

# TWEED SAND BYPASSING

## Dredging Overview

|  |                                |
|--|--------------------------------|
| <b>Stage 1 (26 Apr 1995 to 26 May 1998)</b>                            | <b>3,047,549 m<sup>3</sup></b> |
| Stage 2 Pre-commissioning Dredging (1 April 2000 to 29 Apr 2001)       | 532,517 m <sup>3</sup>         |
| Stage 2 Operations Dredging Campaign 1 (11 May 2001 to 6 Nov 2001)     | 289,972 m <sup>3</sup>         |
| Stage 2 Operations Dredging Campaign 2 (20 May 2002 to 20 Oct 2002)    | 240,129 m <sup>3</sup>         |
| Stage 2 Operations Dredging Campaign 3 (7 Feb 2003 to 28 Sep 2003)     | 230,892 m <sup>3</sup>         |
| Stage 2 Operations Dredging Campaign 4 (7 July 2004 to 30 Sep 2004)    | 169,926 m <sup>3</sup>         |
| Stage 2 Operations Dredging Campaign 5 (22 May 2005 to 30 Sep 2005)    | 199,059 m <sup>3*</sup>        |
| Stage 2 Operations Dredging Campaign 6 (23 May 2006 to 28 Sep 2006)    | 200,298 m <sup>3</sup>         |
| Stage 2 Operations Dredging Campaign 7 (17 May 2008 to 24 Sep 2008)    | 198,979 m <sup>3</sup>         |
| Stage 2 Operations Dredging Campaign 8 (1 Dec 2011)                    | 200 m <sup>3</sup>             |
| Stage 2 Operations Dredging Campaign 9 (1 Apr 2016 to 31 May 2016)     | 41,938 m <sup>3</sup>          |
| Stage 2 Operations Dredging Campaign 10 (2 Feb 2017 to 31 August 2017) | 216,605 m <sup>3</sup>         |
| <b>Total Stage 2 Dredging (April 2000 to 31 February 2018)</b>         | <b>2,320,516 m<sup>3</sup></b> |
| <b>Total Dredging (Since 1995)</b>                                     | <b>5,368,065 m<sup>3</sup></b> |

\* Note: This includes 22,870.3 m<sup>3</sup> of sand delivered to Palm Beach from June 2005 to September 2005.

