: 136.460007 | 136 27.600403 E | E136 27 36 Field elevation: 53 ft/16 m MSL
	Gove	Runway: 7,244 x 148 ft (2,208 x 45 m) — paved — lighted Type: regional airport Scheduled airline service: yes Latitude: -12.269400 | 12 16.163979 S | S12 16 09 Longitude: 136.817993 | 136 49.079590 E | E136 49 04 Field elevation: 192 ft/59 m MSL
	Gilnockie Station	Runway: 1200 x 45 m — paved — lighted Type: local airport(light traffic) Scheduled airline service: no Latitude: 15 55.208 S Longitude: 132 23.287 E Field elevation: 528 ft MSL
	Tindal	Runway: 9,003 x 150 ft (2,744 x 46 m) — paved — lighted Type: regional airport Scheduled airline service: no Latitude: -14.521100 | 14 31.266003 S | S14 31 15 Longitude: 132.378006 | 132 22.680359 E | E132 22 40 Field elevation: 443 ft/135 m MSL
	Jabiru	Runway: 4,670 x 100 ft (1,423 x 30 m) — other (PER) — lighted Type: local airport(light traffic)

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JURISDICTION	NAME	DETAILS
Northern Territory	Jabiru contined	Scheduled airline service: no Latitude: -12.658300 | 12 39.498024 S | S12 39 29 Longitude: 132.893005 | 132 53.580322 E | E132 53 34 Field elevation: 85 ft/26 m MSL
	Darwin	Runway 11/29: 11,004 x 197 ft (3,354 x 60 m) — paved — lighted Runway 18/36: 5,000 x 98 ft (1,524 x 30 m) — paved — lighted Type: international airport Scheduled airline service: yes Latitude: -12.414700 | 12 24.881973 S | S12 24 52 Longitude: 130.876999 | 130 52.619934 E | E130 52 37 Field elevation: 103 ft/31 m MSL
Queensland	**Rockhampton**	Runway 04/22: 5,397 x 98 ft (1,645 x 30 m) — paved — lighted Runway 15/33: 8,622 x 148 ft (2,628 x 45 m) — paved — lighted Type: regional airport Scheduled airline service: yes Latitude: -23.381901 | 23 22.914047 S | S23 22 54 Longitude: 150.475006 | 150 28.500366 E | E150 28 30 Field elevation: 34 ft/10 m MSL
	Blackwater	Runway: 5,023 x 98 ft (1,531 x 30 m) — paved — lighted Type: regional airport Scheduled airline service: yes Latitude: -23.603100 | 23 36.185989 S | S23 36 11 Longitude: 148.807007 | 148 48.420410 E | E148 48 25 Field elevation: 657 ft/200 m MSL
	Emerald	Runway 06/24: 6,234 x 98 ft (1,900 x 30 m) — paved — lighted Runway 15/33: 3,038 x 59 ft (926 x 18 m) — gravel — lighted Type: regional airport Scheduled airline service: yes Latitude: -23.567499 | 23 34.049950 S | S23 34 02 Longitude: 148.179001 | 148 10.740051 E | E148 10 44 Field elevation: 624 ft/190 m MSL

AIRPORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	DETAILS
Queensland	**Alpha**	Runway: 4,777 x 98 ft (1,456 x 30 m) — paved — lighted Type: regional airport Scheduled airline service: no Latitude: -23.646099 | 23 38.765945 S | S23 38 45 Longitude: 146.584000 | 146 35.039978 E | E146 35 02 Field elevation: 1,255 ft/383 m MSL
	Barcaldine	Runway 01/19: 5,591 x 98 ft (1,704 x 30 m) — paved — lighted Runway 14/32: 3,104 x 98 ft (946 x 30 m) — other (CLA) — not lighted Type: regional airport Scheduled airline service: yes Latitude: -23.565300 | 23 33.917999 S | S23 33 55 Longitude: 145.307007 | 145 18.420410 E | E145 18 25 Field elevation: 878 ft/268 m MSL
	Longreach	Runway 04/22: 6,352 x 98 ft (1,936 x 30 m) — paved — lighted Runway 09/27: 2,953 x 59 ft (900 x 18 m) — gravel — not lighted Type: regional airport Scheduled airline service: yes Latitude: -23.434200 | 23 26.052017 S | S23 26 03 Longitude: 144.279999 | 144 16.799927 E | E144 16 47 Field elevation: 627 ft/191 m MSL
	Aramac	Runway: 3,937 ft (1,200 m) — other (X) — not lighted Type: local airport(light traffic) Scheduled airline service: no Latitude: -22.966700 | 22 58.001976 S | S22 58 00 Longitude: 145.242004 | 145 14.520264 E | E145 14 31 Field elevation: 232 ft/71 m MSL
	Muttaburra	Runway: 3,608 ft (1,100 m) — other (X) — not lighted Type: local airport(light traffic) Scheduled airline service: no Latitude: -22.583300 | 22 34.997978 S | S22 34 59 Longitude: 144.533005 | 144 31.980286 E | E144 31 58 Field elevation: 230 ft/70 m MSL

AIRPORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	DETAILS
Queensland	Winton	Runway 05/23: 2,920 x 59 ft (890 x 18 m) — other (CLA) — not lighted Runway 14/32: 4,600 x 98 ft (1,402 x 30 m) — paved — lighted Type: regional airport Scheduled airline service: yes Latitude: -22.363600 | 22 21.815987 S | S22 21 48 Longitude: 143.085999 | 143 5.159912 E | E143 05 09 Field elevation: 638 ft/194 m MSL
	Clermont	Runway 01/19: 3,504 x 98 ft (1,068 x 30 m) — gravel — not lighted Runway 15/33: 4,301 x 98 ft (1,311 x 30 m) — paved — lighted Type: regional airport Scheduled airline service: no Latitude: -22.773100 | 22 46.385994 S | S22 46 23 Longitude: 147.621002 | 147 37.260132 E | E147 37 15 Field elevation: 908 ft/277 m MSL
	Dysart	Runway: 5,085 x 98 ft (1,550 x 30 m) — paved — lighted Type: regional airport Scheduled airline service: no Latitude: -22.622200 | 22 37.332001 S | S22 37 19 Longitude: 148.363998 | 148 21.839905 E | E148 21 50 Field elevation: 670 ft/204 m MSL
	Middlemount	Runway: 5,085 x 98 ft (1,550 x 30 m) — paved — not lighted Type: local airport(light traffic) Scheduled airline service: no Latitude: -22.802500 | 22 48.149986 S | S22 48 08 Longitude: 148.705002 | 148 42.300110 E | E148 42 18 Field elevation: 547 ft/167 m MSL
	Moranbah	Runway: 5,000 x 98 ft (1,524 x 30 m) — paved — lighted Type: regional airport Scheduled airline service: yes Latitude: -22.057800 | 22 3.468018 S | S22 03 28 Longitude: 148.076996 | 148 4.619751 E | E148 04 37 Field elevation: 770 ft/235 m MSL

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JURISDICTION	NAME	DETAILS
Queensland	**Mackay**	Runway 05/23: 4,409 x 98 ft (1,344 x 30 m) — paved — lighted Runway 14/32: 6,499 x 148 ft (1,981 x 45 m) — paved — light Type: regional airport Scheduled airline service: yes Latitude: -21.171700 | 21 10.301971 S | S21 10 18 Longitude: 149.179993 | 149 10.799561 E | E149 10 47 Field elevation: 19 ft/6 m MSL
	Collinsville	Runway: 4,599 ft (1,402 m) — other (X) — not lighted Type: local airport(light traffic) Scheduled airline service: no Latitude: -20.596701 | 20 35.802040 S | S20 35 48 Longitude: 147.860001 | 147 51.600037 E | E147 51 36 Field elevation: 180 ft/55 m MSL
	Bowen	Runway 04/22: 4,399 ft (1,341 m) — grass — not lighted Runway 12/30: 3,290 ft (1,003 m) — grass — not lighted Type: local airport(light traffic) Scheduled airline service: no Latitude: -20.018299 | 20 1.097946 S | S20 01 05 Longitude: 148.214996 | 148 12.899780 E | E148 12 53 Field elevation: 8 ft/2 m MSL
	Charters Towers	Runway 01/19: 3,297 x 98 ft (1,005 x 30 m) — gravel — not lighted Runway 06/24: 5,699 x 100 ft (1,737 x 30 m) — other (COP) — lighted Type: local airport(light traffic) Scheduled airline service: no Latitude: -20.043100 | 20 2.586021 S | S20 02 35 Longitude: 146.272995 | 146 16.379700 E | E146 16 22 Field elevation: 955 ft/291 m MSL
	Hughenden	Runway 06/24: 3,051 x 59 ft (930 x 18 m) — gravel — lighted Runway 12/30: 5,394 x 98 ft (1,644 x 30 m) — paved — lighted Type: local airport(light traffic) Scheduled airline service: yes Latitude: -20.815001 | 20 48.900032 S | S20 48 54

AIRPORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	DETAILS
Queensland	Hughenden continued	Longitude: 144.225006 | 144 13.500366 E | E144 13 30 Field elevation: 1,043 ft/318 m MSL
	Richmond	Runway: 5,000 x 98 ft (1,524 x 30 m) — paved — lighted Type: local airport(light traffic) Scheduled airline service: yes Latitude: -20.701900 | 20 42.114029 S | S20 42 06 Longitude: 143.115005 | 143 6.900330 E | E143 06 54 Field elevation: 676 ft/206 m MSL
	Julia Creek	Runway: 4,600 x 98 ft (1,402 x 30 m) — paved — lighted Type: local airport(light traffic) Scheduled airline service: yes Latitude: -20.668301 | 20 40.098038 S | S20 40 05 Longitude: 141.723007 | 141 43.380432 E | E141 43 22 Field elevation: 404 ft/123 m MSL
	Cloncurry	Runway 06/24: 3,796 x 60 ft (1,157 x 18 m) — paved — not lighted Runway 12/30: 6,562 x 98 ft (2,000 x 30 m) — paved — lighted Type: regional airport Scheduled airline service: yes Latitude: -20.668600 | 20 40.116005 S | S20 40 06 Longitude: 140.503998 | 140 30.239868 E | E140 30 14 Field elevation: 616 ft/188 m MSL
	Dajarra	Runway 11/29: 3,733 ft (1,138 m) — other (C) — not lighted Runway 15/33: 2,598 ft (792 m) — other (X) — not lighted Type: local airport(light traffic) Scheduled airline service: no Latitude: -21.708300 | 21 42.497978 S | S21 42 29 Longitude: 139.533005 | 139 31.980286 E | E139 31 58 Field elevation: 335 ft/102 m MSL
	Boulia	Runway: 4,180 x 98 ft (1,274 x 30 m) — paved — lighted Type: regional airport Scheduled airline service: yes

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JURISDICTION	NAME	DETAILS
Queensland	Boulia continued	Latitude: -22.913300 | 22 54.797974 S | S22 54 47 Longitude: 139.899994 | 139 53.999634 E | E139 53 59 Field elevation: 542 ft/165 m MSL
	Mt Isa	Runway: 8,399 x 148 ft (2,560 x 45 m) — paved — lighted Type: regional airport Scheduled airline service: yes Latitude: -20.663900 | 20 39.834023 S | S20 39 50 Longitude: 139.488998 | 139 29.339905 E | E139 29 20 Field elevation: 1,121 ft/342 m MSL
	Ayr	Runway 01/19: 4,796 x 98 ft (1,462 x 30 m) — paved — not lighted Runway 11/29: 3,697 x 98 ft (1,127 x 30 m) — grass — not lighted Type: local airport(light traffic) Scheduled airline service: no Latitude: -19.584400 | 19 35.064011 S | S19 35 03 Longitude: 147.328995 | 147 19.739685 E | E147 19 44 Field elevation: 41 ft/12 m MSL
	Townsville	Runway 01/19: 7,999 x 148 ft (2,438 x 45 m) — paved — lighted Runway 07/25: 3,609 x 98 ft (1,100 x 30 m) — paved — lighted Type: regional airport Scheduled airline service: yes Latitude: -19.252501 | 19 15.150032 S | S19 15 09 Longitude: 146.764999 | 146 45.899963 E | E146 45 53 Field elevation: 18 ft/5 m MSL
	Ingham	Runway: 5,006 x 98 ft (1,526 x 30 m) — paved — lighted Type: local airport(light traffic) Scheduled airline service: no Latitude: -18.660601 | 18 39.636040 S | S18 39 38 Longitude: 146.151993 | 146 9.119568 E | E146 09 07 Field elevation: 49 ft/15 m MSL
	Georgetown	Runway: 3,799 x 59 ft (1,158 x 18 m) — paved — not lighted Type: local airport(light traffic) Scheduled airline service: no

AIRPORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	DETAILS
Queensland	Georgetown continued	Latitude: -18.305000 | 18 18.300018 S | S18 18 18 Longitude: 143.529999 | 143 31.799927 E | E143 31 47 Field elevation: 995 ft/303 m MSL
	Croydon	Runway: 4,799 ft (1,463 m) — other (X) — not lighted Type: local airport(light traffic) Scheduled airline service: no Latitude: -18.225000 | 18 13.500023 S | S18 13 30 Longitude: 142.257996 | 142 15.479736 E | E142 15 28 Field elevation: 107 ft/33 m MSL
	Normanton	Runway: 5,499 x 98 ft (1,676 x 30 m) — paved — lighted Type: regional airport Scheduled airline service: yes Latitude: -17.683599 | 17 41.015968 S | S17 41 00 Longitude: 141.070007 | 141 4.200439 E | E141 04 12 Field elevation: 73 ft/22 m MSL
	Karumba	Runway: 4,169 ft (1,271 m) — other (S) — not lighted Type: local airport(light traffic) Scheduled airline service: yes Latitude: -17.456699 | 17 27.401962 S | S17 27 24 Longitude: 140.830002 | 140 49.800110 E | E140 49 48 Field elevation: 5 ft/2 m MSL
	Burketown	Runway 03/21: 4,501 x 98 ft (1,372 x 30 m) — paved — lighted Runway 14/32: 2,484 x 98 ft (757 x 30 m) — other (CLA) — not lighted Type: local airport(light traffic) Scheduled airline service: yes Latitude: -17.748600 | 17 44.916000 S | S17 44 54 Longitude: 139.533997 | 139 32.039795 E | E139 32 02 Field elevation: 21 ft/6 m MSL
	Innisfail	Runway 03/21: 4,409 x 98 ft (1,344 x 30 m) — other (CLA) — not lighted Runway 14/32: 4,439 x 98 ft (1,353 x 30 m) — paved — lighted Type: local airport(light traffic)

AIRPORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	DETAILS
Queensland	Innisfail continued	Scheduled airline service: no Latitude: -17.559401 | 17 33.564034 S | S17 33 33 Longitude: 146.011993 | 146 0.719604 E | E146 00 43 Field elevation: 46 ft/14 m MSL
	Atherton	Runway: 3,818 ft (1,164 m) — grass — not lighted Type: local airport(light traffic) Scheduled airline service: no Latitude: -17.261700 | 17 15.701981 S | S17 15 42 Longitude: 145.514999 | 145 30.899963 E | E145 30 53 Field elevation: 2,450 ft/747 m MSL
	Cairns	Runway 12/30: 3,035 x 60 ft (925 x 18 m) — paved — not lighted Runway 15/33: 10,489 x 148 ft (3,197 x 45 m) — paved — lighted Type: international airport Scheduled airline service: yes Latitude: -16.885799 | 16 53.147964 S | S16 53 08 Longitude: 145.755005 | 145 45.300293 E | E145 45 18 Field elevation: 10 ft/3 m MSL
	Mareeba	Runway: 4,938 x 98 ft (1,505 x 30 m) — paved — lighted Type: regional airport Scheduled airline service: no Latitude: -17.069201 | 17 4.152031 S | S17 04 09 Longitude: 145.419006 | 145 25.140381 E | E145 25 08 Field elevation: 1,560 ft/475 m MSL
	Chillagoe	Runway: 3,218 x 60 ft (981 x 18 m) — paved — not lighted Type: local airport(light traffic) Scheduled airline service: no Latitude: -17.142799 | 17 8.567963 S | S17 08 34 Longitude: 144.529007 | 144 31.740417 E | E144 31 44 Field elevation: 1,110 ft/338 m MSL
	Mount Garnet	Runway: 4,038 ft (1,231 m) — other (C) — not lighted Type: local airport(light traffic) Scheduled airline service: no

AIRPORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	DETAILS
Queensland	Mount Garnet continued	Latitude: -17.700001 | 17 42.000046 S | S17 42 00 Longitude: 145.149994 | 145 8.999634 E | E145 08 59 Field elevation: 657 ft/200 m MSL
	Kowanyama	Runway: 4,528 x 98 ft (1,380 x 30 m) — paved — lighted Type: regional airport Scheduled airline service: yes Latitude: -15.485600 | 15 29.136028 S | S15 29 08 Longitude: 141.751007 | 141 45.060425 E | E141 45 03 Field elevation: 35 ft/11 m MSL
	Cooktown	Runway: 5,338 x 98 ft (1,627 x 30 m) — paved — lighted Type: regional airport Scheduled airline service: yes Latitude: -15.444700 | 15 26.682014 S | S15 26 40 Longitude: 145.184006 | 145 11.040344 E | E145 11 02 Field elevation: 26 ft/8 m MSL
	Kalpowar	Runway: 4,921 ft (1,500 m) — other (N) — not lighted Type: local airport(light traffic) Scheduled airline service: no Latitude: -14.900000 | 14 53.999977 S | S14 53 59 Longitude: 144.199997 | 144 11.999817 E | E144 11 59
	Pormpuraaw	Runway: 4,462 x 98 ft (1,360 x 30 m) — paved — lighted Type: local airport(light traffic) Scheduled airline service: yes Latitude: -14.896700 | 14 53.801994 S | S14 53 48 Longitude: 141.608994 | 141 36.539612 E | E141 36 32 Field elevation: 10 ft/3 m MSL
	Coen	Runway: 4,107 x 75 ft (1,252 x 23 m) — paved — lighted Type: regional airport Scheduled airline service: yes Latitude: -13.760800 | 13 45.648022 S | S13 45 38 Longitude: 143.113998 | 143 6.839905 E | E143 06 50

AIRPORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	DETAILS
Queensland	Coen continued	Field elevation: 532 ft/162 m MSL
	Aurukun	Runway: 4,140 x 98 ft (1,262 x 30 m) — other (PER) — lighted Type: local airport(light traffic) Scheduled airline service: yes Latitude: -13.353900 | 13 21.233997 S | S13 21 14 Longitude: 141.720993 | 141 43.259583 E | E141 43 15 Field elevation: 31 ft/9 m MSL
	Lockhart River	Runway: 4,919 x 98 ft (1,499 x 30 m) — paved — lighted Type: regional airport Scheduled airline service: yes Latitude: -12.786900 | 12 47.213974 S | S12 47 12 Longitude: 143.304993 | 143 18.299561 E | E143 18 17 Field elevation: 77 ft/23 m MSL
	Weipa	Runway: 5,397 x 98 ft (1,645 x 30 m) — paved — lighted Type: regional airport Scheduled airline service: yes Latitude: -12.678600 | 12 40.716019 S | S12 40 42 Longitude: 141.925003 | 141 55.500183 E | E141 55 30 Field elevation: 63 ft/19 m MSL
	Bamaga Injinoo	Runway: 5,462 x 98 ft (1,665 x 30 m) — paved — lighted Type: local airport(light traffic) Scheduled airline service: yes Latitude: -10.950800 | 10 57.047997 S | S10 57 02 Longitude: 142.459000 | 142 27.539978 E | E142 27 32 Field elevation: 34 ft/10 m MSL
	Horn/Thursday Island	Runway 08/26: 4,557 x 98 ft (1,389 x 30 m) — paved — lighted Runway 14/32: 4,052 x 75 ft (1,235 x 23 m) — paved — lighted Type: regional airport Scheduled airline service: yes Latitude: -10.586400 | 10 35.184002 S | S10 35 11 Longitude: 142.289993 | 142 17.399597 E | E142 17 23

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JURISDICTION	NAME	DETAILS
Queensland	Horn/Thursday Island continued	Field elevation: 43 ft/13 m MSL
	Mornington Island	Runway 09/27: 4,987 x 98 ft (1,520 x 30 m) — other (PER) — lighted Runway 12/30: 2,480 x 59 ft (756 x 18 m) — gravel — not lighted Type: local airport(light traffic) Scheduled airline service: yes Latitude: -16.662500 | 16 39.750023 S | S16 39 45 Longitude: 139.177994 | 139 10.679626 E | E139 10 40 Field elevation: 33 ft/10 m MSL
	Doomadgee	Runway: 5,433 x 98 ft (1,656 x 30 m) — paved — lighted Type: local airport(light traffic) Scheduled airline service: yes Latitude: -17.940300 | 17 56.417999 S | S17 56 25 Longitude: 138.822006 | 138 49.320374 E | E138 49 19 Field elevation: 153 ft/47 m MSL
Western Australia	**Kununurra**	Runway: 6,000 x 98 ft (1,829 x 30 m) — paved — lighted Type: regional airport Scheduled airline service: yes Latitude: -15.778100 | 15 46.686001 S | S15 46 41 Longitude: 128.707993 | 128 42.479553 E | E128 42 28 Field elevation: 145 ft/44 m MSL
	Wyndham	Runway 12/30: 5,272 x 59 ft (1,607 x 18 m) — paved — lighted Runway 18/36: 3,287 x 98 ft (1,002 x 30 m) — gravel — not lighted Type: local airport(light traffic) Scheduled airline service: no Latitude: -15.511400 | 15 30.684013 S | S15 30 41 Longitude: 128.153000 | 128 9.179993 E | E128 09 10 Field elevation: 14 ft/4 m MSL
	Halls Creek	Runway 04/22: 4,839 x 98 ft (1,475 x 30 m) — paved — lighted Runway 08/26: 3,104 x 59 ft (946 x 18 m) — gravel — lighted Type: regional airport

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JURISDICTION	NAME	DETAILS
Western Australia	Halls Creek continued	Scheduled airline service: no Latitude: -18.233900 | 18 14.034004 S | S18 14 02 Longitude: 127.669998 | 127 40.199890 E | E127 40 11 Field elevation: 1,346 ft/410 m MSL
	Fitzroy Crossing	Runway: 4,265 x 98 ft (1,300 x 30 m) — paved — lighted Type: regional airport Scheduled airline service: no Latitude: -18.181900 | 18 10.914001 S | S18 10 54 Longitude: 125.558998 | 125 33.539886 E | E125 33 32 Field elevation: 368 ft/112 m MSL
	Derby	Runway 05/23: 3,799 x 59 ft (1,158 x 18 m) — gravel — lighted Runway 11/29: 5,696 x 98 ft (1,736 x 30 m) — paved — lighted Type: regional airport Scheduled airline service: no Latitude: -17.370001 | 17 22.200050 S | S17 22 12 Longitude: 123.661003 | 123 39.660187 E | E123 39 39 Field elevation: 24 ft/7 m MSL
	Broome	Runway: 8,064 x 148 ft (2,458 x 45 m) — paved — lighted Type: regional airport Scheduled airline service: yes Latitude: -17.944700 | 17 56.682014 S | S17 56 40 Longitude: 122.232002 | 122 13.920135 E | E122 13 55 Field elevation: 56 ft/17 m MSL
	Port Hedland	Runway 14/32: 8,202 x 148 ft (2,500 x 45 m) — paved — lighted Runway 18/36: 3,281 x 59 ft (1,000 x 18 m) — paved — not lighted Type: regional airport Scheduled airline service: yes Latitude: -20.377800 | 20 22.667999 S | S20 22 40 Longitude: 118.625999 | 118 37.559967 E | E118 37 33 Field elevation: 33 ft/10 m MSL

AIRPORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	DETAILS
Western Australia	**Marble Bar**	Runway 09/27: 4,009 ft (1,222 m) — other (X) — not lighted Runway 17/35: 3,454 ft (1,053 m) — other (X) — not lighted Type: local airport(light traffic) Scheduled airline service: no Latitude: -21.163300 | 21 9.797974 S | S21 09 47 Longitude: 119.833000 | 119 49.980011 E | E119 49 58 Field elevation: 194 ft/59 m MSL
	Nullagine	Runway: 4,002 ft (1,220 m) — other (SU) — not lighted Type: local airport(light traffic) Scheduled airline service: no Latitude: -21.913300 | 21 54.797974 S | S21 54 47 Longitude: 120.197998 | 120 11.879883 E | E120 11 52 Field elevation: 381 ft/116 m MSL
	Newman	Runway: 6,798 x 98 ft (2,072 x 30 m) — paved — lighted Type: regional airport Scheduled airline service: yes Latitude: -23.417801 | 23 25.068054 S | S23 25 04 Longitude: 119.803001 | 119 48.180084 E | E119 48 10 Field elevation: 1,724 ft/525 m MSL
	Paraburdoo	Runway: 6,995 x 148 ft (2,132 x 45 m) — paved — lighted Type: regional airport Scheduled airline service: yes Latitude: -23.171101 | 23 10.266037 S | S23 10 15 Longitude: 117.745003 | 117 44.700165 E | E117 44 42 Field elevation: 1,406 ft/429 m MSL
	Onslow	Runway 01/19: 4,494 ft (1,370 m) — other (X) — not lighted Runway 12/30: 3,257 ft (993 m) — other (X) — not lighted Type: local airport(light traffic) Scheduled airline service: no Latitude: -21.668301 | 21 40.098038 S | S21 40 05 Longitude: 115.112999 | 115 6.779938 E | E115 06 46

AIRPORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	DETAILS
Western Australia	Onslow continued	Field elevation: 7 ft/2 m MSL
	Learmonth	Runway: 9,997 x 148 ft (3,047 x 45 m) — paved — lighted Type: regional airport Scheduled airline service: yes Latitude: -22.235600 | 22 14.135971 S | S22 14 08 Longitude: 114.088997 | 114 5.339813 E | E114 05 20 Field elevation: 19 ft/6 m MSL
	Curtin	Runway: 10,003 x 148 ft (3,049 x 45 m) — paved — lighted Type: regional airport Scheduled airline service: no Latitude: -17.581400 | 17 34.883995 S | S17 34 53 Longitude: 123.828003 | 123 49.680176 E | E123 49 40 Field elevation: 300 ft/91 m MSL

