

Herne Bay Tide Gauge

Location

OS: 616895E 169377N

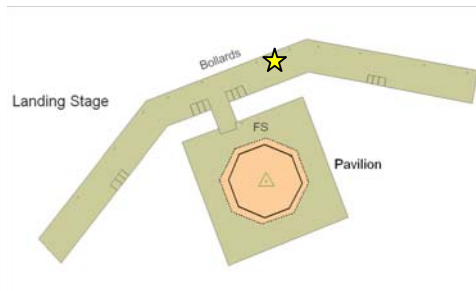
WGS84 Latitude: 51° 22.919196' N Longitude: 01° 6.9335907' E

Instrument Type

Etrometa Step Gauge

Site of Gauge

NE front of Herne Bay Pier



Benchmarks

Benchmark	OS Co-ordinates		Description
TGBM	616894.912E 169376.689N	5.524 OD	Steel pin
Aux1			
Aux2			

TGZ = -3.510m above Ordnance Datum Newlyn

TGZ = -0.790m above Admiralty Chart Datum

TGZ = 9.034m below TGBM

Datum information

All data are to Ordnance Datum Newlyn. The height of Chart Datum relative to Ordnance Datum at Herne Bay is -2.72m.

Survey information

The site was last surveyed on 26 November 2004. All data prior to this date were re-adjusted to the new level.

Data Quality

C1(%)	Sample interval	Missing data
87	10 minutes	01-31 Jan, 05-06 Apr, 05-10 Sep, 12-17 Dec

Residuals and Elevations

Residuals and Elevations (OD and CD) for the whole year are shown in Figures 1 to 3 respectively.

Statistics

All times GMT

Month	Surge maxima		Surge minima	
	Value (m)	Date/Time	Value (m)	Date/Time
January	-	-	-	-
February	1.160	08-Feb-2006 16:20	-0.684	15-Feb-2006 09:40
March	0.560	06-Mar-2006 12:50	-0.956	13-Mar-2006 10:40
April	0.402	09-Apr-2006 17:40	-0.618	11-Apr-2006 18:30
May	0.647	31-May-2006 10:40	-0.533	24-May-2006 05:40
June	0.474	13-Jun-2006 21:20	-0.654	21-Jun-2006 04:00
July	0.371	13-Jul-2006 22:00	-0.379	09-Jul-2006 18:30
August	0.706	03-Aug-2006 13:30	-0.275	19-Aug-2006 16:30
September	0.478	29-Sep-2006 02:10	-0.588	02-Sep-2006 20:20
October	1.948	31-Oct-2006 22:20	-0.485	30-Oct-2006 13:50
November	1.701	01-Nov-2006 00:20	-1.496	20-Nov-2006 07:50
December	0.906	31-Dec-2006 04:10	-1.419	10-Dec-2006 23:50

Month	Extreme maxima		Extreme minima	
	Elevation (OD)	Date/Time	Elevation (OD)	Date/Time
January	-	-	-	-
February	3.04	28-Feb-2006 12:30	-2.60	01-Feb-2006 08:20
March	2.93	29-Mar-2006 12:00	-2.65	02-Mar-2006 08:00
April	2.87	01-Apr-2006 01:40	-2.49	01-Apr-2006 08:20
May	2.63	30-May-2006 01:50	-2.34	24-May-2006 03:50
June	2.66	14-Jun-2006 01:30	-2.23	21-Jun-2006 02:00
July	2.70	14-Jul-2006 02:10	-2.37	16-Jul-2006 22:30
August	3.00	12-Aug-2006 13:50	-2.38	11-Aug-2006 20:00
September	2.86	11-Sep-2006 14:20	-2.32	11-Sep-2006 21:00
October	3.18	07-Oct-2006 11:40	-2.57	06-Oct-2006 18:00
November	2.97	06-Nov-2006 12:00	-2.60	20-Nov-2006 06:20
December	3.00	08-Dec-2006 14:00	-2.79	03-Dec-2006 17:00