Note: Totals and subtotals are rounded up or down to the nearest cubic metre



# TWEED SAND BYPASSING

## Sand Pumping Details

| Pumping Quantities Since March 2001 (m <sup>3</sup> ) |                             |          |         |        |            |       |         |
|---|-----------------------------|----------|---------|--------|------------|-------|---------|
| Year  | Month                       | Outlets  |         |        |            |       | Total   |
|   |                             | Duranbah | SR-E    | Kirra  | Greenmount | SR-W  |         |
| 2001  | March                       | 0        | 111,495 | 0      | 0          | 0     | 111,495 |
|   | April                       | 18,968   | 51,489  | 0      | 0          | 0     | 70,457  |
|   | May                         | 48,290   | 20,009  | 0      | 0          | 0     | 68,299  |
|   | June                        | 0        | 61,800  | 0      | 0          | 0     | 61,800  |
|   | July                        | 0        | 84,263  | 0      | 0          | 0     | 84,263  |
|   | August                      | 0        | 0       | 28,161 | 0          | 0     | 28,161  |
|   | September                   | 0        | 0       | 46,940 | 0          | 0     | 46,940  |
|   | October                     | 0        | 7,720   | 22,178 | 0          | 1,586 | 31,484  |
|   | November                    | 0        | 52,113  | 0      | 0          | 0     | 52,113  |
|   | December                    | 0        | 20,857  | 0      | 0          | 0     | 20,857  |
|   | <b>2001 total = 575,869</b> |          |         |        |            |       |         |
| 2002  | January                     | 0        | 38,284  | 0      | 0          | 0     | 38,284  |
|   | February                    | 0        | 16,198  | 45,233 | 0          | 0     | 61,431  |
|   | March                       | 0        | 75,401  | 0      | 0          | 0     | 75,401  |
|   | April                       | 30,176   | 53,571  | 0      | 0          | 0     | 83,747  |
|   | May                         | 14,339   | 67,521  | 0      | 0          | 0     | 81,860  |
|   | June                        | 0        | 78,377  | 0      | 0          | 0     | 78,377  |
|   | July                        | 0        | 91,417  | 0      | 0          | 0     | 91,417  |
|   | August                      | 0        | 117,842 | 0      | 0          | 0     | 117,842 |
|   | September                   | 19,345   | 15,988  | 0      | 0          | 0     | 35,333  |
|   | October                     | 8,012    | 9,978   | 10,248 | 0          | 0     | 28,238  |
|   | November                    | 0        | 0       | 22,836 | 0          | 0     | 22,836  |
|   | December                    | 0        | 0       | 6,598  | 0          | 0     | 6,598   |
| <b>2002 total = 721,364</b>                           |                             |          |         |        |            |       |         |
| 2003  | January                     | 0        | 2       | 0      | 0          | 0     | 2       |
|   | February                    | 0        | 86,239  | 17,764 | 0          | 0     | 104,003 |
|   | March                       | 14,583   | 65,302  | 0      | 0          | 0     | 79,885  |
|   | April                       | 19,853   | 78,621  | 0      | 0          | 0     | 98,474  |
|   | May                         | 0        | 100,144 | 0      | 0          | 0     | 100,144 |
|   | June                        | 31,482   | 36,561  | 0      | 0          | 0     | 68,043  |
|   | July                        | 4,306    | 73,652  | 0      | 0          | 0     | 77,958  |
|   | August                      | 0        | 68,280  | 0      | 0          | 0     | 68,280  |
|   | September                   | 0        | 33,338  | 0      | 10,722     | 0     | 44,060  |
|   | October                     | 0        | 9,634   | 18,473 | 21,209     | 0     | 49,316  |
|   | November                    | 0        | 9,379   | 36,100 | 0          | 0     | 45,479  |
|   | December                    | 0        | 41,801  | 9,581  | 0          | 0     | 51,382  |
| <b>2003 total = 787,026</b>                           |                             |          |         |        |            |       |         |
| 2004  | January                     | 0        | 48,374  | 0      | 0          | 0     | 48,374  |
|   | February                    | 0        | 23,677  | 0      | 0          | 0     | 23,677  |
|   | March                       | 36,813   | 38,639  | 0      | 0          | 0     | 75,452  |
|   | April                       | 0        | 32,640  | 0      | 0          | 0     | 32,640  |
|   | May                         | 0        | 18,668  | 0      | 0          | 0     | 18,668  |
|   | June                        | 0        | 44,519  | 0      | 0          | 0     | 44,519  |
|   | July                        | 0        | 54,993  | 0      | 0          | 0     | 54,993  |
|   | August                      | 0        | 25,963  | 0      | 0          | 0     | 25,963  |
|   | September                   | 0        | 59,112  | 0      | 0          | 0     | 59,112  |
|   | October                     | 0        | 40,404  | 0      | 0          | 0     | 40,404  |
|   | November                    | 0        | 37,716  | 0      | 0          | 0     | 37,716  |

