

Appendix A

AUSTRALIAN PORT SHIP CALLS
1997 - 2001

SHIP CALLS FOR 7 AUSTRALIAN PORTS 1996/7 - 2000/1 (Port Data)

| Year | Container Ships | Car Carriers | Ro-Ro | Cruise/ Pax | Multi Purpose | Dry Bulk | Liquid Bulk | Other | Total | Growth % | Compound Average |
|------------------|--------------------|-----------------|-------|----------------|------------------|----------|----------------|-------|-------|----------|---------------------|
| ADELAIDE | | | | | | | | | | | |
| 1996/7 | | | | | | | | | 991 | n/a | |
| 1997/8 | 266 | 107 | 21 | 3 | 58 | 421 | 32 | 83 | 991 | nil | |
| 1998/9 | 265 | 124 | 23 | 4 | 37 | 401 | 30 | 40 | 924 | -6.8% | |
| 1999/0 | 215 | 125 | 13 | 4 | 39 | 455 | 38 | 26 | 915 | -1.0% | |
| 2000/1 | 233 | 126 | 7 | 6 | 26 | 504 | 53 | 42 | 997 | 9.0% | 0.2% |
| BRISBANE | | | | | | | | | | | |
| 1996/7 | 687 | 169 | | | | 281 | 440 | 473 | 2050 | n/a | |
| 1997/8 | 839 | 218 | | | | 263 | 455 | 332 | 2107 | 2.8% | |
| 1998/9 | 679 | 231 | | 12 | | 330 | 480 | 455 | 2187 | 3.8% | |
| 1999/0 | 786 | 235 | | 13 | | 371 | 478 | 472 | 2355 | 7.7% | |
| 2000/1 | 699 | 254 | | 18 | | 359 | 451 | 490 | 2271 | -3.6% | 2.6% |
| FREMANTLE | | | | | | | | | | | |
| 1996/7 | 574 | 69 | 35 | 14 | 230 | 376 | 246 | 133 | 1677 | n/a | |
| 1997/8 | 620 | 62 | 54 | 3 | 243 | 385 | 239 | 100 | 1706 | 1.7% | |
| 1998/9 | 674 | 62 | 54 | 10 | 267 | 419 | 216 | 107 | 1809 | 6.0% | |
| 1999/0 | 518 | 77 | 53 | 7 | 244 | 413 | 215 | 123 | 1650 | -8.8% | |
| 2000/1 | 562 | 98 | 32 | 6 | 247 | 373 | 215 | 117 | 1650 | nil | -0.4% |
| MELBOURNE | | | | | | | | | | | |
| 1996/7 | 987 | 171 | 816 | 169 | 268 | 181 | 256 | 34 | 2882 | n/a | |
| 1997/8 | 1017 | 204 | 790 | 240 | 203 | 190 | 234 | 34 | 2912 | 1.0% | |
| 1998/9 | 1127 | 207 | 771 | 282 | 154 | 199 | 277 | 33 | 3050 | 4.7% | |
| 1999/0 | 1061 | 237 | 731 | 260 | 158 | 200 | 268 | 31 | 2946 | -3.4% | |
| 2000/1 | 1047 | 223 | 728 | 261 | 147 | 203 | 235 | 24 | 2868 | -2.6% | -0.1% |
| NEWCASTLE | | | | | | | | | | | |
| 1996/7 | 3 | | 13 | 1 | 97 | 1391 | 30 | 25 | 1560 | n/a | |
| 1997/8 | 1 | | 12 | 5 | 124 | 1472 | 54 | 42 | 1710 | 9.6% | |
| 1998/9 | 1 | 1 | 13 | 5 | 108 | 1426 | 59 | 36 | 1649 | -3.6% | |
| 1999/0 | 6 | | 5 | 3 | 154 | 1361 | 48 | 16 | 1593 | -3.4% | |
| 2000/1 | 9 | | 5 | 3 | 144 | 1261 | 62 | 30 | 1514 | -5.0% | -0.7% |

| Year | Container Ships | Car Carriers | Ro-Ro | Cruise/ Pax | Multi Purpose | Dry Bulk | Liquid Bulk | Other | Total | Growth % | Compound Average |
|----------------------|--------------------|-----------------|-------|----------------|------------------|----------|----------------|-------|-------|----------|---------------------|
| PORT BOTANY | | | | | | | | | | | |
| 1996/7 | 944 | 15 | 17 | | 10 | 40 | 237 | | 1263 | n/a | |
| 1997/8 | 958 | 7 | 4 | | 8 | 54 | 225 | 8 | 1264 | 0.1% | |
| 1998/9 | 929 | | 1 | | 20 | 60 | 229 | 3 | 1242 | -1.7% | |
| 1999/0 | 946 | | 3 | | 7 | 59 | 234 | 8 | 1257 | 1.2% | |
| 2000/1 | 881 | | | | 6 | 49 | 268 | 3 | 1207 | -4.0% | -1.1% |
| PORT JACKSON | | | | | | | | | | | |
| 1996/7 | 191 | 171 | 129 | 73 | 229 | 111 | 94 | 100 | 1098 | n/a | |
| 1997/8 | 163 | 231 | 117 | 53 | 199 | 108 | 109 | 95 | 1075 | -2.1% | |
| 1998/9 | 165 | 244 | 82 | 82 | 180 | 185 | 104 | 47 | 1089 | 1.3% | |
| 1999/0 | 231 | 247 | 64 | 84 | 163 | 242 | 116 | 37 | 1184 | 8.7% | |
| 2000/1 | 257 | 228 | 63 | 73 | 121 | 215 | 115 | 64 | 1136 | -4.1% | 0.9% |
| TOTAL 7 PORTS | | | | | | | | | | | |
| 1996/7 | 3386 | 595 | 1010 | 257 | 834 | 2380 | 1303 | 765 | 11521 | n/a | |
| 1997/8 | 3864 | 829 | 998 | 304 | 835 | 2893 | 1348 | 694 | 11765 | 2.1% | |
| 1998/9 | 3840 | 869 | 944 | 395 | 766 | 3020 | 1395 | 721 | 11950 | 1.6% | |
| 1999/0 | 3763 | 921 | 869 | 371 | 765 | 3101 | 1397 | 713 | 11900 | -0.4% | |
| 2000/1 | 3688 | 929 | 835 | 367 | 691 | 2964 | 1399 | 770 | 11643 | -2.2% | 0.3% |

