

Herne Bay Wave Gauge

Location

OS: 616895E 169377N
 WGS84: Latitude: 51° 22.92' N Longitude: 001° 06.93' E

Water Depth

~0.5m CD

Instrument Type

Etrometa Step Gauge

Data Quality

C1 (%)	Sample interval
92	20 minutes

Monthly Means

All times GMT

Month	H _s	T _p	T _z	Direction	SST	No. of days
	(m)	(s)	(s)	(°)	(°C)	
January	0.27	4.8	3	-	-	30
February	0.28	4.6	2.9	-	-	27
March	0.21	3.3	2.7	-	-	31
April	0.20	3.8	2.7	-	-	29
May	0.28	3.3	2.9	-	-	31
June	0.24	3.6	2.9	-	-	30
July	0.12	2.9	2.5	-	-	30
August	0.22	3.9	2.7	-	-	30
September	0.21	5.1	2.8	-	-	29
October	0.25	6.4	2.8	-	-	30
November	0.29	7.2	3.1	-	-	27
December	0.56	-	4.2	-	-	13

Tables and plots of these values, together with the minimum and maximum values and the standard deviation are available on the website.

Highest events in 2010									
Date/Time	H _s	T _p	T _z	Dir.	Water level elevation* (OD)	Tidal stage (hours re. HW)	Tidal range (m)	Tidal surge* (m)	Max. surge* (m)
23-Dec-2010 13:00	2.40	5.1	4.9	-	2.77	HW -1	4.81	0.40	0.64
07-Jan-2010 05:40	1.89	-	8.4	-	1.92	HW +1	5.12	-0.13	0.29
09-Jan-2010 18:20	1.84	6.1	4.7	-	1.69	HW -1	2.97	0.17	0.31

* Tidal information is obtained from the nearest recording tide gauge (the National Network gauge at Portsmouth). The surge shown is the residual at the time of the highest H_s. The maximum tidal surge is the largest positive surge during the storm event.

Year	Annual H_s exceedance* (m)						Annual Maximum H_s (m)	
	0.05%	0.5%	1%	2%	5%	10%	Date	A_{max}
1996	1.66	1.42	1.33	1.19	0.93	0.72	23-Dec-1996 10:20	1.73
1997	1.50	1.15	1.04	0.88	0.69	0.54	01-Jan-1997 20:00	1.75
1998	1.64	1.17	1.00	0.87	0.71	0.54	08-Oct-1998 11:20	1.74
1999	1.56	1.28	1.16	1.01	0.79	0.62	11-Nov-1999 19:40	1.83
2000	1.61	1.19	1.05	0.92	0.67	0.50	04-Apr-2000 22:20	1.78
2001	1.74	1.30	1.14	0.98	0.77	0.59	08-Nov-2001 15:00	2.12
2002	1.44	1.17	1.05	0.90	0.72	0.54	14-Feb-2002 01:00	1.54
2003	1.60	1.25	1.13	0.96	0.73	0.55	29-Jan-2003 09:40	1.78
2004	1.51	1.25	1.11	0.94	0.70	0.52	07-Jul-2004 14:40	1.71
2005	1.71	1.36	1.21	1.04	0.81	0.61	14-Feb-2005 04:20	1.94
2006	1.50	1.26	1.11	0.93	0.71	0.53	20-Feb-2006 03:20	1.60
2007	1.45	1.23	1.11	0.98	0.76	0.60	20-Mar-2007 14:20	1.58
2008	1.54	1.06	0.92	0.78	0.58	0.44	22-Nov-2008 10:00	1.74
2009	1.43	1.08	0.94	0.77	0.57	0.43	23-Jan-2009 11:40	1.88
2010	2.09	1.24	1.07	0.90	0.68	0.53	23-Dec-2010 13:00	2.40

* i.e. 5 % of the H_s values measured in 2004 exceeded 0.70m

Distribution plots

The distribution of wave parameters are shown in the accompanying graphs of:

- Percentage of occurrence of H_s , T_p , T_z for 2010
- Percentage wave height exceedance
- Joint distribution of all parameters for 2010, given both as number of observations and as percentage of occurrence
- Cumulative joint distribution of parameters from start of records
- Incidence of storms during 2010. Storm events are defined using the Peaks-over-Threshold method. The highest H_s of each storm event is shown.
- Annual time series of H_s (red line is storm waves threshold)