|                             |           |        |         |   |   |   |         |
|-----------------------------|-----------|--------|---------|---|---|---|---------|
|                             | December  | 0      | 34,849  | 0 | 0 | 0 | 34,849  |
| <b>2004 total = 496,367</b> |           |        |         |   |   |   |         |
| 2005                        | January   | 0      | 56,160  | 0 | 0 | 0 | 56,160  |
|                             | February  | 0      | 58,972  | 0 | 0 | 0 | 58,972  |
|                             | March     | 0      | 56,585  | 0 | 0 | 0 | 56,585  |
|                             | April     | 6,527  | 75,942  | 0 | 0 | 0 | 82,469  |
|                             | May       | 17,821 | 70,400  | 0 | 0 | 0 | 88,221  |
|                             | June      | 0      | 98,493  | 0 | 0 | 0 | 98,493  |
|                             | July      | 0      | 54,511  | 0 | 0 | 0 | 54,511  |
|                             | August    | 0      | 95,636  | 0 | 0 | 0 | 95,636  |
|                             | September | 0      | 31,587  | 0 | 0 | 0 | 31,587  |
|                             | October   | 0      | 43,796  | 0 | 0 | 0 | 43,796  |
|                             | November  | 5,231  | 27,804  | 0 | 0 | 0 | 33,035  |
|                             | December  | 12,108 | 13,358  | 0 | 0 | 0 | 25,466  |
| <b>2005 total = 724,931</b> |           |        |         |   |   |   |         |
| 2006                        | January   | 0      | 56,231  | 0 | 0 | 0 | 56,231  |
|                             | February  | 0      | 70,596  | 0 | 0 | 0 | 70,596  |
|                             | March     | 0      | 51,602  | 0 | 0 | 0 | 51,602  |
|                             | April     | 13,715 | 7,134   | 0 | 0 | 0 | 20,849  |
|                             | May       | 23,551 | 0       | 0 | 0 | 0 | 23,551  |
|                             | June      | 6,903  | 57,402  | 0 | 0 | 0 | 64,305  |
|                             | July      | 0      | 115,009 | 0 | 0 | 0 | 115,009 |
|                             | August    | 0      | 39,955  | 0 | 0 | 0 | 39,955  |
|                             | September | 0      | 35,988  | 0 | 0 | 0 | 35,988  |
|                             | October   | 0      | 17,705  | 0 | 0 | 0 | 17,705  |
|                             | November  | 22,930 | 3,004   | 0 | 0 | 0 | 25,934  |
|                             | December  | 0      | 30,559  | 0 | 0 | 0 | 30,559  |
| <b>2006 total = 552,284</b> |           |        |         |   |   |   |         |
| 2007                        | January   | 0      | 27,203  | 0 | 0 | 0 | 27,203  |
|                             | February  | 0      | 58,002  | 0 | 0 | 0 | 58,002  |
|                             | March     | 0      | 52,736  | 0 | 0 | 0 | 52,736  |
|                             | April     | 0      | 37,505  | 0 | 0 | 0 | 37,505  |
|                             | May       | 19,766 | 19,496  | 0 | 0 | 0 | 39,262  |
|                             | June      | 1,956  | 60,129  | 0 | 0 | 0 | 62,085  |
|                             | July      | 0      | 70,689  | 0 | 0 | 0 | 70,689  |
|                             | August    | 0      | 83,698  | 0 | 0 | 0 | 83,698  |
|                             | September | 5,572  | 45,694  | 0 | 0 | 0 | 51,266  |
|                             | October   | 0      | 14,069  | 0 | 0 | 0 | 14,069  |
|                             | November  | 2,274  | 18,635  | 0 | 0 | 0 | 20,909  |
|                             | December  | 17,711 | 27,112  | 0 | 0 | 0 | 44,823  |
| <b>2007 total = 562,247</b> |           |        |         |   |   |   |         |
| 2008                        | January   | 8,452  | 42,221  | 0 | 0 | 0 | 50,673  |
|                             | February  | 0      | 47,518  | 0 | 0 | 0 | 47,518  |
|                             | March     | 21,048 | 29,927  | 0 | 0 | 0 | 50,975  |
|                             | April     | 8,750  | 63,642  | 0 | 0 | 0 | 72,392  |
|                             | May       | 0      | 62,086  | 0 | 0 | 0 | 62,086  |
|                             | June      | 0      | 64,782  | 0 | 0 | 0 | 64,782  |
|                             | July      | 0      | 51,114  | 0 | 0 | 0 | 51,114  |
|                             | August    | 0      | 64,894  | 0 | 0 | 0 | 64,894  |
|                             | September | 2,887  | 54,104  | 0 | 0 | 0 | 56,991  |
|                             | October   | 15,220 | 11,235  | 0 | 0 | 0 | 26,455  |
|                             | November  | 9,140  | 23,086  | 0 | 0 | 0 | 32,226  |
|                             | December  | 0      | 5,703   | 0 | 0 | 0 | 5,703   |
| <b>2008 total = 585,809</b> |           |        |         |   |   |   |         |
|                             | January   | 0      | 35,488  | 0 | 0 | 0 | 35,488  |
|                             | February  | 4,325  | 33,481  | 0 | 0 | 0 | 37,806  |
|                             | March     | 0      | 48,644  | 0 | 0 | 0 | 48,644  |
|                             | April     | 14,296 | 61,554  | 0 | 0 | 0 | 75,850  |
|                             | May       | 21,779 | 28,745  | 0 | 0 | 0 | 50,524  |