Source: Port Corporations

N.B. Different ports statistical data base vary in data subsets. Where a port does not report for five years any vessel calls under a particular category of ship it does not mean there were none – they are likely to have been relatively small in number and recorded under other.

Appendix B

AUSTRALIAN PORT TOWAGE SHIP
CALLS 1997 - 2001

| AUSTRALIAN SEVEN DECLARED PORTS TOWAGE SHIP CALL TOTALS (Adsteam) | | | | | | | | | | | |
|---|-----------------|--------------|------------|---------------|----------|-------------|-------|-------|-----------------|-------------------|------------|
| Year | Container Ships | Car Carriers | Cruise/Pax | Multi Purpose | Dry Bulk | Liquid Bulk | Other | Total | % of Port Calls | % +/-v. last year | Comp. Av % |
| ADELAIDE | | | | | | | | | | | |
| 1996/7 | 294 | 93 | | 169 | 124 | 14 | | 694 | 70 | n/a | |
| 1997/8 | 286 | 115 | | 189 | 88 | 8 | | 686 | 69.2 | -1.2% | |
| 1998/9 | 279 | 141 | | 171 | 91 | 17 | | 699 | 75.6 | 1.9% | |
| 1999/0 | 231 | 125 | | 177 | 105 | 20 | | 658 | 71.9 | -5.9% | |
| 2000/1 | 231 | 132 | | 195 | 112 | 29 | | 699 | 70.1 | 6.2% | 0.2% |
| BRISBANE | | | | | | | | | | | |
| 1996/7 | 599 | 186 | | | 134 | 327 | 324 | 1570 | 76.5 | N/a | |
| 1997/8 | 623 | 237 | 1 | | 94 | 352 | 320 | 1627 | 77.2 | 3.6% | |
| 1998/9 | 747 | 249 | 11 | | 106 | 297 | 371 | 1781 | 81.4 | 9.5% | |
| 1999/0 | 907 | 238 | 17 | | 133 | 321 | 363 | 1979 | 84 | 11.1% | |
| 2000/1 | 843 | 247 | 15 | | 108 | 335 | 370 | 1918 | 84.5 | -3.1% | 5.1% |
| FREMANTLE | | | | | | | | | | | |
| 1996/7 | 555 | 66 | 12 | 37 | | 8 | 234 | 912 | 54.4 | N/a | |
| 1997/8 | 601 | 64 | 2 | 53 | | 8 | 195 | 923 | 54.1 | 1.2% | |
| 1998/9 | 660 | 59 | 7 | 52 | | 5 | 224 | 1007 | 55.7 | 9.1% | |
| 1999/0 | 530 | 78 | 7 | 48 | | 5 | 199 | 867 | 52.5 | -13.9% | |
| 2000/1 | 560 | 72 | 7 | 53 | | 3 | 185 | 880 | 53.3 | 1.5% | -0.9% |
| MELBOURNE | | | | | | | | | | | |
| 1996/7 | 973 | 167 | 17 | 285 | 134 | 240 | 20 | 1836 | 63.7 | N/a | |
| 1997/8 | 1014 | 173 | 16 | 191 | 154 | 224 | 11 | 1783 | 61.2 | -2.9% | |
| 1998/9 | 1047 | 46 | 17 | 310 | 226 | 269 | 39 | 1954 | 64.1 | 9.6% | |
| 1999/0 | 1017 | 51 | 8 | 296 | 224 | 243 | 37 | 1876 | 63.7 | -4.0% | |
| 2000/1 | 975 | 56 | 8 | 288 | 217 | 216 | 26 | 1786 | 62.4 | -4.8% | -0.7% |
| NEWCASTLE | | | | | | | | | | | |
| 1996/7 | 11 | | | | 1159 | 39 | 14 | 1223 | 78.3 | N/a | |
| 1997/8 | 12 | | | | 1256 | 53 | 14 | 1335 | 78.1 | 9.2% | |
| 1998/9 | 12 | | | | 1174 | 56 | 11 | 1253 | 77.6 | -6.1% | |
| 1999/0 | | | | | 1135 | 44 | 18 | 1197 | 75.1 | -4.5% | |
| 2000/1 | | | | | 1162 | 57 | 12 | 1231 | 76.3 | 2.8% | 0.2% |