Month	Mean Sea Level	
	No. of days	MSL (OD)
January	0	-
February	28	0.174
March	31	0.030
April	28	0.089
May	31	0.077
June	30	0.069
July	31	0.110
August	31	0.228
September	24	0.236
October	31	0.251
November	30	0.274
December	25	0.025

10 Highest Values in 2006			
Surge		Extreme	
Value (m)	Date/Time	Elevation (OD) (surge component)	Date/Time
1.948	31-Oct-2006 22:20	3.10 (0.40)	07-Oct-2006 11:40
1.160	08-Feb-2006 16:20	3.04 (0.30)	28-Feb-2006 12:30
1.122	08-Feb-2006 15:30	3.00 (0.00)	08-Dec-2006 14:00
1.114	12-Nov-2006 12:20	3.00 (0.27)	12-Aug-2006 13:50
1.075	12-Nov-2006 12:40	2.98 (1.30)	31-Oct-2006 19:30
1.012	20-Nov-2006 20:40	2.97 (0.24)	06-Nov-2006 12:00
0.991	27-Oct-2006 10:20	2.94 (0.29)	10-Oct-2006 01:40
0.976	20-Nov-2006 19:50	2.93 (0.51)	09-Nov-2006 14:20
0.947	27-Oct-2006 10:40	2.93 (0.17)	29-Mar-2006 12:00
0.944	11-Nov-2006 11:20	2.92 (0.08)	08-Oct-2006 00:20

Year	Annual surge maxima		Annual extreme maxima		Annual Mean Sea Level (OD)	Recovery rate (C1)
	Value (m)	Date	Elevation (OD) (surge component)	Date		
1996	1.294	12-Sep-1996 20:30	3.11 (0.539)	13-Nov-1996 00:50	0.116	60%
1997	1.226	18-Feb-1997 17:40	3.16 (0.663)	11-Apr-1997 15:00	0.073	88%
1998	1.390	11-Mar-1998 18:40	3.35 (0.519)	08-Oct-1998 13:40	0.123	90%
1999	1.869	05-Feb-1999 11:00	3.15 (0.554)	27-Nov-1999 14:50	0.124	76%
2000	1.782	30-Jan-2000 03:40	3.20 (0.510)	22-Jan-2000 12:50	0.113	84%
2001	1.714	08-Nov-2001 14:30	3.28 (0.649)	08-Feb-2001 12:00	0.163	91%
2002	1.680	27-Oct-2002 22:10	3.14 (0.385)	07-Nov-2002 01:10	0.142	99%
2003	1.607	30-Jan-2003 18:00	3.09 (0.614)	08-Oct-2003 23:30	0.172	100%
2004	1.814	08-Feb-2004 21:10	3.35 (0.771)	13-Nov-2004 00:20	0.153	96%
2005	1.782	25-Nov-2005 01:10	3.35 (1.187)	16-Dec-2005 12:40	0.140	84%
2006	1.948	31-Oct-2006 22:20	3.18 (0.397)	07-Oct-2006 11:40	0.143	87%
2007						
2008						

General

The time series of 10 minute tidal elevations for one year is quality-checked, flagged and archived. The archived time series is continuous and monotonic, with missing data given as 9999. The missing data shown are days where the entire 24 hours of data are missing.

Monthly **extreme maxima/minima** are the maximum and minimum water levels from all measured data for that month. Monthly **surge maxima/minima** (residuals) are calculated in a similar manner from the time series of residuals. Residuals are derived as the measured tidal elevation minus the predicted tidal elevation.

Tidal predictions were produced using TASK2000. The monthly Mean Sea Level is calculated as the average of all readings for the given month. The annual MSL is the average of all readings for the given year. These average values should not be used for any purpose without consideration of the recovery rate.

The TGBM was surveyed on 26 November 2004 and the resulting elevation of the TGZ was found to be -3.510 OD, which is 0.050m lower than the TGZ which has been used since 1996. All tidal data from 1996 to 2005 inclusive were re-adjusted by -0.050m, to conform with the new TGZ.