|                             |           |        |        |   |   |       |        |
|-----------------------------|-----------|--------|--------|---|---|-------|--------|
| 2009                        | June      | 0      | 12,703 | 0 | 0 | 0     | 12,703 |
|                             | July      | 0      | 17,172 | 0 | 0 | 2,881 | 20,053 |
|                             | August    | 3,411  | 22,853 | 0 | 0 | 7,797 | 34,061 |
|                             | September | 0      | 40,140 | 0 | 0 | 0     | 40,140 |
|                             | October   | 0      | 31,852 | 0 | 0 | 0     | 31,852 |
|                             | November  | 0      | 14,067 | 0 | 0 | 0     | 14,067 |
|                             | December  | 0      | 8,044  | 0 | 0 | 0     | 8,044  |
| <b>2009 total = 409,232</b> |           |        |        |   |   |       |        |
| 2010                        | January   | 0      | 6,641  | 0 | 0 | 0     | 6,641  |
|                             | February  | 0      | 58,309 | 0 | 0 | 0     | 58,309 |
|                             | March     | 0      | 51,041 | 0 | 0 | 0     | 51,041 |
|                             | April     | 0      | 38,304 | 0 | 0 | 0     | 38,304 |
|                             | May       | 12,868 | 23,515 | 0 | 0 | 0     | 36,383 |
|                             | June      | 8,913  | 24,028 | 0 | 0 | 0     | 32,941 |
|                             | July      | 0      | 33,722 | 0 | 0 | 0     | 33,722 |
|                             | August    | 0      | 11,582 | 0 | 0 | 0     | 11,582 |
|                             | September | 0      | 27,708 | 0 | 0 | 0     | 27,708 |
|                             | October   | 0      | 43,208 | 0 | 0 | 0     | 43,208 |
|                             | November  | 0      | 40,395 | 0 | 0 | 0     | 40,395 |
|                             | December  | 0      | 15,375 | 0 | 0 | 0     | 15,375 |
| <b>2010 total = 395,609</b> |           |        |        |   |   |       |        |
| 2011                        | January   | 0      | 35,722 | 0 | 0 | 0     | 35,722 |
|                             | February  | 6,460  | 23,080 | 0 | 0 | 0     | 29,540 |
|                             | March     | 0      | 50,854 | 0 | 0 | 0     | 50,854 |
|                             | April     | 0      | 45,325 | 0 | 0 | 0     | 45,325 |
|                             | May       | 24,674 | 27,031 | 0 | 0 | 0     | 51,705 |
|                             | June      | 0      | 63,363 | 0 | 0 | 0     | 63,363 |
|                             | July      | 0      | 53,621 | 0 | 0 | 0     | 53,621 |
|                             | August    | 0      | 56,251 | 0 | 0 | 0     | 56,251 |
|                             | September | 0      | 37,325 | 0 | 0 | 0     | 37,325 |
|                             | October   | 24,729 | 20,206 | 0 | 0 | 0     | 44,935 |
|                             | November  | 4,541  | 5,174  | 0 | 0 | 0     | 9,715  |
|                             | December  | 0      | 39,813 | 0 | 0 | 0     | 39,813 |
| <b>2011 total = 518,169</b> |           |        |        |   |   |       |        |
| 2012                        | January   | 0      | 25,253 | 0 | 0 | 0     | 25,253 |
|                             | February  | 0      | 32,198 | 0 | 0 | 0     | 32,198 |
|                             | March     | 15,536 | 26,330 | 0 | 0 | 0     | 41,866 |
|                             | April     | 0      | 38,530 | 0 | 0 | 0     | 38,530 |
|                             | May       | 20,939 | 10,851 | 0 | 0 | 0     | 31,790 |
|                             | June      | 0      | 64,953 | 0 | 0 | 0     | 64,953 |
|                             | July      | 12,044 | 36,299 | 0 | 0 | 0     | 48,343 |
|                             | August    | 0      | 28,406 | 0 | 0 | 0     | 28,406 |
|                             | September | 0      | 22,916 | 0 | 0 | 0     | 22,916 |
|                             | October   | 7,893  | 35,461 | 0 | 0 | 0     | 43,354 |
|                             | November  | 1,070  | 26,922 | 0 | 0 | 0     | 27,992 |
|                             | December  | 0      | 30,491 | 0 | 0 | 0     | 30,491 |
| <b>2012 total = 436,092</b> |           |        |        |   |   |       |        |
| 2013                        | January   | 0      | 40,117 | 0 | 0 | 0     | 40,117 |
|                             | February  | 0      | 29,178 | 0 | 0 | 0     | 29,178 |
|                             | March     | 2,236  | 17,149 | 0 | 0 | 0     | 19,385 |
|                             | April     | 0      | 19,406 | 0 | 0 | 0     | 19,406 |
|                             | May       | 3,885  | 26,706 | 0 | 0 | 0     | 30,591 |
|                             | June      | 0      | 46,838 | 0 | 0 | 0     | 46,838 |
|                             | July      | 2,841  | 35,699 | 0 | 0 | 0     | 38,540 |
|                             | August    | 0      | 13,429 | 0 | 0 | 0     | 13,429 |
|                             | September | 0      | 23,780 | 0 | 0 | 0     | 23,780 |
|                             | October   | 0      | 15,882 | 0 | 0 | 0     | 15,882 |
|                             | November  | 1,642  | 19,526 | 0 | 0 | 0     | 21,168 |
|                             | December  | 0      | 21,569 | 0 | 0 | 0     | 21,569 |

