

Herne Bay Tide Gauge

Location

OS: 616895E 169377N

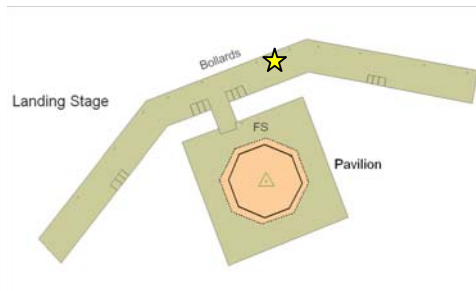
WGS84 Latitude: 51° 22.919196' N Longitude: 01° 6.9335907' E

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 have been readjusted to the new level.

Data Quality

C1(%)	Sample interval	Missing data
84	10 minutes	04 Jun - 04Jul, 20-25 Jul, 16-30 Sep, 15 Dec

Residuals

Residuals for the whole year are shown in Figure 1

Statistics

All times GMT

Month	Surge maxima		Surge minima	
	Value (m)	Date/Time	Value (m)	Date/Time
January	1.129	12-Jan-2005 22:00	-1.093	20-Jan-2005 03:20
February	1.063	13-Feb-2005 23:40	-0.623	06-Feb-2005 19:10
March	0.722	05-Mar-2005 02:50	-0.605	16-Mar-2005 01:10
April	1.089	08-Apr-2005 19:50	-0.838	11-Apr-2005 21:20
May	0.780	14-May-2005 10:30	-0.769	11-May-2005 21:20
June	0.113	01-Jun-2005 09:00	-0.644	02-Jun-2005 04:10
July	0.494	08-Jul-2005 03:10	-0.707	05-Jul-2005 19:30
August	0.697	14-Aug-2005 18:00	-0.698	24-Aug-2005 10:20
September	0.906	14-Sep-2005 17:50	-0.441	03-Sep-2005 22:00
October	1.092	07-Oct-2005 10:00	-0.872	25-Oct-2005 07:00
November	1.782	25-Nov-2005 01:10	-0.757	11-Nov-2005 17:50
December	1.391	16-Dec-2005 13:50	-1.311	30-Dec-2005 20:00

Month	Extreme maxima		Extreme minima	
	Elevation (OD)	Date/Time	Elevation (OD)	Date/Time
January	3.18	13-Jan-2005 01:40	-2.82	12-Jan-2005 08:00
February	3.08	13-Feb-2005 15:30	-2.74	10-Feb-2005 07:40
March	3.02	12-Mar-2005 01:00	-2.67	10-Mar-2005 06:30
April	3.10	08-Apr-2005 12:10	-2.50	10-Apr-2005 07:20
May	2.67	27-May-2005 02:20	-2.35	24-May-2005 06:20
June	1.94	02-Jun-2005 20:40	-2.15	02-Jun-2005 02:40
July	2.56	26-Jul-2005 15:40	-2.17	26-Jul-2005 22:20
August	2.87	23-Aug-2005 02:40	-2.56	21-Aug-2005 19:50
September	2.57	15-Sep-2005 22:20	-2.13	05-Sep-2005 19:50
October	2.64	20-Oct-2005 13:30	-2.47	17-Oct-2005 18:20
November	3.12	15-Nov-2005 11:20	-2.38	03-Nov-2005 19:30
December	3.35	16-Dec-2005 12:40	-2.51	30-Dec-2005 18:00

Month	Mean Sea Level	
	No. of days	MSL (OD)
January	31	0.155
February	28	0.105
March	31	0.075
April	30	0.083
May	31	0.111
June	3	-0.180
July	21	0.159
August	31	0.205
September	15	0.205
October	31	0.157
November	30	0.200
December	30	0.143

10 Highest Values in 2005			
Surge		Extreme	
Value (m)	Date/Time	Elevation (OD) (surge component)	Date/Time
1.782	25-Nov-2005 01:10	3.35 (1.187)	16-Dec-/2005 12:40
1.391	16-Dec-2005 13:50	3.18 (0.665)	13-Jan-2005 01:40
1.299	09-Nov-2005 00:20	3.12 (0.314)	15-Nov-2005 11:20
1.289	09-Nov-2005 00:40	3.10 (0.373)	08-Apr-2005 12:10
1.129	12-Jan-2005 22:00	3.08 (0.589)	13-Feb-2005 15:30
1.115	17-Dec-2005 14:30	3.07 (0.976)	17-Dec-2005 13:10
1.095	12-Jan-2005 21:30	3.07 (0.361)	13-Feb-2005 03:00
1.092	07-Oct-2005 10:00	3.03 (0.511)	11-Jan-2005 00:10
1.089	08-Apr-2005 19:50	3.02 (0.269)	12-Mar-2005 01:00
1.084	07-Oct-2005 10:10	2.98 (0.222)	12-Mar-2005 13:40

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						

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 have been re-adjusted by -0.050m, to conform with the new TGZ. Recorded data for 2006 will use the new TGZ and will require no re-adjustment.