FOSSIL ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS	
Northern Territory	Alice Springs	133.8899	-23.7109	Ron Goodin Power Station: 3x5.5MW diesel 74; 2x1.9MW diesel 78; 3x4.2MW Gas/Diesel Recip 87; 11.7MW 88; 2x3MW diesel (8.7MW diesel on Brewer Estate 97). A 10.1MW $10.5M generator installed 05. At Owen Springs 3 dual fuel reciprocating engines were commissioned in 2011.	
				Fuel Type:	Gas/Other
				Status:	Baseload/Peaking
				Technology:	Gas Turbine/Reciprocating Engine
				Total MW capacity:	58.7
				Commission:	74/78/87/88/97/05/11
	Berrimah	130.9204	-12.42645	**Fuel Type:**	Gas
				Status:	Peaking
				Technology:	Gas Turbine
				No Turbines:	2
				Turbine Capacity:	15
				Total MW capacity:	30
				Commission:	1979
	Channel Island	130.8689	-12.555	**Fuel Type:**	Gas/Other
				Status:	Baseload/Peaking
				Technology:	Gas Turbine Combined Cycle
				Total MW capacity:	255
				Commission:	1986/2000
	Gove	136.78	-12.18	3x38.6MW CCGT 1986; 2x31.6MW GT; 1x32MW Diesel/Gas; 1x44MW Gas 2000.	
				Fuel Type:	Other
				Status:	Baseload
				Technology:	Steam Turbine
				No Turbines:	3
				Turbine Capacity:	35
				Total MW capacity:	105
				Commission:	1971
	Katherine	132.24387	-14.45945	**Fuel Type:**	Gas/Other
				Status:	Baseload/Peaking
				Technology:	Gas Turbine/Reciprocating Engine

FOSSIL ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS	
Northern Territory	Katherine continued			**Total MW capacity:**	28
				Commission:	1976, 87, 91/94
	McArthur River	136.068	-16.4136	2MW Diesel 1976, 1.7MW Diesel 1987, 3x8MW GT	
				Fuel Type:	Gas/Other
				Status:	Baseload/Backup
				Technology:	Gas Turbine/Reciprocating Engine
				No Turbines:	No Turbines:
				Total MW capacity:	21
				Commission:	1995/96
	Pine Creek	131.8621	-13.7849	3x4MW GT 1995, 0.95MW Diesel 1995, 3x2.8MW GT 1995/96	
				Fuel Type:	Gas
				Status:	Baseload/Peaking
				Technology:	Gas Turbine Combined Cycle/Gas Turbine
				Total MW capacity:	49
				Commission:	1989,95,96
	Mt Todd	132.13	-14.13	4x3MW GT 1989, 1x10MW GT 1995; 27MW CCGT 1996	
				Fuel Type:	Gas
				Status:	Not operating
				Technology:	Gas Turbine
				No Turbines:	1
				Turbine Capacity:	35
				Total MW capacity:	35
	Wickham Point	130.859	-12.508	**Fuel Type:**	Gas
				Status:	Baseload
				Technology:	Gas Turbine
				Total MW capacity:	188
				Commission:	2006
	Weddell	130.87	-12.56	**Fuel Type:**	Gas
				Status:	Operating
				Technology:	Gas Turbine
				No Turbines:	2

FOSSIL ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS
Northern Territory	Weddell continued			**Turbine Capacity:** 39 **Total MW capacity:** 78 **Commission:** 2008
	Jabiru	132.834	-12.675	**Fuel Type:** Distillate **Status:** Operating **Technology:** Reciprocating Engine and Steam Turbine **Total MW capacity:** 28 **Commission:** 1981
Queensland	**Mica Creek A,B&C**	139.4926	-20.7768	Converted from coal to gas 1999. 1x30MW, 3x33MW steam turbines, 4x35MW GT & 1x36MW & 1x20MW waste heat turbines **Fuel Type:** Gas **Status:** Baseload **Technology:** Steam Turbine **No Turbines:** 10 **Total MW capacity:** 325 **Commission:** 1960 to 1999
	Barcaldine	145.31269	-23.55163	1x38MW GT and 1x15MW Steam Turbine **Fuel Type:** Gas **Status:** Baseload **Technology:** Gas Turbine Combined Cycle **Total MW capacity:** 55 **Commission:** 1995/96 &99
	Cannington	140.9167	-21.8593	450MW completed 7/01 and the 2nd 450MW completed 11/01. **Fuel Type:** Gas **Status:** Baseload **Technology:** Cogeneration **Total MW capacity:** 38.13 **Commission:** 1997
	Collinsville	147.8069	-20.5434	**Fuel Type:** Black Coal **Status:** Baseload/Backup **Technology:** Steam Turbine **Total MW capacity:** 180

FOSSIL ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS
Queensland	Collinsville continued			**Commission:** 1968 + 1998 Refurbished
	Ernest Henry	140.7	-20.44	Refurbished 1998. 4x30MW and 1x60MW. An intermediate plant that shuts on weekends **Fuel Type:** Other **Status:** Backup **Technology:** Reciprocating Engine **Total MW capacity:** 32 **Commission:** 1997 **Commission:** 1976/82
	Mackay	149.159	-21.145	1x15MW GT 1976 (oil fired); 6x280MW 76/82 (black coal fired) **Fuel Type:** Distillate **Status:** Peaking **Technology:** Gas Turbine **No Turbines:** 1 **Turbine Capacity:** 34 **Total MW capacity:** 34 **Commission:** 1975
	Mines Station - Mt Isa	139.47818	-20.72453111	**Fuel Type:** Gas **Status:** Backup **Technology:** Gas Turbine **Total MW capacity:** 45 **Commission:** Unknown
	Rockhampton	150.53	-23.37	**Fuel Type:** Gas **Status:** Peaking **Technology:** Gas Turbine **No Turbines:** 1 **Turbine Capacity:** 25 **Total MW capacity:** 25 **Commission:** 1967

FOSSIL ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS	
Queensland	Stanwell	150.315	-23.5095	**Fuel Type:**	Black Coal
				Status:	Baseload
				Technology:	Steam Turbine
				No Turbines:	4
				Turbine Capacity:	350
				Total MW capacity:	1400
				Commission:	1993/96
	Weipa	141.88	-12.65	**Fuel Type:**	Other
				Status:	Baseload
				Technology:	Reciprocating Engine
				No Turbines:	
				Turbine Capacity:	
				Total MW capacity:	26
				Commission:	2005
	Yabulu	146.6	-19.25	3x12.5MW	
				Fuel Type:	Black Coal
				Status:	Baseload
				Technology:	Steam (cogeneration)
				Total MW capacity:	38
				Commission:	1974
	Yabulu	146.61901	-19.20097	Converted to a 220MW GTCC plant in 2004	
				Fuel Type:	Gas
				Status:	Baseload
				Technology:	Gas Turbine Combined Cycle
				Total MW capacity:	220
				Commission:	1999, converted 2005
	Mt Stuart	146.8501	-19.3398	Uses Kerosene. 288MW commissioned in 1998. 2xMitsubishi 710D Gas Turbines. A $92M 126MW expansion completed 2010	
				Fuel Type:	Other
				Status:	Peaking
				Technology:	Gas Turbine
				No Turbines:	2

FOSSIL ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS	
Queensland	Mt Stuart continued			**Total MW capacity:**	414
				Commission:	1998 & 2010
	Phosphate Hill	139.97	-21.9	Closed cycle 4x4.5MW GT, 1x8.5MW Steam Turbine; Open cycle 1x3.8MW & 1x4.5MW GT; Cogen 3.5MW; Diesels 3.6MW	
				Fuel Type:	Gas
				Status:	Baseload
				Technology:	Gas Turbine
				Total MW capacity:	42
				Commission:	1999
	German Creek	148.56	-22.94	**Fuel Type:**	Gas
				Status:	Operating
				Technology:	Reciprocating Engine
				No Turbines:	16
				Turbine Capacity:	2
				Total MW capacity:	32
				Commission:	2006
	Blackwater	148.887	-23.576	**Fuel Type:**	Gas
				Status:	Under Construction
				Technology:	Gas Turbine
				Total MW capacity:	30
				Commission:	2011
	Moranbah North	147.975	-21.85	Uses 15 engines	
				Fuel Type:	Gas
				Status:	Operating
				Technology:	Reciprocating Engine
				Total MW capacity:	45
				Commission:	2008
Western Australia	**Cloud Break**	119.396	-22.303	**Fuel Type:**	Gas
				Status:	Operating
				Technology:	Gas Turbine
				Total MW capacity:	45

FOSSIL ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS	
Western Australia	Cloud Break continued			**Commission:**	2008
	Argyle	128.40355	-16.7168	**Fuel Type:**	Other
				Status:	Baseload
				Technology:	Reciprocating Engine
				Total MW capacity:	20
				Commission:	Unknown
	Cape Lambert	117.17	-20.6	**Fuel Type:**	Gas
				Status:	Baseload
				Technology:	Gas Turbine Combined Cycle
				No Turbines:	3
				Turbine Capacity:	35
				Total MW capacity:	105
				Commission:	Unknown
	Dampier C	116.72	-20.65	**Fuel Type:**	Gas
				Status:	Baseload
				Technology:	Steam Turbine
				Total MW capacity:	120
				Commission:	1970
	Newman	119.7086	-23.344	**Fuel Type:**	Gas
				Status:	Baseload/Backup
				Technology:	Gas Turbine
				No Turbines:	3
				Turbine Capacity:	36
				Total MW capacity:	108
				Commission:	1996
	Paraburdoo	117.6	-23.24	**Fuel Type:**	Distillate
				Status:	Peaking
				Technology:	Reciprocating Engine
				Total MW capacity:	20
				Commission:	1985

FOSSIL ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS
Western Australia	Port Hedland	118.5498	-20.4283	3x36MW GT 1996 and 2x36MW GT 1998 **Fuel Type:** Gas **Status:** Baseload/Peaking **Technology:** Gas Turbine **No Turbines:** 5 **Turbine Capacity:** 36 **Total MW capacity:** 180 **Commission:** 1996/98
	Dampier	116.81	-20.58	**Fuel Type:** Gas **Status:** Baseload **Technology:** Steam Turbine **No Turbines:** 3 **Turbine Capacity:** 40 **Total MW capacity:** 120 **Commission:** Unknown
	Broome	122.24	-17.99	**Fuel Type:** Gas **Status:** Operating **Technology:** Gas Turbine **Total MW capacity:** 39.9 **Commission:** 2007
	Cape Preston	116.206	-20.833	450MW Power Station. Desalination will produce 51 Giga litres of water per annum **Fuel Type:** Gas **Status:** Operating **Technology:** Gas Turbine Combined Cycle **Total MW capacity:** 450 **Commission:** 2009
	Telfer	122.21	-21.723	3xLM600 Gas Turbines. Back-up 20MW diesel power station **Fuel Type:** Gas **Status:** Operating **Technology:** Gas Turbine

FOSSIL ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS	
Western Australia	Telfer continued			**No Turbines:**	3
				Turbine Capacity:	47
				Total MW capacity:	141
				Commission:	2004
	Nifty	121.571	-21.658	A GE TM2500 Gas Turbine power plant	
				Fuel Type:	Gas
				Status:	Operating
				Technology:	Gas Turbine
				Total MW capacity:	22.8
				Commission:	2006
	Burrup Peninsula	116.82	-20.586	**Fuel Type:**	Gas
				Status:	Operating
				Technology:	Steam Turbine
				No Turbines:	2
				Total MW capacity:	40
				Commission:	2006
	Karratha - ATCO	116.957	-20.831	86MW gas fired power station	
				Fuel Type:	Gas
				Status:	Operating
				Technology:	Gas Turbine
				No Turbines:	2
				Total MW capacity:	86
				Commission:	2010
	Karratha - 7 Mile	116.857	-20.731	**Fuel Type:**	Gas
				Status:	Operating
				Technology:	Gas Turbine
				Total MW capacity:	250
				Commission:	2010

RENEWABLE ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS
Northern Territory	Akanta	132.82	-24.52	150x80W PV System **Fuel Type:** Solar **Technology:** Photovoltaic **Total kW Capacity:** 12 **Status:** Operating **Commission:** 2005
	Alice Springs Airport	133.90	-23.80	A 235kW SolFocus SF-1100S concentrator photovoltaic array **Fuel Type:** Solar **Technology:** Concentrator Photovoltaic **No. Turbines:** 28 **Turbine kW Capacity:** 8.4 **Total kW Capacity:** 235 **Status:** Operating **Commission:** 2010
	Alyuen	133.34	-22.64	75x165W PV System **Fuel Type:** Solar **Technology:** Photovoltaic **Total kW Capacity:** 12.38 **Status:** Operating **Commission:** 2006
	Bradshaw	130.44	-15.55	112.5kW flat plate photovoltaic solar array **Fuel Type:** Solar **Technology:** Photovoltaic **Total kW Capacity:** 112.5 **Status:** Operating **Commission:** 2005
	Bulman	134.32	-13.66	**Fuel Type:** Solar **Technology:** Photovoltaic **No. Turbines:** 800 **Turbine kW Capacity:** 70 **Total kW Capacity:** 56 **Status:** Operating