|                             |                |        |        |   |   |   |        |
|-----------------------------|----------------|--------|--------|---|---|---|--------|
| <b>2013 total = 319,883</b> |                |        |        |   |   |   |        |
| 2014                        | January        | 0      | 54,911 | 0 | 0 | 0 | 54,911 |
|                             | February       | 0      | 28,780 | 0 | 0 | 0 | 28,780 |
|                             | March          | 0      | 55,527 | 0 | 0 | 0 | 55,527 |
|                             | April          | 4,699  | 33,742 | 0 | 0 | 0 | 38,441 |
|                             | May            | 2,465  | 25,672 | 0 | 0 | 0 | 28,137 |
|                             | June           | 0      | 26,473 | 0 | 0 | 0 | 26,473 |
|                             | July           | 0      | 52,155 | 0 | 0 | 0 | 52,155 |
|                             | August         | 0      | 80,278 | 0 | 0 | 0 | 80,278 |
|                             | September      | 0      | 35,081 | 0 | 0 | 0 | 35,081 |
|                             | October        | 0      | 20,516 | 0 | 0 | 0 | 20,516 |
|                             | November       | 1,949  | 14,325 | 0 | 0 | 0 | 16,274 |
|                             | December       | 6,156  | 22,772 | 0 | 0 | 0 | 28,928 |
| <b>2014 total = 465,501</b> |                |        |        |   |   |   |        |
| 2015                        | January        | 0      | 39,105 | 0 | 0 | 0 | 39,105 |
|                             | February       | 0      | 66,014 | 0 | 0 | 0 | 66,014 |
|                             | March          | 10,008 | 7,449  | 0 | 0 | 0 | 17,457 |
|                             | April          | 4,535  | 34,801 | 0 | 0 | 0 | 39,336 |
|                             | May            | 5,578  | 36,371 | 0 | 0 | 0 | 41,949 |
|                             | June           | 2,076  | 50,999 | 0 | 0 | 0 | 53,075 |
|                             | July           | 4,525  | 65,512 | 0 | 0 | 0 | 70,037 |
|                             | August         | 0      | 45,146 | 0 | 0 | 0 | 45,146 |
|                             | September      | 0      | 56,139 | 0 | 0 | 0 | 56,139 |
|                             | October        | 17,770 | 22,519 | 0 | 0 | 0 | 40,289 |
|                             | November       | 0      | 29,360 | 0 | 0 | 0 | 29,360 |
|                             | December       | 0      | 54,775 | 0 | 0 | 0 | 54,775 |
| <b>2015 total = 552,682</b> |                |        |        |   |   |   |        |
| 2016                        | January        | 0      | 64,363 | 0 | 0 | 0 | 64,363 |
|                             | February       | 0      | 61,124 | 0 | 0 | 0 | 61,124 |
|                             | March          | 3,747  | 21,276 | 0 | 0 | 0 | 25,023 |
|                             | April          | 1,483  | 38,111 | 0 | 0 | 0 | 39,594 |
|                             | May            | 0      | 20,408 | 0 | 0 | 0 | 20,408 |
|                             | June           | 0      | 52,115 | 0 | 0 | 0 | 52,115 |
|                             | July           | 7,164  | 25,431 | 0 | 0 | 0 | 32,595 |
|                             | August         | 6,239  | 32,622 | 0 | 0 | 0 | 38,861 |
|                             | September      | 0      | 16,768 | 0 | 0 | 0 | 16,768 |
|                             | October        | 0      | 12,967 | 0 | 0 | 0 | 12,967 |
|                             | November       | 0      | 25,856 | 0 | 0 | 0 | 25,856 |
|                             | December       | 0      | 29,890 | 0 | 0 | 0 | 29,890 |
| <b>2016 total = 461,564</b> |                |        |        |   |   |   |        |
| 2017                        | January        | 0      | 15,474 | 0 | 0 | 0 | 15,474 |
|                             | February       | 0      | 18,726 | 0 | 0 | 0 | 18,726 |
|                             | March          | 0      | 58,397 | 0 | 0 | 0 | 58,397 |
|                             | April          | 0      | 49,875 | 0 | 0 | 0 | 49,875 |
|                             | May            | 12,013 | 26,800 | 0 | 0 | 0 | 38,813 |
|                             | June           | 19,083 | 49,521 | 0 | 0 | 0 | 68,604 |
|                             | July           | 2,610  | 24,373 | 0 | 0 | 0 | 26,983 |
|                             | August         | 0      | 29,455 | 0 | 0 | 0 | 29,455 |
|                             | September      | 0      | 20,168 | 0 | 0 | 0 | 20,168 |
|                             | October        | 0      | 13,674 | 0 | 0 | 0 | 13,674 |
|                             | November       | 0      | 48,352 | 0 | 0 | 0 | 48,352 |
|                             | December       | 0      | 17,003 | 0 | 0 | 0 | 17,003 |
| <b>2017 total</b>           | <b>405,524</b> |        |        |   |   |   |        |