Acknowledgements

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

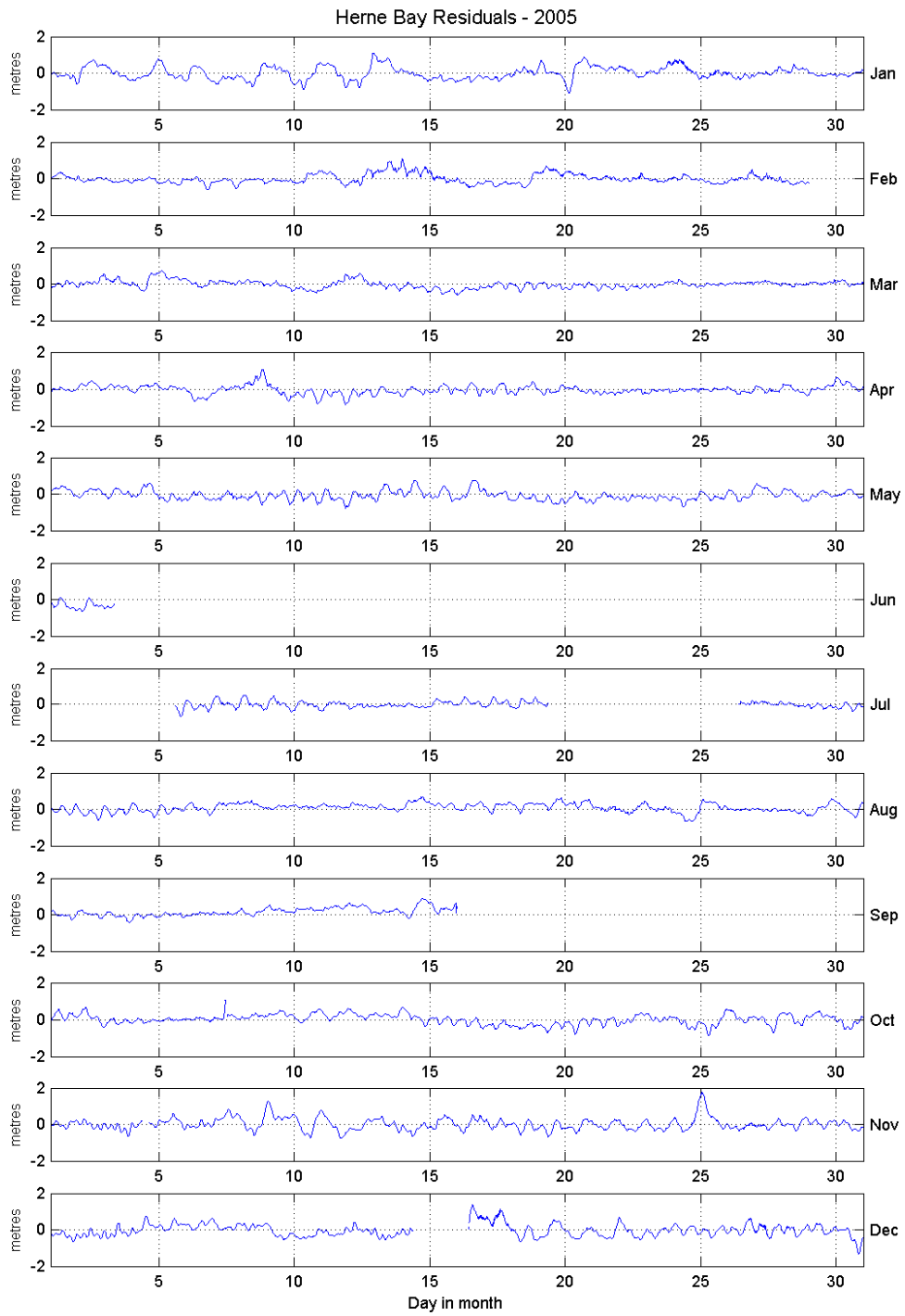


Figure 1 Residuals for 2005