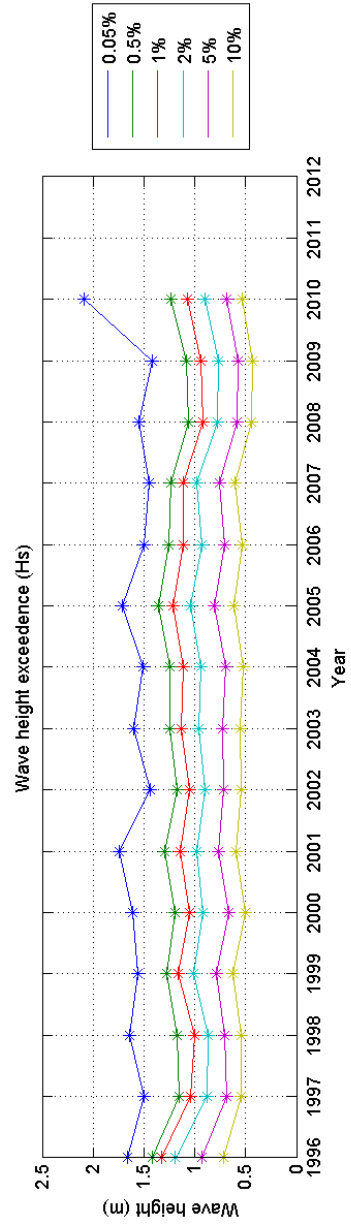
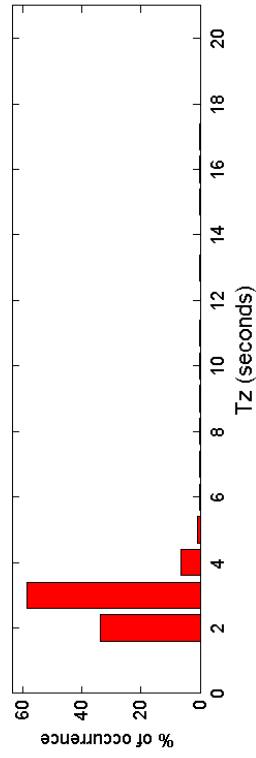
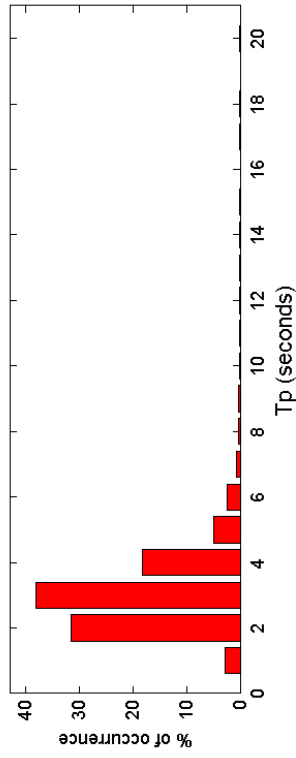
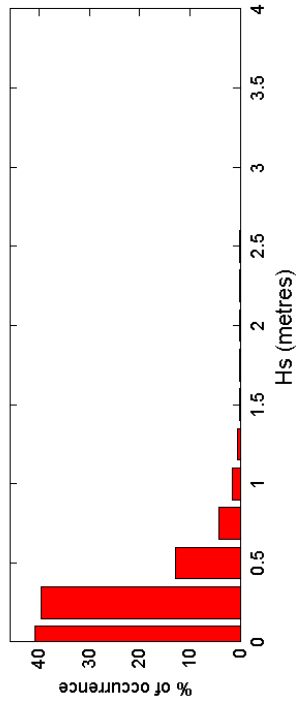
General

The Step Gauge was first deployed on 19 March 1996. Sections of the gauge were renewed during February and July 2007. The telemetry system was intermittently faulty for several weeks during the winter months of 2008 to 2010.