|                   |               |                 |                  |                |                   |               |                  |
|-------------------|---------------|-----------------|------------------|----------------|-------------------|---------------|------------------|
| 2018              | January       | 0               | 32027            | 0              | 0                 | 0             | 32,027           |
|                   | February      | 0               | 35777            | 0              | 0                 | 0             | 35,777           |
|                   | March         |                 |                  |                |                   |               |                  |
|                   | April         |                 |                  |                |                   |               |                  |
|                   | May           |                 |                  |                |                   |               |                  |
|                   | June          |                 |                  |                |                   |               |                  |
|                   | July          |                 |                  |                |                   |               |                  |
|                   | August        |                 |                  |                |                   |               |                  |
|                   | September     |                 |                  |                |                   |               |                  |
|                   | October       |                 |                  |                |                   |               |                  |
|                   | November      |                 |                  |                |                   |               |                  |
|                   | December      |                 |                  |                |                   |               |                  |
| <b>2018 total</b> | <b>67,804</b> |                 |                  |                |                   |               |                  |
|                   |               |                 |                  |                |                   |               |                  |
|                   |               | <b>Duranbah</b> | <b>SR-E</b>      | <b>Kirra</b>   | <b>Greenmount</b> | <b>SR-W</b>   |                  |
| <b>Totals</b>     |               | <b>773,911</b>  | <b>7,913,739</b> | <b>264,112</b> | <b>31,931</b>     | <b>12,264</b> | <b>8,995,957</b> |
|                   |               |                 |                  |                |                   |               |                  |