| Year | Container Ships | Car Carriers | Cruise/ Pax | Multi Purpose | Dry Bulk | Liquid Bulk | Other | Total | % of Port Calls | Growth % v. last year | Comp. Av % |
|----------------------|-----------------|--------------|-------------|---------------|----------|-------------|-------|-------|-----------------|-----------------------|------------|
| PORT BOTANY | | | | | | | | | | | |
| 1996/7 | 890 | | | 16 | | 266 | | 1172 | 92.8 | N/a | |
| 1997/8 | 917 | | | 12 | | 271 | | 1200 | 94.9 | 2.4% | |
| 1998/9 | 919 | | | 3 | | 274 | | 1196 | 96.3 | -0.3% | |
| 1999/0 | 954 | | | 8 | | 268 | | 1230 | 97.8 | 2.8% | |
| 2000/1 | 874 | | | 5 | | 294 | | 1173 | 97.2 | -4.6% | 0.0% |
| PORT JACKSON | | | | | | | | | | | |
| 1996/7 | 197 | 165 | 72 | 191 | 30 | 117 | 58 | 830 | 75.6 | n/a | |
| 1997/8 | 142 | 236 | 52 | 230 | 34 | 121 | 35 | 850 | 79.1 | 2.4% | |
| 1998/9 | 147 | 251 | 80 | 194 | 47 | 119 | 27 | 865 | 79.4 | 1.8% | |
| 1999/0 | 177 | 245 | 66 | 166 | 52 | 140 | 37 | 883 | 74.6 | 2.1% | |
| 2000/1 | 180 | 223 | 61 | 138 | 53 | 124 | 44 | 823 | 72.4 | -6.8% | -0.2% |
| TOTAL 7 PORTS | | | | | | | | | | | |
| 1996/7 | 3519 | 677 | 101 | 698 | 1581 | 1011 | 650 | 8237 | 71.5 | n/a | |
| 1997/8 | 3595 | 825 | 71 | 675 | 1626 | 1037 | 575 | 8404 | 71.4 | 2.0% | |
| 1998/9 | 3811 | 746 | 115 | 730 | 1644 | 1037 | 672 | 8755 | 73.3 | 4.2% | |
| 1999/0 | 3816 | 737 | 98 | 695 | 1649 | 1041 | 654 | 8690 | 73 | -0.7% | |
| 2000/1 | 3663 | 730 | 91 | 679 | 1652 | 1058 | 637 | 8510 | 73.1 | -2.1% | 0.8% |

Source: Adsteam Marine

Appendix C

AUSTRALIAN HARBOUR TOWAGE
PERFORMANCE 1997 - 2001

| ADSTEAM TOWAGE PERFORMANCE BY DELCARED AUSTRALIAN PORT | | | | | | | |
|--|---------------|-------------|-----------------|---------|-------------|------------------|-------------------|
| Year | 1. Ship Calls | 2. Tug Jobs | 3. Harbour Tugs | 4. Crew | 5. Tug Days | 6. Jobs per Call | 7. Jobs / Tug Day |
| ADELAIDE | | | | | | | |
| 1996/7 | 694 | 2472 | 4 | 33 | 1320 | 3.56 | 1.87 |
| 1997/8 | 686 | 2348 | 4 | 33 | 1333 | 3.42 | 1.76 |
| 1998/9 | 699 | 2421 | 4 | 33 | 1299 | 3.46 | 1.86 |
| 1999/0 | 658 | 2272 | 4 | 33 | 1349 | 3.45 | 1.68 |
| 2000/1 | 699 | 2384 | 4 | 29 | 1304 | 3.41 | 1.83 |
| BRISBANE | | | | | | | |
| 1996/7 | 1570 | 4890 | 4 | 45 | 1783 | 3.11 | 2.74 |
| 1997/8 | 1627 | 4905 | 4 | 48 | 1746 | 3.01 | 2.81 |
| 1998/9 | 1781 | 5401 | 4 | 48 | 1687 | 3.03 | 3.20 |
| 1999/0 | 1979 | 5986 | 4 | 50 | 1822 | 3.02 | 3.29 |
| 2000/1 | 1918 | 5869 | 4 | 50 | 1933 | 3.06 | 3.04 |
| FREMANTLE | | | | | | | |
| 1996/7 | 912 | 3145 | 2 | 24 | 1010 | 3.45 | 3.11 |
| 1997/8 | 923 | 3044 | 2 | 32 | 1057 | 3.30 | 2.88 |
| 1998/9 | 1007 | 3066 | 2 | 32 | 1080 | 3.04 | 2.84 |
| 1999/0 | 867 | 2545 | 2 | 32 | 1082 | 2.94 | 2.35 |
| 2000/1 | 880 | 2645 | 2 | 32 | 1086 | 3.01 | 2.44 |
| MELBOURNE | | | | | | | |
| 1996/7 | 1836 | 5436 | 5 | 48 | 1737 | 2.96 | 3.13 |
| 1997/8 | 1783 | 4909 | 5 | 48 | 1761 | 2.75 | 2.79 |
| 1998/9 | 1954 | 4817 | 4 | 48 | 1765 | 2.47 | 2.73 |
| 1999/0 | 1876 | 4532 | 4 | 48 | 1759 | 2.42 | 2.58 |
| 2000/1 | 1786 | 4189 | 4 | 48 | 1653 | 2.35 | 2.53 |
| NEWCASTLE | | | | | | | |
| 1996/7 | 1223 | 7125 | 8 | 100 | 2920 | 5.83 | 2.44 |
| 1997/8 | 1335 | 7975 | 8 | 100 | 2920 | 5.97 | 2.73 |
| 1998/9 | 1253 | 7594 | 8 | 100 | 2920 | 6.06 | 2.60 |
| 1999/0 | 1197 | 6904 | 6 | 54 | 2214 | 5.77 | 3.12 |
| 2000/1 | 1231 | 6978 | 6 | 54 | 2190 | 5.67 | 3.19 |