Acknowledgements

TASK2000 tidal prediction software was kindly provided by Proudman Oceanographic Laboratory.

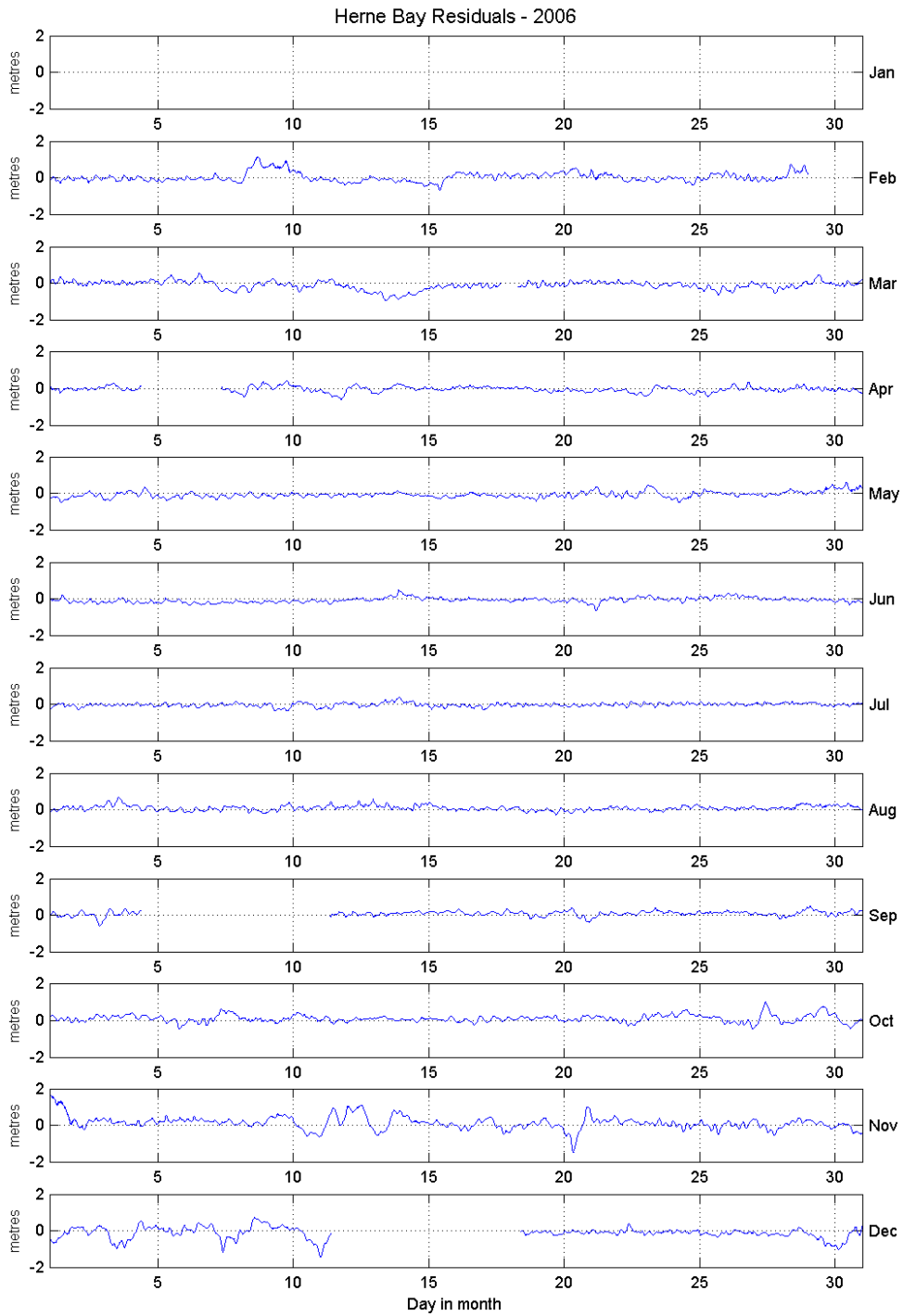


Figure 1 Residuals for 2006

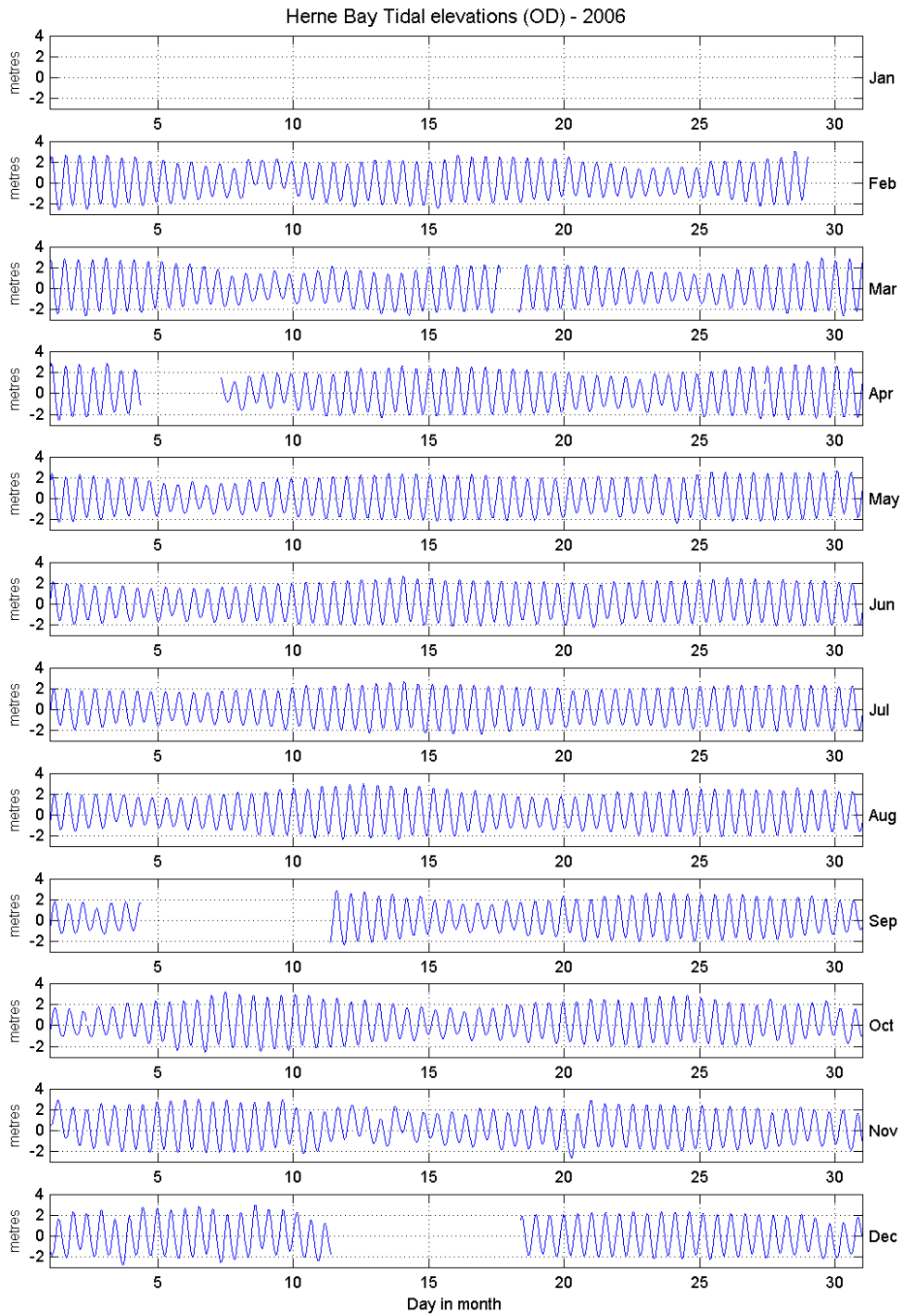


Figure 2 Tidal elevations relative