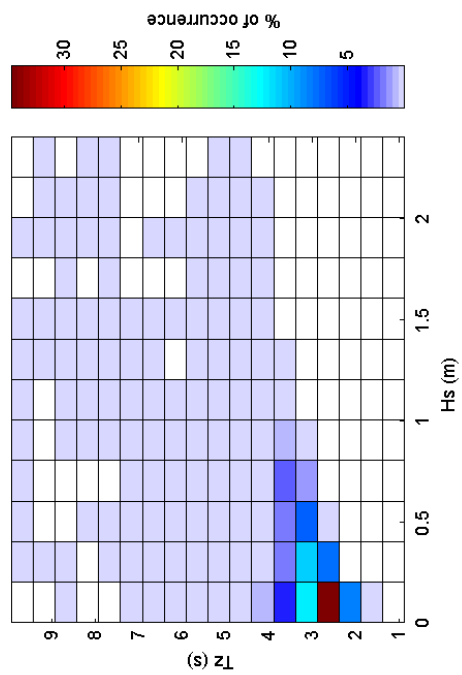
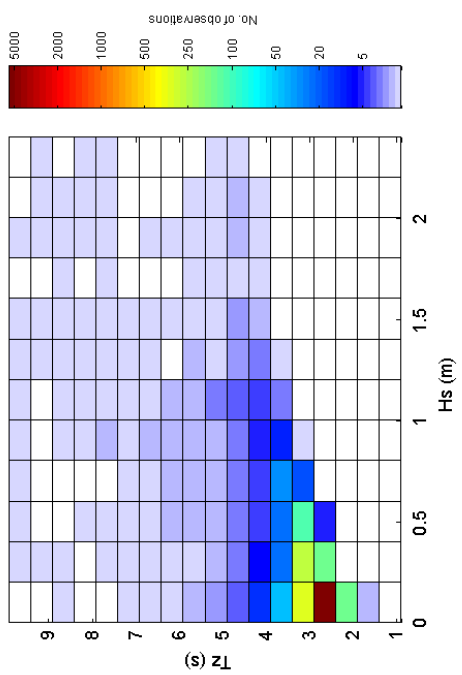
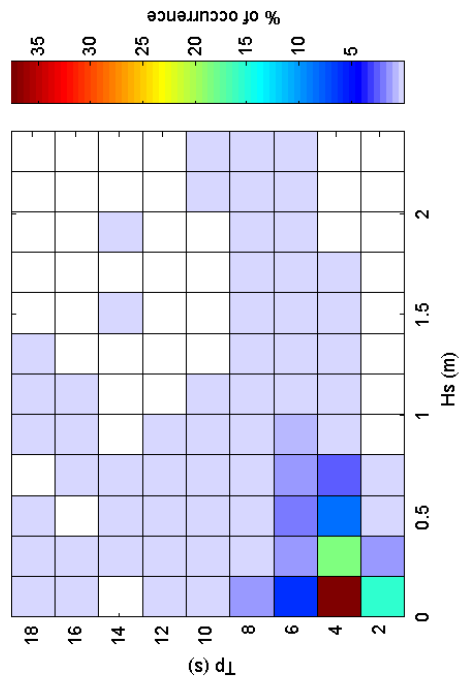
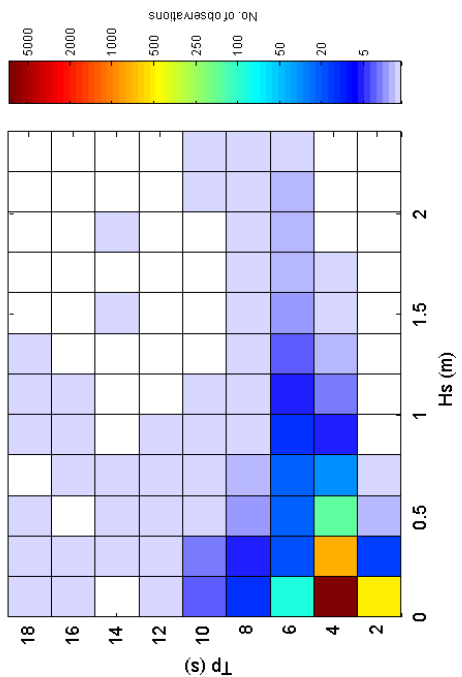
Acknowledgements

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Herne Bay 2010



Herne Bay 2010 - Joint distribution



Herne Bay 1996 to 2010 - Joint distribution (% of occurrence)