| Year | 1. Ship Calls | 2. Tug Jobs | 3. Harbour Tugs | 4. Crew | 5. Tug Days | 6. Jobs per Call | 7. Jobs / Tug Day |
|----------------------|---------------|-------------|-----------------|---------|-------------|------------------|-------------------|
| PORT BOTANY | | | | | | | |
| 1996/7 | 1172 | 4237 | 3 | 42 | 1132 | 3.62 | 3.74 |
| 1997/8 | 1200 | 4302 | 3 | 42 | 1132 | 3.59 | 3.80 |
| 1998/9 | 1196 | 4287 | 3 | 42 | 1132 | 3.58 | 3.79 |
| 1999/0 | 1230 | 4180 | 3 | 42 | 1132 | 3.40 | 3.69 |
| 2000/1 | 1173 | 3931 | 3 | 32 | 1132 | 3.35 | 3.47 |
| PORT JACKSON | | | | | | | |
| 1996/7 | 830 | 2854 | 4 | 34 | 1122 | 3.44 | 2.54 |
| 1997/8 | 850 | 2971 | 4 | 34 | 1122 | 3.50 | 2.65 |
| 1998/9 | 865 | 2959 | 4 | 34 | 1122 | 3.42 | 2.64 |
| 1999/0 | 883 | 3000 | 4 | 34 | 1125 | 3.40 | 2.67 |
| 2000/1 | 823 | 2717 | 4 | 28 | 1122 | 3.30 | 2.42 |
| TOTAL 7 PORTS | | | | | | | |
| 1996/7 | 8237 | 30159 | 30 | 326 | 11024 | 3.66 | 2.74 |
| 1997/8 | 8404 | 30454 | 30 | 337 | 11071 | 3.62 | 2.75 |
| 1998/9 | 8755 | 30545 | 29 | 337 | 11005 | 3.49 | 2.78 |
| 1999/0 | 8690 | 29419 | 27 | 293 | 10483 | 3.39 | 2.81 |
| 2000/1 | 8510 | 28713 | 27 | 273 | 10420 | 3.37 | 2.76 |

Source: Appendices 1 & 2, and Adsteam

Appendix D

AUSTRALIAN HARBOUR TOWAGE
CAPACITY AND PRODUCTIVITY
1997 - 2001

HARBOUR TOWAGE INDUSTRY STRUCTURE – AUSTRALIA

| ITEM | ADELAIDE | | BRISBANE | | FREMANTLE | | MELBOURNE | | NEWCASTLE | | PORT BOTANY | | PORT JACKSON | | TOTAL | |
|---------------------|----------|----------------|----------------------------|----------------|--------------------------|---------------|--------------------------------|---------------|-----------|---------------|-------------|---------------|--------------------------------|---------------|-------------|---------------|
| 1. TOWAGE PROFILE * | | | | | | | | | | | | | | | | |
| a)Total Fleet 01 | 4 | | 5 | | 3 | | 5 | | 6 | | 3 | | 5 | | 31 | |
| Harbour | 4 | | 4 | | 2 | | 4 | | 6 | | 3 | | 4 | | 27 | |
| Salvage | | 2 | | 2 | | 1 | | 2 | | - | | 1 | | 1 | | 9 |
| Firefight | | 2 | | 2 | | 1 | | 3 | | 3 | | 1 | | 1 | | 13 |
| Back up | - | | 1 | | 1 | | 1 | | - | | - | | 1 | | 4 | |
| Total Fleet 97 | 4 | | 5 | | 3 | | 5 | | 8 | | 3 | | 5 | | 33 | |
| b) No of Crew | 8 | | 12 | | 8 | | 12 | | 18 | | 10.5 | | 8.5 | | 77 | |
| Crewmen | 29 | | 50 | | 32 | | 48 | | 54 | | 32 | | 28 | | 283 | |
| % Change | (12.0) | | (11.0) | | 33.3 | | nil | | (46) | | (23.8) | | (17.6) | | (19.0) | |
| Crew per tug | 3 – 4 | | 3 - 4 | | 4 | | 4 | | 3 | | 3 | | 3 – 4 | | 3 – 4 | |
| Casuals | av. 2 | | av.3 | | av.2 | | av 3 | | av.3 - 4 | | av.2 | | av. 3 | | av. 18 – 19 | |
| c) Fleet sharing | None | | Relief to North Queensland | | Relief to other WA ports | | Relief to Geelong/ Westernport | | No | | No | | Relief to P Kembla & Newcastle | | N/A | |
| 2. MARKET PROFILE * | | | | | | | | | | | | | | | | |
| | 00/01 | % +/- 96/97 | 00/01 | % +/- 96/97 | 00/01 | % +/- 96/7 | 00/01 | % +/- 96/7 | 00/01 | % +/- 96/7 | 00/01 | % +/- 96/7 | 00/01 | % +/- 96/7 | 00/01 | % +/- 96/7 |
| a) Calls Handled | 699 | 0.7 | 1918 | 22.1 | 880 | (3.5) | 1786 | (2.7) | 1231 | 0.6 | 1173 | nil | 823 | (0.8) | 8,510 | 3.3 |
| b) Tug Jobs | 2384 | (3.5) | 5869 | 20.0 | 2645 | (15.9) | 4189 | (23.0) | 6978 | (2.1) | 3931 | (7.2) | 2717 | (4.8) | 28713 | (4.8) |
| c) Tug days | 1304 | (1.2) | 1933 | 8.4 | 1086 | 7.5 | 1653 | (4.8) | 2190 | (25.0) | 1132 | nil | 1122 | Nil | 10420 | (5.5) |
| d) Jobs per call | 3.41 | (4.2) | 3.06 | (1.6) | 3.01 | (12.7) | 2.35 | (20.6) | 5.67 | (2.7) | 3.35 | (7.5) | 3.30 | (4.1) | 3.37 | (7.9) |
| e) Jobs tug/day | 1.83 | (2.1) | 3.04 | 10.9 | 2.44 | (21.6) | 2.53 | (19.2) | 3.19 | 30.1 | 3.47 | (7.2) | 2.42 | (4.7) | 2.76 | 0.7 |
| f) On Time % | 100 | | 99.0 | | 100 | | 99 | | 100 | | 100 | | 100 | | 99.5 | |
| h) Delay causes | - | | Late cargo | | - | | Ship clash | | - | | - | | - | | n/a | |

Notes.