RENEWABLE ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS	
Northern Territory	Bulman continued			**Commission:**	2002
	Coniston Station	132.50	-22.05	80x80W system for homestead power and 5x0.525kW for water pumping systems	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	10
				Status:	Operating
				Commission:	2001
	Connells Lagoon	136.54	-18.88	15.75kW solar PV system	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	15.75
				Status:	Operating
				Commission:	2008
	Corkwood Bore	134.86	-23.31	Seven Bushlight systems installed (12.6 kW)	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	13
				Status:	Operating
				Commission:	2004
	Emu Springs	134.85	-13.15	140x80W PV System	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	11.2
				Status:	Operating
				Commission:	2005
	Epenarra	135.25	-20.43	80kW Lagerwey wind turbine	
				Fuel Type:	Wind
				Technology:	Turbine
				No. Turbines:	1
				Turbine kW Capacity:	80
				Total kW Capacity:	80
				Status:	Operating

RENEWABLE ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS
Northern Territory	Fitzroy Station	130.93	-15.56	9.6kW PV array **Fuel Type:** Solar **Technology:** Photovoltaic **Total kW Capacity:** 9.6 **Status:** Operating **Commission:** 2007
	Gurrumurru	136.23	-12.59	160x80W PV System **Fuel Type:** Solar **Technology:** Photovoltaic **Total kW Capacity:** 12.8 **Status:** Operating **Commission:** 2005
	Hermannsburg	132.77	-23.93	Installation of 30 solar dishes **Fuel Type:** Solar **Technology:** Photovoltaic and mirrors **No. Turbines:** 8 **Turbine kW Capacity:** 24 **Total kW Capacity:** 192 **Status:** Operating **Commission:** 2005
	Irrerlirre	135.13	-22.84	95x155W PV System **Fuel Type:** Solar **Technology:** Photovoltaic **Total kW Capacity:** 14.7 **Status:** Operating **Commission:** 2006
	Ji-Benna	134.48	-12.33	11.7kW PV array **Fuel Type:** Solar

RENEWABLE ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS
Northern Territory	Ji-Benna continued			**Technology:** Photovoltaic **Total kW Capacity:** 11.7 **Status:** Operating **Commission:** 2007
	Jilkminggan	133.00	-15.00	**Fuel Type:** Solar **Technology:** Photovoltaic **Total kW Capacity:** 17 **Status:** Operating
	Kangaroo Flats	130.82	-12.78	18.4kW flat plate photovoltaic solar array **Fuel Type:** Solar **Technology:** Photovoltaic **Total kW Capacity:** 18.4 **Status:** Operating **Commission:** 2004
	Kapalga	132.37	-12.69	12.8kW solar PV system **Fuel Type:** Solar **Technology:** Photovoltaic **Total kW Capacity:** 12.8 **Status:** Operating **Commission:** 2008
	Kewulyi	134.02	-14.93	11.7kW PV system **Fuel Type:** Solar **Technology:** Photovoltaic **Total kW Capacity:** 11.7 **Status:** Operating **Commission:** 2008
	Kings Canyon	131.50	-24.25	**Fuel Type:** Solar **Technology:** Photovoltaic **Total kW Capacity:** 241 **Status:** Operating **Commission:** 2003

RENEWABLE ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS	
Northern Territory	Lajamanu	130.63	-18.32	Solar dishes	
				Fuel Type:	Solar
				Technology:	Photovoltaic and mirrors
				No. Turbines:	12
				Turbine kW Capacity:	24
				Total kW Capacity:	288
				Status:	2005
				Commission:	Operating
	Lingarra	130.64	-16.48	A 280x75W solar array	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	28.39
				Status:	Operating
				Commission:	2001, 2007
	Mata Mata	136.27	-12.07	170x80W PV System	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	13.6
				Status:	Operating
				Commission:	2005
	Milibundurra-Sandridge	136.42	-15.96	Solar PV System	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				No. Turbines:	120
				Total kW Capacity:	9.2
				Status:	Operating
				Commission:	2004
	Mirrnatja	135.19	-12.65	9.6kW PV System	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	9.6

RENEWABLE ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS	
Northern Territory	Mirrnatja continued			**Status:**	Operating
				Commission:	2006
	Mulga Bore	134.21	-22.45	240x85W PV System	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	20.4
				Status:	Operating
				Commission:	2005
	Mungalawarru	133.59	-19.38	16.8kW solar PV system	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	16.8
				Status:	Operating
				Commission:	2008
	Murrungga	134.92	-12.10	65x160W PV System	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	10.4
				Status:	Operating
				Commission:	2006
	Paradise Farm	132.53	-12.93	11.7kW solar PV system	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	11.7
				Status:	Operating
				Commission:	2008
	Patonga Homestead	132.58	-12.96	10.55kW solar PV system	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	10.55
				Status:	Operating

RENEWABLE ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS	
Northern Territory	Patonga Homestead continued			**Commission:**	2008
	Shoal Bay	130.93	-12.39	**Fuel Type:**	Biomass (landfill methane)
				Technology:	Reciprocating Engine
				Total kW Capacity:	1100
				Status:	Operating
				Commission:	2005
	Spring Peak	132.45	-12.96	14.3kW PV system	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	14.3
				Status:	Operating
				Commission:	2008
	Ukaka	132.38	-24.60	**Fuel Type:**	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	20
				Status:	Operating
				Commission:	2007
	Ulpanyali	131.50	-24.23	14.4kW solar PV system	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	14.4
				Status:	Operating
				Commission:	2008
	Urlampe	137.74	-22.49	56x165W PV System	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	9.24
				Status:	Operating
				Commission:	2006
	Wada Warra	136.25	-15.75	PV System	
				Fuel Type:	Solar

RENEWABLE ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS	
Northern Territory	Wada Warra continued			**Technology:**	Photovoltaic
				Total kW Capacity:	12.8
				Status:	Operating
				Commission:	2006
	Wuyagiba	135.52	-14.62	60x175W PV System	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	10.5
				Status:	Operating
				Commission:	2006
	Yenbakwa	136.46	-14.22	120x80W PV System	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	9.6
				Status:	Operating
				Commission:	2006
	Yuendumu	131.79	-22.24	Solar dishes	
				Fuel Type:	Solar
				Technology:	Photovoltaic and mirrors
				No. Turbines:	8
				Turbine kW Capacity:	24
				Total kW Capacity:	192
				Status:	Operating
				Commission:	2005
Queensland	**Babinda**	145.92	-17.34	**Fuel Type:**	Biomass (bagasse)
				Technology:	Steam Turbine
				Total kW Capacity:	6000
				Status:	Operating
	Barron Gorge	145.65	-16.85	**Fuel Type:**	Hydro
				Technology:	Turbine
				No. Turbines:	2

RENEWABLE ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS	
Queensland	Barron Gorge continued			**Turbine kW Capacity:**	30000
				Total kW Capacity:	60000
				Status:	Operating
				Commission:	1963
	Coconut Is	143.08	-10.06	**Fuel Type:**	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	25
				Status:	Operating
				Commission:	1996
	Emerald	148.16	-23.52	**Fuel Type:**	Solar
				Technology:	Photovoltaic
				No. Turbines:	12
				Turbine kW Capacity:	3
				Total kW Capacity:	36
				Status:	Operating
				Commission:	2004
	Farleigh	149.10	-21.10	**Fuel Type:**	Biomass (bagasse)
				Technology:	Steam Turbine
				Total kW Capacity:	13000
				Status:	Operating
	Hidden Valley	146.05	-18.97	90x130W solar panels	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				No. Turbines:	90
				Turbine kW Capacity:	11.7
				Total kW Capacity:	2008
				Status:	Operating
	Inkerman	147.40	-19.64	1963 2MW; 1976 10MW	
				Fuel Type:	Biomass (bagasse)
				Technology:	Steam Turbine
				Total kW Capacity:	12000

RENEWABLE ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS	
Queensland	Inkerman continued			**Status:**	Operating
				Commission:	1963 & 1976
	Inkerman Station	141.42	-16.23	18kW combined solar/wind generation system	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	10
				Status:	Operating
				Commission:	2002
	Invicta	147.11	-19.52	**Fuel Type:**	Biomass (bagasse)
				Technology:	Steam Turbine
				Total kW Capacity:	50000
				Status:	Operating
				Commission:	1976, 95 & 96
	Kalamia	147.42	-19.52	**Fuel Type:**	Biomass (bagasse)
				Technology:	Steam Turbine
				Total kW Capacity:	9000
				Status:	Operating
				Commission:	1976
	Kareeya	145.58	-17.77	4x18MW plus 1x7MW	
				Fuel Type:	Hydro
				Technology:	Turbine
				Total kW Capacity:	86400
				Status:	Operating
				Commission:	1957/59/2000
	Koombooloomba Dam	145.60	-17.83	**Fuel Type:**	Hydro
				Technology:	Turbine
				Total kW Capacity:	7000
				Status:	Operating
				Commission:	2000
	Macknade	146.25	-18.58	**Fuel Type:**	Biomass (bagasse)
				Technology:	Steam Turbine

RENEWABLE ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS	
Queensland	Macknade continued			**Total kW Capacity:**	3000
				Status:	Operating
				Commission:	1965
	Magnetic Island	146.82	-19.14	**Fuel Type:**	Solar
				Technology:	Photovoltaic
				No. Turbines:	500
				Total kW Capacity:	1000
				Status:	Operating
				Commission:	2007-2010
	Marian	148.95	-21.15	**Fuel Type:**	Biomass (bagasse)
				Technology:	Steam Turbine
				Total kW Capacity:	18000
				Status:	Operating
				Commission:	1967, 76 & 78
	Mornington Island	139.40	-16.55	Four separate solar PV systems	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	14.45
				Status:	2004/05
				Commission:	Operating
	Mossman	145.46	-16.53	**Fuel Type:**	Biomass (bagasse)
				Technology:	Steam Turbine
				Total kW Capacity:	11000
				Status:	Operating
				Commission:	1954, 64 & 95
	Mourilyan	146.03	-17.58	**Fuel Type:**	Biomass (bagasse)
				Technology:	Steam Turbine
				Total kW Capacity:	4250
				Status:	Operating
	Mulgrave	145.78	-17.12	**Fuel Type:**	Biomass (bagasse)
				Technology:	Steam Turbine

RENEWABLE ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS	
Queensland	Mulgrave continued			**Total kW Capacity:**	10500
				Status:	Operating
				Commission:	1970
	North Keppel Island	150.90	-23.07	**Fuel Type:**	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	30
				Status:	Operating
				Commission:	1996 & 2004
	Paradise Dam	151.92	-25.35	**Fuel Type:**	Hydro
				Technology:	Turbine
				Total kW Capacity:	2790
				Status:	Operating
				Commission:	2007
	Pastoral Property	140.10	-23.00	10kW Westwind turbine	
				Fuel Type:	Wind
				Technology:	Turbine
				No. Turbines:	1
				Turbine kW Capacity:	10
				Total kW Capacity:	10
				Status:	Operating
	Pioneer	147.33	-19.53	**Fuel Type:**	Biomass (bagasse)
				Technology:	Steam Turbine
				Total kW Capacity:	7200
				Status:	Operating
				Commission:	1958, 63 & 76
	Pioneer 2	147.36	-19.55	63MW bagasse fored power plant	
				Fuel Type:	Biomass (bagasse)
				Technology:	Steam Turbine
				Total kW Capacity:	63000
				Status:	2005
				Commission:	Operating

RENEWABLE ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS	
Queensland	Plane Creek	149.22	-21.43	**Fuel Type:**	Biomass (bagasse)
				Technology:	Steam Turbine
				Total kW Capacity:	20000
				Status:	Operating
				Commission:	1970&1997
	Pleystowe	149.03	-21.15	**Fuel Type:**	Biomass (bagasse)
				Technology:	Steam Turbine
				Total kW Capacity:	10100
				Status:	1966 & 1975
				Commission:	Operating
	Port Stewart	143.69	-14.07	Moojeeba (16.4kW) and Theethinji (11.9kW) PV installations	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	28.3
				Status:	Operating
				Commission:	2008
	Proserpine	148.58	-20.40	**Fuel Type:**	Biomass (bagasse)
				Technology:	Steam Turbine
				Total kW Capacity:	16000
				Status:	Operating
				Commission:	1974,78 & 99
	Public Schools Qld	145.78	-16.92	**Fuel Type:**	Solar
				Technology:	Photovoltaic
				No. Turbines:	17
				Turbine kW Capacity:	3
				Total kW Capacity:	51
				Status:	Operating
				Commission:	2000-03
	Racecourse	149.13	-21.17	**Fuel Type:**	Biomass (bagasse)
				Technology:	Steam Turbine
				Total kW Capacity:	10500