to Ordnance Datum for 2006

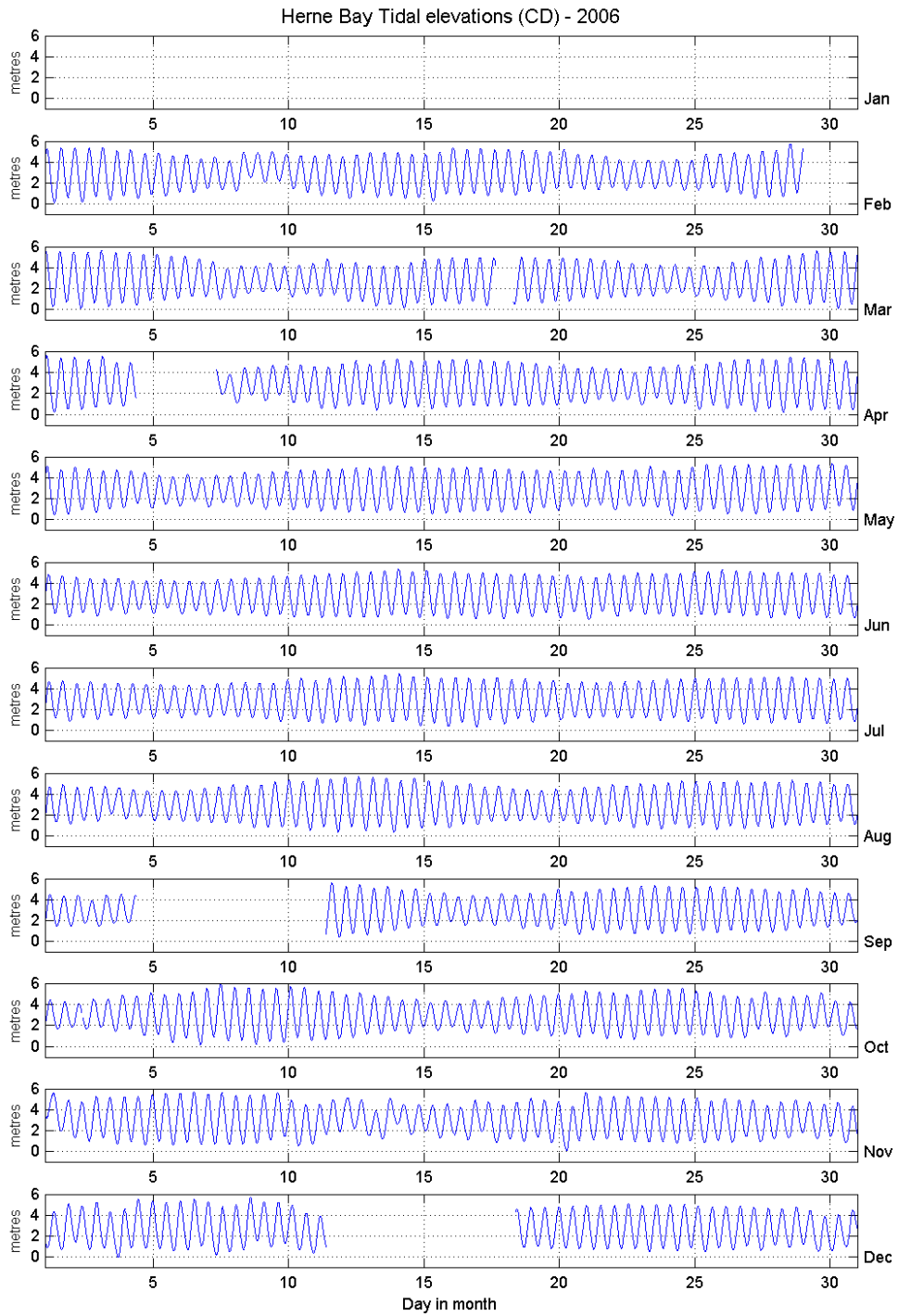


Figure 3 Tidal elevations relative to Chart Datum for 2006