Sections 1 and 2 – where brackets are shown in % change figures, this means a reduction over the period of review, and is not necessarily an adverse variance.

Towage Profile;

- 1 a) * Total fleet 01 is total number of hulls 2000/01 in each port including back up tug where applicable.
- * Harbour is the number of operational hulls in each port
 - * Salvage and Fire fight are the number of harbour tugs also with those capabilities.
 - * Back up shows which ports have a back up tug (not crewed until operational). Back up tugs are used to cover for other tugs docking in home port or when home port tugs are on other deployment (e.g. salvage work), and to cover shortages through docking etc in other ports, not necessarily declared ports.
 - * Total Fleet 97 is the number of hulls in each port including back up tugs in 1996/97.
- b) * Number of crews is those required to provide the 2000/01 level of service. Note the number of crews between Port Botany and Port Jackson is 19 which includes a roving crew to cover shortfalls and in this table is notionally split between the two ports.
- * Total crewmen is the number of permanent and permanent/casual personnel making up the number of crews. Permanent/casual are part time personnel on the payroll hence in the numbers.
 - * % change is the reduction or increase in crewmen employed since 1996/97 through 2000/01. It is important to note that since 2000/01 in the current year 2001/02 there have been subsequent reductions in total crewmen in Brisbane (now 40), and Melbourne (now 37) .
 - * Crewmen per tug is the range employed per tug in each port. Tugs with a main towage winch have 3 crewmen, other tugs 4. In the period under review ports previously service by Howard Smith Towage (Brisbane & Melbourne) had not negotiated the AM initiative of a reduction to 3 crew on main towage winch equipped tugs by the end of 2000/01. These are included as 4 crewmen per tug, but it should be noted that the number has been subsequently reduced to 3 in the 2001/02 year.
 - * Casuals is an estimate of the number of casuals used expressed on a man/year basis to provide consistency in expression with that for total crewmen. Precise assessment is difficult because of the fluctuating need to engage casuals caused by illness/sick leave, accumulated leave, long service leave etc., and some ongoing constraints to be able to freely interchange permanent crew between Port Jackson and Port Botany. AM port management strives to minimise the use of casuals through best possible use of permanent and permanent/casual personnel within the scope and conditions of the relevant EBAs. When tugs go off station for other port relief, personnel are provided from relief port numbers i.e. from the tug which the relief tug is replacing. But when tugs go off station for deep sea e.g. salvage work, they normally take a large % of their port crew with them so casuals are needed to ensure full manning of the relief tug in same port.

Appendix E

AUSTRALIAN HARBOUR TOWAGE
FLEET AND SERVICE PROVISION
2001

AUSTRALIAN TOWAGE FLEET AND SERVICE 2001

| ITEM | ADELAIDE | BRISBANE | FREMANTLE | MELBOURNE | NEWCASTLE | Pt BOTANY | Pt JACKSON |
|--|---|--|---|---|--|---|---|
| 1. HARBOUR TUGS | | | | | | | |
| Number | 4 | 4 + 1 back up | 2 + 1 back up | 4 + 1 back up | 6 | 3 | 4 + 1 back up |
| Propulsion | 3Z, 1SN | 4Z + 1 SN | 2Z + 1 Z | 3Z, 1SN + 1 SN | 3Z, 3V | 3Z | 4Z + 1 SN |
| Bollard Pull tons | 60, 2 x 47, 41 | 3 x 60, 47 + 41 | 2 x 60 + 47 | 2 x 60, 46, 42 + 41 | 6 x 47 – 48 | 60, 2 x 47 | 60, 2 x 47, 40 + 28 |
| Horse Power | 4800, 2 x 3600, 2440 | 3 x 4800, 3600 + 2440 | 2 x 4800, + 3600 | 2 x 4800, 3600, 2440 + 2440 | 3 x 4800 3 x 3600 | 4800, 2 x 3600 | 4800, 2 x 3600, 2440 + 1900 |
| Capability | 2 x SF | 2 x SF | 1 x SF | 2 x SF, 1 F | 4 x F | 1 x SF | 1 x SF |
| 2. SERVICE PROVISION | | | | | | | |
| a) Service Available | Limited 24 – 25/12 & 31/12 | 365 days | 365 days | 365 days | 365 days | 365 days | 365 days |
| b) Service Adviser | Port Authority | Ship Agent | Ship Agent | Harbour Control | Ship Agent | Port Corp | Port Corp |
| c) Bookings Central Party Lead Time Change L/T FOC Cancel Priority | Yes Port Authority 2 hours 2 hours Prior tug move Ad hoc | No Ship Agent Nil Nil No charge Pax, Tanker | No Ship Agent 2 hours 2 hours No charge Ad hoc | Yes Harb Control None None Prior tug move Informal | No Ship Agent 15 mins-2 hrs 2 hours Prior tug move Ad hoc | Yes Port Corp 2 hours nil – 2 hrs Prior tug move Tidal Tankers | Yes Port Corp 2 hours nil-2 hours Prior tug move Tankers/Pax |
| d) QA | No | ISO 9002 | ISOQAR9002 | ISO 9002 | No | No | No |
| e) Port Guidelines | Rigid | Flexible | Flexible | Flexible | Rigid | Rigid | Rigid |
| f) Consultation | Irregular | Regular – Port Users Group | Quarterly – FPA with all users | Nothing Formal | Regular – Port Users Group | 3 p.a. – Port Users Group | 3 p.a. – Port User Group |

N.B. Z = Z-Pellar; V = Voith; SN = Steering Nozzle; S = Salvage tug; F = Firefighting tug. Back up tug data preceded by +.