RENEWABLE ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS	
Queensland	Racecourse continued			**Status:**	Operating
				Commission:	1968 & 1982
	Silver Plains	143.55	-13.98	9.12kW array	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	9.12
				Status:	Operating
				Commission:	2007
	South Johnstone	146.00	-17.60	**Fuel Type:**	Biomass (bagasse)
				Technology:	Steam Turbine
				Total kW Capacity:	11500
				Status:	Operating
				Commission:	1997
	Tableland	145.42	-17.00	**Fuel Type:**	Biomass (bagasse)
				Technology:	Steam Turbine
				Total kW Capacity:	7000
				Status:	Operating
				Commission:	1998
	Thursday Island	142.23	-10.58	**Fuel Type:**	Wind
				Technology:	Turbine
				No. Turbines:	2
				Turbine kW Capacity:	225
				Total kW Capacity:	450
				Status:	Operating
				Commission:	1998
	Ti Tree	152.74	-27.57	**Fuel Type:**	Biomass (biogas)
				Technology:	Reciprocating Engine
				No. Turbines:	2
				Total kW Capacity:	2200
				Status:	Operating
				Commission:	2008

RENEWABLE ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS	
Queensland	Tinaroo Dam	145.55	-17.16	1.6MW mini-hydro	
				Fuel Type:	Hydro
				Technology:	Turbine
				Total kW Capacity:	1600
				Status:	Operating
				Commission:	2004
	Townsville	146.86	-19.29	115kw unit	
				Fuel Type:	Biomass (sewage methane)
				Technology:	Reciprocating Engine
				Total kW Capacity:	270
				Status:	Operating
				Commission:	2000
	Tully	145.93	-17.93	**Fuel Type:**	Biomass (bagasse)
				Technology:	Steam Turbine
				Total kW Capacity:	21400
				Status:	Operating
				Commission:	1956, 65, 75 & 97
	Tully (biogas)	145.85	-17.95	**Fuel Type:**	Biomass (digester gas)
				Technology:	Reciprocating Engine
				Total kW Capacity:	10
				Status:	Operating
				Commission:	2010
	University of Qld	153.01	-27.50	A 10kW solar research array	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	10
				Status:	Operating
	Victoria	148.97	-21.23	**Fuel Type:**	Biomass (bagasse)
				Technology:	Steam Turbine
				Total kW Capacity:	11800
				Status:	Operating
				Commission:	1965 & 1976

RENEWABLE ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS
Queensland	Westerton & Mutti Stations	142.83	-24.05	Comprising hybrid diesel battery PV (5kW array) and 3kW wind turbine" **Fuel Type:** Solar **Technology:** Photovoltaic **No. Turbines:** 2 **Turbine kW Capacity:** 5 **Total kW Capacity:** 10 **Status:** Operating **Commission:** 2003
	Windorah	142.51	-25.48	5 mirrored solar concentrators 14m in diameter **Fuel Type:** Solar **Technology:** Solar Concentrator **No. Turbines:** 5 **Turbine kW Capacity:** 35 **Total kW Capacity:** 175 **Status:** Operating **Commission:** 2008
	Windy Hill	145.53	-17.59	**Fuel Type:** Wind **Technology:** Turbine **No. Turbines:** 12 **Turbine kW Capacity:** 1000 **Total kW Capacity:** 12000 **Status:** Operating **Commission:** 2000
Western Australia	10 Mile Lagoon	121.76	-33.89	Vestas V27 wind turbines **Fuel Type:** Wind **Technology:** Turbine **No. Turbines:** 9 **Turbine kW Capacity:** 225 **Total kW Capacity:** 2025 **Status:** Operating **Commission:** 1993

RENEWABLE ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS	
Western Australia	Armadale	116.00	-32.15	**Fuel Type:**	Wind
				Technology:	Turbine
				No. Turbines:	1
				Turbine kW Capacity:	30
				Total kW Capacity:	30
				Status:	Operating
				Commission:	1997
	Balginjirr	123.79	-17.90	13.5kW PV array	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	13.5
				Status:	Operating
				Commission:	2007
	Broome 2	122.24	-17.91	**Fuel Type:**	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	40
				Status:	Operating
				Commission:	Unknown
	Carnarvon	113.72	-24.90	**Fuel Type:**	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	15.84
				Status:	Operating
				Commission:	2005
	Chile Creek	122.87	-16.53	9.6kW array	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	9.6
				Status:	Operating
				Commission:	2007
	Cocos Island	96.90	-12.12	turbines	
				Fuel Type:	Wind
				Technology:	Turbine

RENEWABLE ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS	
Western Australia	Cocos Island continued			**No. Turbines:**	4
				Turbine kW Capacity:	20
				Total kW Capacity:	80
				Status:	Operating
				Commission:	2005
	Collgar	142.55	-37.64	270MW wind farm	
				Fuel Type:	Wind
				Technology:	Turbine
				No. Turbines:	111
				Total kW Capacity:	270000
				Status:	Operating
				Commission:	2012
	Coral Bay	113.77	-23.16	7x320kW diesel generators & 3x200kW Vernet turbines	
				Fuel Type:	Wind
				Technology:	Turbine
				No. Turbines:	3
				Turbine kW Capacity:	200
				Total kW Capacity:	600
				Status:	Operating
				Commission:	2007
	Denham	113.54	-25.92	3x230kW wind turbines	
				Fuel Type:	Wind
				Technology:	Turbine
				No. Turbines:	4
				Total kW Capacity:	990
				Status:	Operating
				Commission:	1998 & 1999 & 2007
	Exmouth	114.13	-21.93	**Fuel Type:**	Wind
				Technology:	Turbine
				Total kW Capacity:	75
				Status:	Operating

RENEWABLE ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS	
Western Australia	Exmouth continued			**Commission:**	2001
	Garden Island	115.66	-32.20	**Fuel Type:**	Ocean (wave)
				Technology:	Turbine
				Total kW Capacity:	5000
				Status:	Operating
				Commission:	2011
	Hamersley Iron	117.79	-22.69	**Fuel Type:**	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	151
				Status:	Operating
				Commission:	2003
	Hamersley Station	117.68	-22.28	A solar/diesel hybrid system icludes 260 solar panels and a 53kVA diesel generator	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				No. Turbines:	260
				Total kW Capacity:	31
				Status:	Operating
				Commission:	2005
	Kalbarri	114.17	-27.71	**Fuel Type:**	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	20
				Status:	Operating
				Commission:	1995
	Kalbarri 2	114.17	-27.71	Wind farm consisting of 2x800kW turbines	
				Fuel Type:	Wind
				Technology:	Turbine
				No. Turbines:	2
				Turbine kW Capacity:	800
				Total kW Capacity:	1600
				Status:	Operating
				Commission:	2007

RENEWABLE ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS
Western Australia	Kandiwal	125.84	-14.82	130x80W PV System **Fuel Type:** Solar **Technology:** Photovoltaic **Total kW Capacity:** 10.4 **Status:** Operating **Commission:** 2006
	Kununurra	128.74	-15.77	**Fuel Type:** Solar **Technology:** Photovoltaic **Total kW Capacity:** 11.2 **Status:** Operating **Commission:** 2005
	Marble Bar	119.75	-21.17	303.75kW solar PV array for hybrid solar-diesel plant with 1350x225W Sunpower Modules **Fuel Type:** Solar **Technology:** Photovoltaic **No. Turbines:** 1350 **Turbine kW Capacity:** 0.225 **Total kW Capacity:** 303.75 **Status:** Operating **Commission:** 2010
	Mornington	126.11	-17.52	Solar array 192x165 watt panels **Fuel Type:** Solar **Technology:** Photovoltaic **No. Turbines:** 192 **Turbine kW Capacity:** 0.165 **Total kW Capacity:** 31.68 **Status:** Operating **Commission:** 2007
	Mount House	125.71	-17.05	158 panel system **Fuel Type:** Solar **Technology:** Photovoltaic **No. Turbines:** 158 **Turbine kW Capacity:** 0.165

RENEWABLE ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS
Western Australia	Mount House continued			**Total kW Capacity:** 26.2 **Status:** 2006 **Commission:** Operating
	Mt Newman rail line	119.00	-22.00	**Fuel Type:** Solar **Technology:** Photovoltaic **No. Turbines:** 70 **Turbine kW Capacity:** 1 **Total kW Capacity:** 75 **Status:** Operating
	Murdoch University 2	115.84	-32.14	Westwind turbine on a 36m tiltable tower **Fuel Type:** Wind **Technology:** Turbine **Total kW Capacity:** 20 **Status:** Operating **Commission:** 1999
	Nullagine	120.11	-21.89	202.5kW solar PV array with 900x225W Sunpower Modules **Fuel Type:** Solar **Technology:** Photovoltaic **No. Turbines:** 900 **Turbine kW Capacity:** 0.225 **Total kW Capacity:** 202.5 **Status:** Operating **Commission:** 2010
	Ord River	128.74	-16.12	**Fuel Type:** Hydro **Technology:** Turbine **Total kW Capacity:** 30000 **Status:** Operating **Commission:** 1996
	Pia Wadjari	116.39	-27.12	1.5kW Solar PV and 1x40kW and 1x24kW Diesel Gensets **Fuel Type:** Wind

RENEWABLE ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS
Western Australia	Pia Wadjari continued			**Technology:** Turbine **No. Turbines:** 1 **Turbine kW Capacity:** 10 **Total kW Capacity:** 10 **Status:** Operating **Commission:** 2000
	Rottnest Island	115.53	-31.99	46m high wind turbine includes a 2.14MW diesel generator **Fuel Type:** Wind **Technology:** Turbine **No. Turbines:** 1 **Turbine kW Capacity:** 600 **Total kW Capacity:** 600 **Status:** Operating **Commission:** 2004
	Turee Creek	118.66	-23.62	**Fuel Type:** Solar **Technology:** Photovoltaic **Total kW Capacity:** 16.9 **Status:** Operating **Commission:** 2001, 2004
	Upper Chittering	116.10	-31.46	**Fuel Type:** Biomass **Technology:** Reciprocating Engine **Total kW Capacity:** 10 **Status:** Operating **Commission:** 2001
	Violet Valley	127.92	-17.18	11.2kW solar PV system **Fuel Type:** Solar **Technology:** Photovoltaic **Total kW Capacity:** 11.2 **Status:** Operating **Commission:** 2008

RENEWABLE ENERGY IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LONGITUDE	LATITUDE	DETAILS	
Western Australia	Wanamulyandong	121.89	-18.75	9.8kW PV array	
				Fuel Type:	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	9.8
				Status:	Operating
				Commission:	2007
	Wodgina	118.66	-21.21	11MW gas fired power station	
				Fuel Type:	Gas
				Technology:	Gas Turbine
				No. Turbines:	11
				Total kW Capacity:	11
				Status:	Operating
				Commission:	2010
	Yagga Yagga	128.07	-20.96	**Fuel Type:**	Solar
				Technology:	Photovoltaic
				Total kW Capacity:	20
				Status:	1998
				Commission:	Operating

PORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LATITUDE	LONGITUDE	DETAILS
Northern Territory	**Port Gove (Melville Bay)**	12° 12' S	136° 44' E	***Tides:*** The maximum tidal range is approx. 3.7m, the Spring Range is 2.1m and the Neap Range is 1.1m. ***The Bulk Terminal :*** located at the western side of Dundas Point, consists of two in-line berths connected to the shore by light traffic access bridge with the 2 berths forming the head of a 'T'. The length of the bridge is 982 metres. The two in-line berths run in a north-west (330 degrees), south-east (150 degrees) direction. The northern branch at the 'T' head constitutes the 'Alumina Loading Berth' and is designated 'Berth 1', available depth at chart datum alongside is 13.0 metres (Nominal). The concept of both berths provides for the ships to lay against independent breasting dolphins with single mooring dolphins located at the northern and southern ends of the terminal. Serving both berths 1 and 2, a third mooring dolphin is provided centrally to the terminal. The mooring dolphins are equally spaced at 305 metres. **Maximum parameters for vessels utilising the Bulk Terminal:** **Berth 1** L.O.A.: 225 m Beam: Min 22.0m Max 33.2m Depth (at I.S.L.W.): 13.0 m **Berth 2** L.O.A.: 275 m Beam; No restriction Depth (at I.S.L.W.): 13.6 m Maximum Sailing Draft: 13.0m Maximum Air Draft: 1 13.20m Maximum Arrival Draft 12.8 m only applies to tanker wharf – berth #2.

PORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LATITUDE	LONGITUDE	DETAILS
Northern Territory	Port Gove (Melville Bay) continued			***General Cargo Terminal :*** located at the eastern side of Dundas Point. Vessels can be berthed on either side with the S.W. side designated Berth #3 and the N.E. side called Berth #4. The depth of water on both sides of the General Cargo wharf is 9.0m. The facilities have been designated for vessels up to 25,000 MT D.W.T. Larger vessels could be accommodated subject to approval by Pacific Aluminium Gove. Max Length of vessel 160m. ***Perkins Wharf:*** A public wharf (managed for the N.T. Government by Toll Marine Logistics) with a depth alongside of 4.27m below chart datum, is located at the head of Gove Harbour to the North of Harbour Island. ***Pilotage:*** Usually daylight hours only. Berthing and unberthing Pilotage assistance for vessels arriving at and leaving Pacific Aluminium Gove facilities is compulsory and is carried out by fully qualified Pacific Aluminium Gove employed Pilots. ***Towage & Mooring:*** 2 x Z Drive tugs. 62.5 tonne bollard pull. ***Facilities:*** Berth 1, dedicated to the loading of alumina, hydrate and bauxite. Equipped with a travelling-luffing ship loader discharging through a vertical spout. The shiploader is linked by a belt conveyor system of 2.950km in length to the alumina silos. Alumina is loaded at a max. rate of 2,000 MT/hr. Berth 2 dedicated to the discharge of bulk liquids, is equipped with 2 centrally located marine unit unloading arms linked to pipe lines supported on a trestle structure. The unloading arms are of the nominal 12' type. The General Cargo terminals (Berths 3 and 4) have no facilities. However, the concrete deck and its support structure can accommodate a unit load of 8.5 ton/m.sq for the whole deck area. Deck area 94m x 23.7m. ***Access:*** There are no sealed roads or railways into Gove with regular access by a twice weekly barge service to Darwin operated by Toll Marine Logistics. ***Fuel:*** Fuel is not available, neither is lube oil. ***Repairs:*** Minor repair facilities are available. ***Water:*** Fresh water is available at all times.

PORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LATITUDE	LONGITUDE	DETAILS
Northern Territory	**Port Darwin**	12° 27' S	130° 48' E	**East Arm Wharf** ***Berth details:*** Multi-user berth designed to handle livestock exports, dry and liquid bulk imports and exports, containerised, breakbulk, general and heavy lift cargoes. ***Type:*** sheet pile/solid fill. ***Length:*** 490m. ***Depth alongside:*** 12.0m chart datum for 300m. Remaining 190m – 12.2m chart datum. Under keel clearance alongside: 0.5m. ***Shipping:*** Design vessel capacity: 100,000 WT/110,000t Displacement. Beam, LOA, Unlimited. ***Arrival & Departure Draft:*** 10.8m + tide – 2.0m UKC. ***Common user facilities:*** 10 hectares of sealed hardstand. 8 hectares of bunded area for future reclamation. 4,000sqm cargo transit shed with dry bulk cargo handling facilities and 20 reefer outlets. 24 reefer outlets on hardstand. Container washdown and pre-tripping facilities. Quarantine & Customs services. Dry bulk cargo import facilities. Quarantine waste collection and disposal. 784m of continuous berth face. A 16m wide railway access embankment to accommodate the north/south railway. An Intermodal Container facility incorporating: • Access to 200m of the existing common user berth facility for container vessels. • A nominal 200m x 200m intermodal container terminal yard with 924 TEU ground slot capacity. The facility has two rail sidings, rail gantry cranes and straddle carriers. • Provision of a dedicated bulk liquids berth by extending the general purpose berth by an additional 154m to provide a total of 754m continuous berth face plus mooring dolphins. ***Cranage:*** IHI/Sumitomo single-lift, rail mounted gantry crane. Maximum outreach from fenders - 32m. Height from deck level to underside of boom - 30m. Lifting capacity: 40t @32m outreach. 50t @23m outreach. 70t @14.450m outreach. **Fort Hill Wharf** ***Berth details:*** West & East multi-user berth

PORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LATITUDE	LONGITUDE	DETAILS
Northern Territory	Port Darwin continued			***Type:*** Concrete deck berth on steel piles. Total length: 300m. - East berth 150m. West berth - 150m. Depth alongside: - West berth: 11.0m below chart datum. East berth: 10.0m below chart datum. Under keel clearance: 05m. Height of deck level above chart datum: 9.5m. Deck loading: - West berth: 2.5t/sqm. East berth: 4t/sqm. East berth rear apron: 6t/sqm. Forklift axle load: 100t. Location of Darwin's cruise ship terminal. Shipping: Beam: Unlimited. LOA: 300m. Arrival & Departure draft: 11.4m (Subject to Harbour Master's approval). Displacement restriction – 50,000 tonne. **<u>Stokes Hill Wharf</u>** ***Berth details:*** West & East multi-user berth ***Type:*** concrete deck berth on steel piles. Total length: 292m. Depth alongside: 8.0m below chart datum. Under keel clearance: 0.5m. Height of deck level above chart datum: 10.6m Deck loading: West berth: 2.8t/sqm. East berth: 3.1t/sqm. ***Shipping:*** no longer accepts SOLAS vessels - outside port security plan. LOA: 150m. Maximum 6,000 GRT. ***Berth details:*** Type: concrete deck berth on steel piles. Total length: 280m. Depth alongside: 4.5m below chart datum. Height of deck level above chart datum: 9.2m ***Deck loading:*** West berth: 4.2t/sqm. ***East Berth:*** 2.2t/sqm (with localised restrictions).
	Port Milner Bay (Groote Eylandt)	13° 52′S	136° 25′E	***Anchorage depth:*** 20.1m - 21.3m ***Cargo pier depth:*** 12.5m - 13.7m ***Channel Depth:*** 11m - 12.2m ***Tide:*** 2.0 m ***Harbor size:*** Very Small ***Railway size:*** N/A ***Harbor type:*** Open Roadstead ***Max size:*** Up to 150m in length ***Cranage:*** Fixed ***Repairs:*** None

PORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LATITUDE	LONGITUDE	DETAILS
Northern Territory	Port Milner Bay (Groote Eylandt)			***Fuel:*** Fuel is not available, neither is lube oil. ***Water:*** Fresh water is available at all times. ***Shelter:*** Poor
	Port Bing Bong	15° 37'S	136° 20'E	***Berth:*** Small port located in the south west corner of the Gulf of Carpentaria, operated by Mcarthur River Mining Pty Ltd. Loading of vessels involves transfer to a lighter vessel at a load rate of 1050 tonnes per hour. Discharge into bulk carriers is done by a bucket wheel system feeding a cascading conveyor and then a swinging boom conveyor that is moveable the full length of the ship's hold. ***Channel:*** 3.8 km long, 60m wide, 3.5m depth ***Offshore Transfer Zone Depth:*** 14.5m ***Air draft:*** 10m ***Access:*** Sealed road ***Repairs:*** None ***Fuel:*** Fuel is not available, neither is lube oil. ***Water:*** Fresh water is not available.
Western Australia	**Cape Cuvier**	24° 15' 6'S	113° 24' 58'E	***Facilities:*** A 560 metre jetty running from the base of the stockpile carries the loader conveyor system to the ship loader. The load rate is approximately 2000 tonnes per hour. Vessels must warp alongside the berth for separate hold loadings although by slewing the ship loader, two (2) adjacent holds can be loaded consecutively. Berthing only permitted during daylight hours (winter 0700-1630 hrs; summer 0600-1700 hrs). ***Berth depth:*** 17.8m ***Anchorage depth:*** 14m - 15.2m ***Cargo pier depth:*** 14m - 15.2m ***Draft:*** Depth alongside 17.8 metres at Datum. Draft 14m at SDWT. Keel clearance dependant on swell, formula used – 10% of draft plus 10% for swell. ***Air draft:*** 16m ***Dry dock:*** N/A ***Harbor size:*** Very Small ***Railway size:*** N/A

PORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LATITUDE	LONGITUDE	DETAILS
Western Australia	Cape Cuvier continued			***Harbor type:*** Open Roadstead ***Max size:*** Up to 220m (LOA); DWT minimum 25,000 tonnes maximum 75,000 tonnes ***Repairs:*** None ***Fuel:*** Fuel is not available, neither is lube oil. ***Water:*** Fresh water is not available. ***Shelter:*** Poor
	Broome Port	17° 58'S	122° 14'E	***Berth:*** The berthing head is 331m outer and 170m inner berth, split in two, 170m and 96m. Maximum draft is 9.5m at chart datum with a tidal range of up to 10m (springs). ***Anchorage depth:*** 14m - 15.2m ***Cargo pier depth:*** 6.4m - 7.6m ***Oil terminal depth:*** 9.4m - 10m ***Max size:*** Up to 500 feet in length ***Tugs:*** One: Fitzroy Star BP 25 tonne ***Pilotage:*** Compulsory for vessels of 150 gross tonnes unless under the command of an exempt master – 72 hours notice. ***Fuel:*** Diesel fuel available at jetty, at rates of up to 80 tonnes per hour ***Water:*** Potable water available at rates of up to 120 tonnes per hour ***Cranage:*** 100 tonne and 2 x 45 tonne available ***Stevedoring services:*** Supplied by the Port 24 hours a day, seven days a week ***Harbor size:*** Small ***Railway size:*** N/A ***Harbor type:*** Coastal Natural ***Repairs:*** Limited ***Shelter:*** Excellent

PORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LATITUDE	LONGITUDE	DETAILS
Western Australia	**Port of Port Hedland**	20° 19' S	118° 36' E	***Wharf Accommodation:*** There are 15 wharves, 4 of which are the property of the Port Hedland Port Authority, 8 are privately owned by BHP Billiton and 3 are privately owned by Fortescue Metals Group (FMG). The Port Authority's Nos. 1, 2 and 3 wharves are steel and concrete structures with berth frontages of 343m (No 1 & 2) and 183m (No. 3). PHPA No 4 Berth (Utah Point) is the Ports' new multi user bulk cargo facility 272m in length and can cater for vessels up to 279m LOA. The berth is fitted with a Cavotec Moormaster 200 Suction Mooring system which eliminates the need for mooring lines. ***Berth Depths:*** PHPA Berths are as follows: PH#1 is 12.00m, PH#2 is 11.20m and PH#3 is 12.20m and PH#4 is 13.8m. ***Berth lengths:*** The total length of the BHPBilliton Nelson Point A&B is 658m. The berthing pocket is 679 metres in length, 65 metres wide and is dredged to a depth alongside of 19.00m for its entire length. Nelson Point C&D berth is approximately 750m in length and has a berthing pocket 65m wide and is dredged to a depth of 19.00m for its entire length. BHPBilliton Finucane Island C&D berths are similar to the Nelson Point berths, the total length of the Finucane Island berths is 623 metres with a berthing pocket 722 metres long and 65 metres wide, dredged to a depth of 19.00m for its entire length. BHPBilliton Harriet point facility known as Finucane Island berths A&B have a total length of 843m with a berthing pocket dredged to 20m for its entire length and the berthing pocket is 65m wide. The FMG berths at Anderson Point (AP1, AP2 and AP3) consist of two loading berths and an associated layby berth of approximately 400 metres in length with a berthing pocket 1,100 metres in length and 65 metres wide, dredged to a depth of 19 metres. These three berths are continuous. ***Cargo Handling Facilities:*** General cargo is handled only at the Port Authority's wharves. Additionally No.1 berth has a 1,000 tph shiploader used for bulk minerals and No. 3 berth has a 2,200 tph shiploader which is owned and used by Dampier Salt Ltd. The shiploader at PHPA No 4 berth is rated to 7500 tph and is owned and operated by the Port.

PORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LATITUDE	LONGITUDE	DETAILS
Western Australia	Port of Port Hedland continued			BHP Billiton Nelson Point A & B facility is serviced by two 10,000 tph shiploaders which can be used for loading the same vessel if desired. Both C and D berth at Finucane Island are serviced by two 10,000 tph shiploaders which can be used for loading the same vessel if desired. Nelson Point C & D and Finucane Island A & B berths each have a shiploader rated to 12,000tph and are able to long travel the entire length of the berth. The FMG berths (AP1, AP2 & AP3) are serviced by two shiploaders rated to 13,500 tph instantaneous loading capacity and 8,000tph normal average loading rate. ***Berths under Construction:*** FMG Berth AP4 and Roy Hill Berths SP1 & SP2 are Cape Size berths currently under construction in South West Creek. Completion dates are unknown at this time. ***Anchorage depth:*** 4.9m - 6.1m ***Cargo pier depth:*** 9.4m - 10m ***Oil terminal depth:*** 9.4m - 10m ***Harbor size:*** Small ***Railway size:*** Small ***Harbor type:*** River Natural ***Fuel:*** Diesel fuel via pipeline is available from No 1 and 3 berths ***Water:*** Available at all berths ***Repairs:*** Major ***Shelter:*** Excellent
	Port Walcott (Cape Lambert)	20° 37'S	117° 10' 59E	***Location:*** It includes the defunct ports of Cossack and Point Samson. ***Berth depths:*** Alongside the ore wharf are 19.1m in No.1 and 19.4m in No.2. The controlling depth of water is 15.6m in the dredged channel plus height of tide (requirement of 10% underkeel clearance) for 18 miles. ***Wharf:*** There are two jetties both owned privately by Pilbara Iron. The service jetty can accommodate vessels up to 47,000 tonnes dwt. It has a least depth alongside of 9.4m. The ore jetty has been extended a further 300m and can now accommodate 4 ships, 2 on each side, with a total of 2 ship loaders both capable of approx. 9000 tonnes per hour.

PORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LATITUDE	LONGITUDE	DETAILS
Western Australia	Port Walcott (Cape Lambert) continued			***Cargo Handling:*** Loading of iron ore is presently at a rate of approximately 6,000 tonnes/hour on the old loader (berth 2) and approximately 9,000 tonnes/hour on the new loader (berth 1). ***Towage:*** 2 x 55 tonne bollard pull Z pellor tugs delivered in 1991 are used at the above jetties. Each is rated at 4,800 HP. Also a 3rd tug 65 tonne bollard pull. ***Anchorage depth:*** 11m - 12.2m ***Cargo pier depth:*** 18.6m - 19.8m ***Oil terminal depth:*** 9.4m - 10m ***Harbor size:*** Very Small ***Railway size:*** N/A ***Harbor type:*** Open Roadstead ***Max size:*** Up to 500 feet in length ***Fuel:*** Not available ***Water:*** Available ***Repairs:*** None ***Shelter:*** Fair
	Port Dampier	20° 40' S	116° 42' E	**The Port of Dampier accommodates four major users:** • The Dampier Cargo Wharf (DCW) (seven berths), a heavy load out facility, and a barge ramp. The Bulk Liquids Berth (BLB) facility is designed to handle bulk liquids (import and export) including, but not limited to, ammonia, dimethyl ether, diesel and methanol • Pilbara Iron operates private loading facilities for the export of iron ore at Parker Point and East Intercourse Island at the southern end of Mermaid Sound • Dampier Salt, operates a private facilities for the export of Salt at Mistaken Island at the eastern end of Mermaid Strait • Woodside Energy Limited, operates from private berths located in the eastern side of the Port at Withnell Bay exporting LPG, LNG, and Condensate **Dampier Cargo Wharf**

PORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LATITUDE	LONGITUDE	DETAILS
Western Australia	Port Dampier continued			The approach has a least depth of 7.5m (LAT). The wharf consists of a concrete deck supported by tubular piles. Access is by a concrete approach bridge 35m long and 9.5m wide. Seven berths are available; the main or Western berth can accept vessels of up to 35,000 tonnes displacement. The Eastern berth is suitable for smaller craft- supply vessels etc. To the East of the wharf a barge ramp caters for the landing barges supporting the offshore islands. **Bulk Liquids Berth** The BLB has a berthing basin depth of 13.0m and a channel depth of 11.0m. The BLB can accommodate vessels from 5,000 up to 65,000 tonnes displacement. **East Intercourse Island** Iron Ore is the only product handled at this facility. Wharf width 167.6m, length 341.4 m, depth of water alongside 21.50m LAT. Accommodates vessels of up to 150,000 tonnes max berthing displacement. Maximum departure draft is dependent on tide and UKC. **Parker Point Berth 1** Currently being refurbished as a tanker berth. **Parker Point Berth 2 & 4** Iron Ore is the only product handled at this facility. Length of wharf 455m, depth of water alongside 19.50m LAT. Maximum berthing displacement 142,000 tonnes. Maximum departure draft is dependent on tide and UKC. **Parker Point Berth 3 & 5** Iron Ore is the only product handled at this facility. Length of wharf 330m, depth of water alongside 18.00m LAT. Maximum berthing displacement 140,000 tonnes. Maximum departure draft is dependent on tide and UKC. **Service Wharf** Petroleum products are received over this facility. Approach depth 6.4 metres LAT. Length of wharf 69.5m with mooring buoys off each end. Alongside berth 6.7 metres. Tankers delivering oil products also accommodated. Bunkers and GO: 200mm pipeline; Fuel Oil: 350MM pipeline. Both lines 3x200mm hoses. **Mistaken Island**

PORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LATITUDE	LONGITUDE	DETAILS
Western Australia	Port Dampier continued			Salt is the only cargo loaded at this facility. Length of wharf 225m. Depth of water alongside 12.0m LAT. Maximum berthing draft 12m. Seven multi-spring pile mooring dolphins are situated clear of the shiploader platform. Vessels may berth either side. **Withnell Bay LNG, LPG, Condensate** 3 jetties owned and operated by Woodside Offshore Petroleum. Depth of water alongside 13.2m LAT. Turning circle 600m, maximum departure draft for condensate loadings dependent on tide. LNG loading rate of 10,000 cubic metres/hr; condensate loading rate of 6000 cubic metres/hr. ***Dry dock:*** N/A ***Harbor size:*** Medium ***Railway size:*** N/A ***Harbor type:*** Coastal Breakwater ***Fuel:*** Available ***Water:*** Available ***Repairs:*** Minor ***Shelter:*** Fair
	Wyndham Port	15° 28' S	128° 06' E	***Berth:*** Maximum draught allowable is 8.0m and maximum LOA is 190m. Maximum displacement is 34,000 DWT. Least depth in the approach channel is 6.8 metres and least depth alongside the berth are 3.0 metres in the North berth and 7.0 metres in the South berth. NB. A continuous maintenance dredging program is in place due to siltation. Shipping must regularly verify maximum draught with the Harbour Master. ***Wharfage:*** The jetty has two deep water berths. Length of the jetty is 450m with a berthing face of 314m. Maximum beam for vessels using the ship loader is 22m. The jetty is a piled structure with a concrete deck and spring fendering. A bulk product ship loader is located at the Southern end. NB. A wreck lies off the North end of the jetty with a least depth of 4.5m. ***Air draught:*** 16.4m

PORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LATITUDE	LONGITUDE	DETAILS
Western Australia	Wyndham Port continued			***Tides and Weather:*** Ship operation and movement is greatly affected by tidal range and flow. The tidal range is up to 8m at springs and very strong tidal currents are experienced in the Cambridge Gulf and West Arm, along with strong katabatic winds blowing off the Bastion Range at times. Strong ebb tides can be experienced during the Dry Season, April until October. ***Shore Based Plant and Equipment:*** The port maintains a fleet of MHE and plant. There is a container park (400 TEU) with 150 reefer points. ***Dry dock:*** N/A ***Harbor size:*** Very Small ***Railway size:*** N/A ***Harbor type:*** River Natural ***Fuel:*** Available ***Water:*** Available ***Repairs:*** Limited ***Shelter:*** Good
	Port of Varanus Island Terminal Port of Varanus Island Terminal continued	20° 38' S	115° 35'59' E	***Anchorage depth:*** Minimum 23.2m ***Oil terminal depth:*** 17.1m - 18.2m ***Dry dock:*** N/A ***Harbor size:*** Small ***Railway size:*** N/A ***Harbor type:*** Open Roadstead ***Repairs:*** None ***Shelter:*** None
	Barrow Island	20° 49' S	115° 24' 25' E	***Berth:*** Consists of a Material Offloading Facility consisting of an access channel, turning basin, various harbor basins and an LNG jetty and access channel, turning basin and basins. ***Anchorage depth:*** 11m - 12.2m ***Oil terminal depth:*** 11m - 12.2m ***Load Displacement:*** Maximum 105,000 tonnes ***Dry dock:*** N/A

PORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LATITUDE	LONGITUDE	DETAILS
Western Australia	Barrow Island continued			***Harbor size:*** Very Small ***Harbor type:*** Open Roadstead ***Fuel:*** Unavailable ***Water:*** Unavailable ***Repairs:*** None ***Shelter:*** Poor
	Port of Saladin Marine Terminal	21° 23' S	115° 02' 60' E	***Anchorage depth:*** 11m - 12.2m ***Cargo pier depth:*** N/A ***Oil terminal depth:*** 11m - 12.2m ***Dry dock:*** N/A ***Harbor size:*** Very Small ***Railway size:*** N/A ***Harbor type:*** Open Roadstead ***Fuel:*** Unavailable ***Water:*** Unavailable ***Repairs:*** None ***Shelter:*** Poor
Queensland	**Port of Karumba**	17° 31' S	140° 48' E	***Operation:*** A 5,000 tonne transfer vessel undertakes a 40km journey to export ships that anchor in deep water in the Gulf of Carpentaria. ***Facilities:*** Provide for general cargo, fuel, fisheries products, and the export of live cattle. Dredging is undertaken to maintain the necessary channel depth, usually about every two years. ***Anchorage depth:*** 7.1m - 9.1m ***Cargo pier depth:*** 1.8m - 3m ***Oil terminal depth:*** 6.4m - 7.6m ***Dry dock:*** N/A ***Harbor size:*** Very Small ***Railway size:*** N/A ***Harbor type:*** River Natural

PORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LATITUDE	LONGITUDE	DETAILS
Queensland	Port of Karumba continued			***Max size:*** N/A ***Fuel:*** Available ***Water:*** Available ***Repairs:*** Emergency Only ***Shelter:*** Good
	Port of Weipa	12° 38' S	141° 52' 19' E	***Berths:*** Four berths; Lorim Point East Wharf - for bauxite export; Lorim Point West Wharf - for bauxite export; Evans Landing Wharf - for import of fuel and oil; and Humbug Point Wharf - for import of general cargo. ***Facilities:*** Regular dredging required to maintain the shipping channels. Consist of onshore bauxite handling, processing and stockpiling facilities and conveyors running to Lorim Point East and West wharves for shiploading. ***Anchorage depth:*** 11m - 12.2m ***Cargo pier depth:*** 9.4m - 10m ***Oil terminal depth:*** 9.4m - 10m ***Dry dock:*** N/A ***Harbor size:*** Very Small ***Railway size:*** N/A ***Harbor type:*** Coastal Natural ***Max size:*** Over 500 feet in length ***Fuel:*** Unavailable ***Water:*** Available ***Repairs:*** None ***Shelter:*** Good
	Port of Thursday Island	10° 33' S	142° 11' 40' E	***Anchorage depth:*** 6.4m - 7.6m ***Cargo pier depth:*** 3.4m - 4.6m ***Oil terminal depth:*** 3.4m - 4.6m ***Dry dock:*** N/A ***Harbor size:*** Small ***Railway size:*** N/A

PORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LATITUDE	LONGITUDE	DETAILS
Queensland	Port of Thursday Island continued			***Harbor type:*** Coastal Natural ***Max size:*** Up to 500 feet in length ***Fuel:*** Available ***Water:*** Available ***Repairs:*** Limited ***Shelter:*** Good
	Port of Cape Flattery	14° 58' S	145° 17' 01' E	***Facilities:*** On-shore silica sand handling and stockpile facilities and a single trestle jetty and conveyor running from the mine to an off-shore berth and shiploader. There is also a general purpose wharf for the import of fuel and other supplies for the mine, and for the mooring of two line boats, which assist in ship berthing. ***Anchorage depth:*** 6.4m - 7.6m ***Cargo pier depth:*** 12.5m - 13.7m ***Oil terminal depth:*** 12.5m - 13.7m ***Dry dock:*** N/A ***Harbor size:*** Small ***Railway size:*** N/A ***Harbor type:*** Open Roadstead ***Max size:*** Up to 500 feet in length ***Fuel:*** Unavailable ***Water:*** Unavailable ***Repairs:*** N/A ***Shelter:*** Fair
	Port of Cairns	16° 55' S	145° 46' 59' E	**Berths, Wharves and Moorings:** ***Wharves No. 1-6:*** Form a continuous quay length of 595m with a height of 4.9m and a depth of 8.3m LAT. Used predominately for cruise vessels and visiting Naval vessels. The wharves are also used as overflow for tourist and fishing vessels and other coastal shipping. On Wharves 2 and 3 are heritage listed cargo sheds one of which is used as an international cruise terminal. The aprons in front of the shed are 8m and Wharves 4-6 have 27m apron width.

PORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LATITUDE	LONGITUDE	DETAILS
Queensland	Port of Cairns continued			***Wharves No. 7-8:*** General cargo, dry bulk, containers and fertiliser berth. Wharves 7 and 8 form a continuous quay length of 250m with a height of 5.0m and a width of 27.8m. Depth alongside is 9.5m LAT. The wharf has trelex fendering system which can accommodate vessels up to 40,000 tonne dead weight capacity and the distance from the outer edge of fender to waling piece is 1.35m. This wharf complex is complemented by access to the container terminal area (3,800m2). ***Wharf No. 10:*** Tanker berth for oil and LP gas with a maximum permissible vessel length of 189m. The wharf has a depth of 9.3m LAT and a wharf height of 4.8m LAT. Wharf 10 is a liquid product berth for petroleum products and petroleum gas. The wharf is also used for bunkering. ***Wharf No. 12:*** A bulk sugar terminal and bulk molasses berth with a length of 183m, wharf height of 5m and depth of 10.5m LAT. Width of apron is 17.6m and includes an outloading sugar conveyor system. ***Commercial Fishing Base 1 & 2:*** The Port has two bases for fishing vessels - CFB1 and CFB2 - located in Smith's Creek. There are mooring facilities for 94 vessels - 59 at CFB1, 35 at CFB2. A loading/unloading berth is located at CFB2 or alternatively. Fuel is also available at CFB1 at Jetty D. ***Barge Ramp: T***wo barge ramps located about one nautical mile upstream in Smith's Creek between Cairns Cruising Yacht Squadron and CFB2. Both ramps accommodate vessels up to 55m in length, with a maximum beam of 13.2m and a maximum gross tonnage of 500 grt. A large barge loading facility is also located in the Duck Pond in Smith's Creek for loading construction materials. ***Smith's Creek Wharf:*** General cargo berth for vessels up to 65m. The wharf is 53.4m long and has a wharf height of 3.7m and a depth of 5.0m LAT. It has 1,360m2 of open storage and a 1,225m2 cargo shed. ***Crannage:*** A fixed wharf crane with a capacity of 25.4 tonnes is located on Wharf 6. ***Storage:*** Shed storage space is available at Wharf 3, additional storage space is available behind Smith's Creek Wharf 1. ***Anchorage depth:*** 7.1m - 9.1m ***Cargo pier depth:*** 9.4m - 10m ***Oil terminal depth:*** 9.4m - 10m

PORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LATITUDE	LONGITUDE	DETAILS
Queensland	Port of Cairns continued			***Dry dock:*** Small ***Harbor size:*** Small ***Railway size:*** Small ***Harbor type:*** River Natural ***Max size:*** Over 500 feet in length ***Fuel:*** Available ***Water:*** Available ***Repairs:*** Moderate ***Shelter:*** Good
	Port of Mourilyan	17° 36' S	146° 07' 55' E	***Facilities:*** On-shore sugar and molasses handling and storage facilities and a single sugar loader and associated wharf. ***Anchorage depth:*** 6.4m - 7.6m ***Cargo pier depth:*** 9.4m - 10m ***Oil terminal depth:*** N/A ***Dry dock:*** N/A ***Harbor size:*** Small ***Railway size:*** Small ***Harbor type:*** Coastal Natural ***Max size:*** Up to 500 feet in length ***Fuel:*** Available ***Water:*** Available ***Repairs:*** Moderate ***Shelter:*** Good
	Port of Lucinda	18° 31' S	146° 19' 59' E	***Facilities:*** On-shore sugar handling and storage facilities and a single trestle jetty and conveyor running to an off-shore berth and shiploader. The off-shore jetty is 5.8km long (dipping 1.2km over its length). Sugar takes 22 minutes to travel along the conveyor from the on-shore storage sheds to the shiploader. ***Storage capacity:*** 230,000 tonnes ***Anchorage depth:*** 6.4m - 7.6m ***Cargo pier depth:*** 12.5m - 13.7m

PORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LATITUDE	LONGITUDE	DETAILS
Queensland	Port of Lucinda continued			***Oil terminal depth:*** N/A ***Dry dock:*** N/A ***Harbor size:*** Very Small ***Railway size:*** Small ***Harbor type:*** Open Roadstead ***Max size:*** Up to 500 feet in length ***Fuel:*** Unavailable ***Water:*** Unavailable ***Repairs:*** Limited ***Shelter:*** Fair
	Port of Townsville	19° 17' S	146° 50' 35' E	***Channel & Harbour Depths:*** The access channels have a total length of 6.4 nautical miles. The channel is 92m wide and has a depth of approximately 11.7m below LAT. Depths vary from 12.9m at Berth 2 to 9.5 m at Berth 10. ***Cargo Berths:*** The Port of Townsville has nine operational berths; ***Berth 1:*** A dedicated bulk liquids wharf used exclusively by tankers for bulk oil, gas and sulphuric acid discharge and by all types of vessels for bunkering. ***Berth 2:*** **F**or unloading nickel ore, two gantry cranes can be equipped to unload ore from the vessel into hoppers and feed a conveyor system. ***Berth 3****:* Typical cargoes handled over this wharf include lead ingots, refined copper, nickel and zinc. Also used for containerised cargo, fertiliser imports and live cattle exports. ***Berth 4:*** Handles bulk cement, molasses, mineral products, and general cargo. The molasses pipeline to this berth is capable of loading up to 400 tonnes/hour. ***Berth 7:*** Supports a bulk shiploader for mineral concentrates and ores at the rate of 1000 tonnes/hour, and fertiliser at 1200 tonnes/hour. The berth is also equipped with bunker pipelines. ***Berth 8:*** A general purpose berth handling molasses, fertiliser, refined mineral products, sulphur and general cargo. This berth is currently under redevelopment as part of the $118 million Townsville Port Inner Harbour Expansion (TPIX). ***Berth 9:*** A bulk shiploader delivers sugar to carriers at the rate of 2000 tonnes/hour. The berth is equipped with bulk molasses and bunker pipelines.

PORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LATITUDE	LONGITUDE	DETAILS
Queensland	Port of Townsville continued			***Berth 10:*** A general purpose berth and is being extended to accommodate cruise and military vessels as part of the TPIX project. ***Berth 11:*** Known as the Outer Berth Mineral Concentrates Loading Facility. Lead and zinc concentrates are placed onto a conveyor system by front-end loader and transported to the 1350 tonnes/hour shiploader. ***Mobile Cargo Handling Equipment:*** An extensive range of mobile cargo handling equipment including forklifts, tractors, trailers (container), loaders and earth-moving equipment. ***Road and Rail Access:*** All berths are accessible to road transport whilst berths 3 and 4 are serviced by railway lines integrated with Queensland's railway system. ***Anchorage depth:*** 7.1m - 9.1m ***Cargo pier depth:*** 9.4m - 10m ***Oil terminal depth:*** 11m - 12.2m ***Dry dock:*** N/A ***Harbor size:*** Small ***Railway size:*** Medium ***Harbor type:*** Coastal Breakwater ***Max size:*** Over 500 feet in length ***Fuel:*** Available ***Water:*** Available ***Repairs:*** Moderate ***Shelter:*** Fair
	Port of Abbot Point	19° 52' S	148° 04' 70' E	***Facilities:*** Comprises, two rail inloading facilities; six coal stockpile rows all greater than 1km in length; inloading and outloading conveyors; and two berths and two shiploaders 2.75 kilometres offshore. ***Berth 1:*** Length of 268m, depth alongside 19m ***Berth 2:*** Length of 252m, depth alongside 17m ***Channel Depth:*** 17.2m ***Dry dock:*** N/A ***Railway size:*** Medium ***Max size:*** 300m

PORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LATITUDE	LONGITUDE	DETAILS
Queensland	Port of Abbot Point continued			***Max Displacement:*** 110,000 tonnes ***Fuel:*** Unavailable ***Water:*** Unavailable ***Repairs:*** N/A ***Shelter:*** Fair
	Port of Mackay	21° 04' S	149° 13' 00' E	***Facilities:*** Four berths, serviced by three ship loaders, cater for the export of sugar and sugar products, molasses and grain, and the import of petroleum. The terminal includes fuel terminals, sugar and grain storage and scrap metal ***Anchorage depth:*** 11m - 12.2m ***Cargo pier depth:*** 9.4m - 10m ***Oil terminal depth:*** 9.4m - 10m ***Crannage:*** Fixed and mobile ***Dry dock:*** N/A ***Harbor size:*** Small ***Railway size:*** Small ***Harbor type:*** Coastal Breakwater ***Max size:*** Up to 500 feet in length ***Fuel:*** Available ***Water:*** Available ***Repairs:*** Limited ***Shelter:*** Good
	Port of Hay Point	21° 17' S	149° 16' 16' E	***Facilities:*** Comprises two separate coal export terminals, Dalrymple Bay Coal Terminal (DBCT) and the Hay Point Coal Terminal (HPCT) with purpose-built rail inloading facilities, onshore stockyards and offshore jetties leading to wharves. The offshore wharves are serviced by conveyor systems which run the coal from the stockyard to the wharves situated about 3.8km out to sea. ***Berths*** ***DBCT:*** Consists of four berths, serviced by three manually operated shiploaders with a loading capacity of 7,200tph.

PORTS IN NORTHERN AUSTRALIA

JURISDICTION	NAME	LATITUDE	LONGITUDE	DETAILS
Queensland	Port of Hay Point continued			***HPCT:*** The wharf is 1.8km offshore. It has two berths . Berth #1 is serviced by a luffing boom gantry with telescopic chute with an average loading capacity of 4,000 tph with a maximum of 6,000 tph. Berth #2 is serviced by a rail mounted shuttle boom with telescopic chute and an average loading capacity of 4,000 tph with a maximum of 6,000tph. ***Anchorage depth:*** 12.5m - 13.7m ***Cargo pier depth:*** 17.1m - 18.2m ***Oil terminal depth:*** N/A ***Dry dock:*** N/A ***Harbor size:*** Small ***Railway size:*** Small ***Harbor type:*** Open Roadstead ***Max size:*** Up to 500 feet in length ***Fuel:*** Unavailable ***Water:*** Unavailable ***Repairs:*** N/A ***Shelter:*** Poor
	Port of Port Alma	23° 34' S	150° 51' 30' E	***Anchorage depth:*** 11m - 12.2m ***Cargo pier depth:*** 9.4m - 10m ***Oil terminal depth:*** 9.4m - 10m ***Crannage:*** Fixed ***Dry dock:*** N/A ***Harbor size:*** Very Small ***Railway size:*** N/A ***Harbor type:*** River Natural ***Max size:*** Over 500 feet in length ***Fuel:*** Available ***Water:*** Available ***Repairs:*** Limited ***Shelter:*** Good

RAIL IN NORTHERN AUSTRALIA

JURISDICTION	NETWORK	DETAILS
Northern Territory	**Darwin to Alice Springs**	Length: 1420 km Gauge: Interstate standard Rail: 50kg/m Axle load: 23 tonne Maximum line speed: 115km/hr Mainline sleepers: Concrete Electrified: No Track Configuration: Single
Queensland	**Newlands – Abbot Point**	Length: 190 km Gauge: Narrow Rail: 53kg/m Axle load: 20 tonne Maximum line speed: 80km/hr Mainline sleepers: Concrete Electrified: No Track Configuration: Single
	Mt Isa Network	Length: 1032 km Gauge: Narrow Rail: 41, 47, 50, 53 and 60kg/m Axle load: 20 tonne Maximum line speed: 80km/hr Mainline sleepers: Concrete Electrified: No Track Configuration: Single
	Cairns - Forsayth System	Length: 462km Gauge: Narrow Rail: 41kg/m Axle load: 15.75 tonne Maximum line speed: 70km/hr Mainline sleepers: Timber and steel Electrified: No Track Configuration: Single

RAIL IN NORTHERN AUSTRALIA

JURISDICTION	NETWORK	DETAILS
Queensland	**Croydon - Normanton**	Length: 152km Gauge: Narrow Rail: 20kg/m Axle load: 8.8 tonne Maximum line speed: 40km/hr Mainline sleepers: Timber and steel Electrified: No Track Configuration: Single
	Rockhampton to Cairns	Length: 1041km Gauge: Narrow Rail: 20, 30, 41, 47, 50, 53 and 60 kg/m Axle load: 20 tonne Maximum line speed: Passenger – 80 to 160km/hr, Freight 80 to 100km/hr Mainline sleepers: Timber, steel and concrete Electrified: No Track Configuration: Single (duplicated between Nome to Townsville – 20km length)
	Winton - Nogoa	Length: 599km Gauge: Narrow Rail: 20, 30, 41, 47, 50 and 53kg/m Axle load: 10.62 to 15.75 tonne Maximum line speed: 50 to 80km/hr Mainline sleepers: Timber, steel and concrete Electrified: No (Nogoa to Emerald has overhead wires in place – not energised) Track Configuration: Single
	Emerald – Blair Athol	Length: 123km Gauge: Narrow Rail: 31, 41 and 47kg/m Axle load: 15.75 tonne Maximum line speed: 80 to 100km/hr Mainline sleepers: Timber and steel Electrified: No Track Configuration: Single

RAIL IN NORTHERN AUSTRALIA

JURISDICTION	NETWORK	DETAILS
Queensland	Nogoa - Springsure	Length: 66km Gauge: Narrow Rail: 41 and 47kg/m Axle load: 15.75 to 20tonne Maximum line speed: 60km/hr Mainline sleepers: Timber Electrified: No Track Configuration: Single
	Goonyella Rail System	Length: 924km Gauge: Narrow Rail: 53 and 60kg/m Axle load: 26.5 tonne Maximum line speed: 50 to 80km/hr Mainline sleepers: Concrete Electrified: Yes Track Configuration: Single (duplicated between Dalrymple Junction and Wotonga)
	Blackwater System	Length: 985km (807km electrified) Gauge: Narrow Rail: 53 and 60kg/m Axle load: 26.5 tonne Maximum line speed: 80 to 100km/hr Mainline sleepers: Concrete (some steel) Electrified: Yes Track Configuration: Duplicated
	Moura System	Length: 235km (12.85km electrified) Gauge: Narrow Rail: 30, 41, 47, 53 and 60kg/m Axle load: 15.75 to 26.5 tonne Maximum line speed: 40 to 80km/hr Mainline sleepers: Concrete and timber Electrified: No Track Configuration: Single

RAIL IN NORTHERN AUSTRALIA

JURISDICTION	NETWORK	DETAILS
Western Australia	**Hamersley and Road River Railway**	Length: 1300 km Gauge: Standard Rail: 68kg/m Axle load: >30 tonne Mainline sleepers: Concrete Electrified: No Track Configuration: Duplicated
	Mount Newman Railway	Length: 426 km Gauge: Standard Rail: 68kg/m Axle load: >30 tonne Mainline sleepers: Concrete Electrified: No Track Configuration: Duplicated in multiple locations (Nelson Point Yard to Bing South, Coonarie and Spring sidings and Turner South to Turner North)
	Goldsworthy Railway	Length: 208 km Gauge: Standard Rail: 68kg/m Axle load: 32 to 40 tonne Mainline sleepers: Concrete Electrified: No Track Configuration: Single
	Fortescue Railway	Length: 620 km Gauge: Standard Rail: 68kg/m Axle load: 40 tonne Mainline sleepers: Concrete Electrified: No Track Configuration: Single