Appendix F

SELECTED ASIA PACIFIC HARBOUR TOWAGE PROFILE

HARBOUR TOWAGE INDUSTRY STRUCTURE – ASIA PACIFIC

| Item | Auckland | Hong Kong | Port Klang | Singapore | Yokohama |
|--------------------------------------|---------------|-----------------|-----------------|-----------------------|-----------|
| 1) TOWAGE PROFILE | | | | | |
| a) Number Operators | 1 | 3 | 2 | 4 | 3 |
| b) Other ports | Marsden Point | PRC Tug & Barge | Nil | Regional Charter | Tokyo Bay |
| c) Total Tug Fleet | 10 | 34 | 13 | 94 | 34 |
| Local Harbour | 5 | 30 | 13 | 52 | |
| including Salvage | 3 | 4 | - | 80% | |
| Firefighting | 2 | - | all | all | Yes |
| Pollution Resp. | M'dn Pt | - | - | all | Yes |
| Offshore | - | - | - | - | |
| d) Tug Crew (number) | 2 – 3 | 4 | 3 - 4 | 3 | 5? |
| Crews per tug | 3 | 4 | 2 | 2 | 1.5? |
| e) Fleet Pooling/ cooperation | N/A | Organised | Nil | Ad hoc & Time charter | |
| f) Other Services | | | | | |
| - terminal operations | Yes | - | Yes | Yes | Yes |
| - pilotage | Yes | - | Yes | Yes | |
| - ship repair | - | Yes | - | Yes | |
| - offshore oil & gas | - | - | - | Yes | |
| - cargo handling | Yes | - | Yes | Yes | |
| - salvage | Yes | Yes | - | Yes | Yes |
| - tug & barge | Yes | Yes | Yes | - | Yes |
| - mooring | Yes | - | Yes | - | - |
| - other | - | - | - | - | Ferries. |
| 2) MARKET PROFILE | | | | | |
| a) Ship Calls 2001 | 1805 | 36,700* | 13,091 | 62,000+ | 30,000 ~ |
| b) Tug Jobs 2001 | N/A | 65,000 est | 37,500 est | 110,000 est | |
| c) % Inc 96 – 01 | N/A | | | Stable | Stable? |
| d) Tug Days 2001 | 1,800 | 10,800 | 4,680 | 18,720 | |
| e) Jobs per call | N/A | 1.77 | 2.87 | 1.77 | |
| f) Jobs/tug day | N/A | 6.02 | 8.02 | 5.88 | |
| g) On time % | 98% | Nearly all | 95% | 95% < 15 mins | |
| h) Delay Causes | Client issues | | Vessel bunching | High tide peak | |

| Item | Auckland | Hong Kong | Port Klang | Singapore | Yokohama |
|------------------------------------|------------------------------------|------------------------------|---------------------------------|----------------------------------|----------|
| 3) SERVICE PROVISION | | | | | |
| a) Service Provided | 365 days | 365 days | 365 days | 365 days | 365 days |
| b) Arrival Data | | Agent | Agent | MPA | |
| c) Bookings | | | | | |
| Central | Port system | HK VTMS | WCC | MPA central | Yes |
| Ship Priorities | Bulk lowest | Not formal | Box/Pax | Passenger | No |
| Booking lead time | 2 hours | 1.5 – 3 hrs | 1 – 2 | 2 hours | |
| Booking Party | Agent | Agent | Agent | Agent | |
| Change lead time | Flexible | 15 minutes | 1 – 2 | 2 hours | |
| FOC Cancellation | No Penalty | Not formal | 1- 2 | 2 hours | |
| d) QA | ISO 9001 | ISO 9002 | ISO9002(1) | ISO 9002 | |
| e) Port Guidelines | Master/Pilot | Master/Pilot | PKA | MPA | |
| f) Industry Consultation | Series master contracts with lines | Bilateral | Bilateral with lines | Singapore Shipowners Association | |
| 4) COMPETITION | | | | | |
| a) New Entrants since 1996 | Nil | AP Moller Entry | Nil | 6 MPA licences '97 | |
| b) Rationalised since 1996? | Took over Navy contract | AP Moller operation acquired | Nil | 2 acquired since 1999 | |
| c) ROI potential | Bundled services | No price rise in 12 years | Prices effectively same as 1966 | Softening | |

* excl. 116,200 PRC river traffic calls, mainly tug & barge;

+ excl. 84,200 regional ferry, tug & barge movements

~ 75% of port calls of 48,000 are coastal; this statistic assumes 50% of coastal traffic never requires harbour towage.

Appendix G

SELECTED EUROPEAN HARBOUR TOWAGE PROFILE

HARBOUR TOWAGE INDUSTRY STRUCTURE – EUROPE

| Item | Hamburg | Rotterdam | Tilbury | Zeebrugge |
|--|---------------------------------------|-----------------------------------|---|----------------------|
| 1) TOWAGE PROFILE | | | | |
| a) Number Operators | 3 | 3 | 1 | 1 |
| b) Other Ports | Rotterdam, Rostock, Bremerhaven | Holland, Belgium, N Germany | Felixstowe, Hull, Medway, Liverpool, Southampton | 6 Benelux ports |
| c) Total Tug Fleet | 57 | 344 | 48 | 43 |
| Local Harbour | 16 | 30 | 8 | 6 |
| Including Salvage | - | yes | all | yes |
| Firefighting | - | yes | all | yes |
| Pollution Resp. | - | yes | - | yes |
| Offshore | - | - | - | yes |
| d) Tug Crew (number) | 3 | 3 | 4 | |
| Crews per tug | < 13 men | 2.5 | 3 | |
| e) Fleet Pooling/ cooperation | Ad hoc | Ad hoc | N/A | Ex Smit Rotterdam |
| f) Other Services | | | | |
| - terminal operations | - | - | - | - |
| - pilotage | - | - | - | - |
| - ship repair | yes | - | - | yes |
| - offshore oil & gas | yes | yes | - | yes |
| - cargo handling | - | - | - | - |
| - salvage | yes | yes | - | yes |
| - tug and barge | yes | yes | - | yes |
| - mooring | yes | - | - | - |
| - other | - | dredging | - | pollution |
| 2) MARKET PROFILE | | | | |
| a) Ship Calls 2001 | 11,678* | 19,000 | 701^ | 5,222* |
| b) Tug Jobs 2001 | 15,000 est | 23,000 est | 6,150 | N/A |
| c) % Inc 96 – 01 | Declining | Stable | Stable | Stable |
| d) Tug Days 2001 | 5,840 | 10,800 | 2,880 | 2160 |
| e) Jobs per call | 1.28 | 1.21 | 5.28^ | N/A |
| f) Jobs/tug day | 2.60 | 2.13 | 2.14 | 2.41 |
| g) On time % | 99% | > 95% | 98% | 95% est |
| h) Delay Causes | Weather/tide | Weather | Fog, Cargo | Weather, Cargo |

| Item | Hamburg | Rotterdam | Tilbury | Zeebrugge |
|--|--|---|--|--|
| 3) SERVICE PROVISION | | | | |
| a) Service Provided | 365 days | 365 days | 365 days | 365 days |
| b) Arrival Data | SMD# | VTs | PLA Database | Port VHF |
| c) Bookings Central Ship Priorities Booking lead time Booking Party Change lead time FOC Cancellation | No Deep draft ships 2 hours Agent Flexible 2 hours | No No N/A Agent/ex VTs Nil Prior tug mobile | In – house Nil 6 hours Agent Varies 4 hours | |
| d) QA | ISO 9002 | ISO 9002 | Nil | ISO 9002 |
| e) Port Guidelines | Pilot/Master – Altenwerder rules | Only Tankers & HNS | Voluntary PLA Code | |
| f) Industry Consultation | AdS on pricing only ~ | Service Providers Committee | Association of London S'owners | |
| 4) COMPETITION | | | | |
| a) New Entrants since 1996 | 1996 Kotug in 1998 Smit in | 1998 Fairplay in | nil | Nil |
| b) Rationalised since 1996 | 2001 Smit out | | 1997 acquired in-dock towage | Smit acquired URS 49.9% shareholding |
| c) ROI Potential | 3 x 4800 3 x 3600 | Prices as 1988 | | |

*data for 2000; in the case of Zeebrugge this figure is after deducting ferry and ro-ro calls;

^ Tilbury only, whereas calls are for Thames region as a whole ;

Schiffmeldungdienst (Ship reporting service)

~ Arbeitsgemeinschaft der Seeschiffsassistentzredeerei (Hamburg Towage Working Group)

Appendix H

SELECTED NORTH AMERICAN HARBOUR TOWAGE PROFILE

HARBOUR TOWAGE INDUSTRY STRUCTURE – NORTH AMERICA

| Item | LA/Long Beach | Philadelphia/ Camden | Seattle/Tacoma |
|--|-------------------------|---------------------------|----------------|
| 1) TOWAGE PROFILE | | | |
| a) Number Operators | 3 | 2 | 2 |
| b) Other Ports | S Diego/Bay Area/PNW | USEC | USWC |
| c) Total Tug Fleet | > 80 | 150 | > 80 |
| Local Harbour | 16 | 15 | 14 |
| Including Salvage | All | - | 4 |
| Firefighting | All | - | 7 |
| Pollution Response | - | - | - |
| Offshore | - | - | - |
| d) Tug Crew (number) | 2 – 6 | 4 – 7 | 4 – 6 |
| Crews per tug | 2 | 3 | 2 |
| e) Fleet Pooling/ cooperation | Ad hoc | Nil | As Required |
| f) Other Services | | | |
| - terminal operations | - | - | Yes |
| - pilotage | - | - | - |
| - ship repair | - | - | Yes |
| - offshore oil & gas | - | - | Yes |
| - cargo handling | - | - | - |
| - salvage | yes | Yes | Yes |
| - tug and barge | yes | Yes | - |
| - mooring | - | - | - |
| - other | Environmental | Environmental | - |
| 2) MARKET PROFILE | | | |
| a) Ship Calls 2001 | 6,000 est | 2,792 | 2,000 est |
| b) Tug Jobs 2001 | 18,000 est. | 6,074 | 7,746 |
| c) % Inc 96 – 01 | Stable | Stable | Stable |
| d) Tug Days 2001 | 5,760 | 5,400 | 5,040 |
| e) Jobs per call | 3.00 | 2.18 | 3.87 |
| f) Jobs/tug day | 3.12 | 1.13 | 1.53 |
| g) On time % | 95% | 95% | 99%? |
| h) Delay Causes | Fog, pilot shortage | Vessel peaking & river | Cargo work |

| Item | LA/Long Beach | Philadelphia/ Camden | Seattle/Tacoma |
|---------------------------------------|------------------------------------|-----------------------------------|--|
| 3) SERVICE PROVISION | | | |
| a) Service Provided | 365 days | 365 days | 365 days |
| b) Arrival Data | Ex Agent Marine Exch. | Ex Agent | Ex Agent |
| c) Bookings | | | |
| Central | None | None | None |
| Ship Priorities | None | None | None |
| Booking lead time | 2 hours | Nil | 24 hours |
| Booking Party | Agent | Agent | Agent |
| Change lead time | 1 hour | Nil | 2 hours |
| FOC Cancellation | 1 hour | 4 hours | 2 hours |
| d) QA | ISO 9002? | | |
| e) Port Guidelines | Nil – Master/Pilot decide | Port Captain & Agent decide | Master & Agent decide (oil terminals excepted) |
| f) Industry Consultation | None – anti trust laws | Bilateral with clients | Only on ops/safety issues |
| 4) COMPETITION | | | |
| a) New Entrants since 1996 | 2001 Millennium | nil | Nil |
| b) Rationalised since 1996 | 1998 Foss buy Wilmington Towing | 1999 Moran buy Turecano Towing | Nil |
| c) ROI Potential | Under pressure | | |

Appendix I

INTERNATIONAL COMPARATIVE HARBOUR TOWAGE REGULATION

INTERNATIONAL COMPARATIVE HARBOUR TOWAGE REGULATION

| | | Singapore | Klang | HK | Yokohama | Auckland | UK | Hamburg | Zeebrugge | Rotterdam | Seattle | LA | Philadelphia |
|---|---|-----------|-------|-----|----------|----------|-----|---------|-----------|-----------|---------|-----|--------------|
| Regulatory (non IMO) | | | | | | | | | | | | | |
| 1. | Government licence required | Yes | Yes | No | No | No | No | No | No | No | No | No | No |
| 2. | Government price controls | Yes | Yes | No | No | No | No | No | No | No | No | No | No |
| 3. | Government control of manning levels | Yes | Yes | No | No | Yes | No | No | | Yes | No | No | No |
| 4. | Mandatory provision of fire or environmental services | Yes | Yes | No | | No | No | No | | No | No | No | No |
| 5. | Tax surcharge invoicing regulations | No | No | No | | Yes | No | No | | No | No | No | No |
| 6. | Fuel subsidies | No | No | No | No | No | No | No | | No | No | No | No |
| 7. | Anti-competition regulations | No | No | No | No | No | No | No | | No | No | No | No |
| 8. | Fiscal support (eg building bounties) | Yes | No | No | | No | Yes | Yes | | No | Yes | Yes | Yes |
| Port Authority (and other where specified) | | | | | | | | | | | | | |
| 1. | Tendering or other constraints | Yes | No | No | | No | No | No | Yes | No | Union | No | No |
| 2. | Tug specification | Yes | No | No | | No | Yes | No | No | No | No | No | No |
| 3. | Towage pricing | Yes | Yes | No | | No | No | No | No | No | No | No | No |
| 4. | General tug manning levels | Yes | No | No | Union | No | Yes | Union | No | No | No | No | No |
| 5. | Towage work practices | No | Yes | No | Union | No | Yes | No | No | No | Yes | Yes | Yes |
| 6. | Service standards | Yes | Yes | Yes | | No | No | No | No | No | No | No | No |
| 7. | Customer satisfaction | No | Yes | No | | No | No | No | No | No | No | No | No |

Appendix J

THOMPSON CLARKE SHIPPING PTY LTD
COMPANY BROCHURE



**THOMPSON
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SHIPPING
PORTS
TRANSPORTATION
LOGISTICS
MARITIME SAFETY
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Independent shipping and transportation consultancy services.

Thompson Clarke Shipping Pty Ltd was formed in 1981 to provide independent consultancy services to the shipping and ports industry and associated organisations whose interests lie in maritime transportation.

The company specialises in providing operational and commercial advice for all aspects of shipping; our commercial clients therefore include transport operators, port authorities and cargo interests. Substantial reports have also been prepared for State and Commonwealth Governments in subjects as diverse as ballast water management and land bridging opportunities for container traffic.

Our international business has steadily grown and we now advise clients in the U.K., U.S.A., New Zealand, South East Asia and the Pacific Islands.

SHIPPING - PORTS - TRANSPORTATION

Investment Analysis

The ship management, finance and chartering experience of our consultants enables us to produce detailed financial analyses for new maritime projects such as the shipping component of mining ventures or port infrastructure development. This is combined with practical advice on the ship operating issues that impact on investments of this type.



Market Surveys and Feasibility Studies

TCS is able to undertake market surveys and analyse trade flows to assist a client's own internal strategic review of vessel operations, cargo logistics or



port development. Often this will be carried out as part of a more comprehensive feasibility study involving computer modelling and our own strategic analysis of the market sector under consideration.

Market Representation

TCS provides Australian representation for ports and general commercial services by arranging trade missions and business development programmes. The company also acts as commercial correspondents for P & I Clubs.



Maritime Safety and Marine Pollution

With the increasing attention being paid to ship safety and marine pollution prevention, TCS has undertaken major reviews and audits for statutory authorities concerned with maritime safety and marine



pollution. TCS has also surveyed ship's waste reception facilities at ports around Australia. The company has completed a

number of ballast water related research projects for Australian government authorities and has a detailed knowledge of contemporary operational, management and regulatory issues.

Executive Search for the Shipping Industry

TCS is in regular contact with shipowners, operators and agents in the major centres and has long standing associations with many of the major bulk shippers. We are therefore well placed to assist companies in recruiting shipping executives with the correct professional background, either on an advertised or confidential basis.

Management Consulting

Because of our breadth of consulting expertise in all aspects of shipping operation



and management we have been retained over the years to provide management assistance in the task of commercial, operational and financial reorganisation.

Ferries

We have considerable expertise in conventional and high-speed passenger and cargo ferry services. We provide strategic advice for existing and new ferry services with commercial analysis and recommendations for the design and modification of ships and terminals.





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