

## Questionnaire

We would be grateful if you could provide the following information:

<b>1. PRIMARY INFORMATION</b>	
<b>Contact Name</b> <b>Address</b> <b>Tel/Fax/E-mail</b>	Helena Kol Rua Artilharia Um, 107, 1099-052 Lisboa Tel: +351213819600 / Fax: +351213819685 <a href="mailto:hkol@igeo.pt">hkol@igeo.pt</a>
<b>Location of the historic measurements</b> (station name, country name, if possible latitude/longitude) If possible a local map should be provided showing the location of the measurements within a port or harbour (we realise that sometimes the exact location may no longer be known).	CASCAIS PORTUGAL Lat. 38° 41' 36" N (ETRS89) Long. 9° 25' 06" W (ETRS89)
<b>Start and end dates of the measurements</b>	Start – 1882; End – still in service.
<b>Are existing (i.e. probably later) data already available in computer form from this site?</b> If so, for what dates?	Yes. From 1986 until 2000.
<b>Is this site a GLOSS station, or are there existing data from this site in the PSMSL, UHSLC or other international data banks?</b> (We can enter this field if necessary from our knowledge of GLOSS, PSMSL and UHSLC)	CASCAIS is a GLOSS station. The data is also available in the PSMSL.

<b>2. SUPPLEMENTARY INFORMATION</b>	
<b>Type of charts.</b> Manufacturer of the charts. Approximate size (cm x cm or inch x inch).	145cm × 68cm
<b>Manufacturer</b> and description of the gauge itself.	Borel System.
<b>Scale factor</b> (i.e. ratio of sea level in the ocean to that on the chart)	10cm on chart = 1m on reality
<b>Chart replacement frequency</b> (e.g. daily, weekly)	Weekly.
<b>Quality of charts</b> (e.g. Is the pen trace thin and distinct, which is good, or fat or smudged, which is bad? Is the paper deteriorating? How much high-frequency variability is there in the pen trace from waves, harbour activity or seiching).	The pen trace is thin and distinct. The quality of the paper is good.
<b>How often were checks made on the gauge by a local observer?</b>	Daily.
<b>Is there corresponding data available from tide pole readings?</b> How frequent were they (e.g. daily, weekly) and are how are those readings recorded (e.g. in a book, marked on the chart)	
<b>Is there other detailed knowledge of the relationship between the zero of the chart readings, tide gauge zero, tide pole zero, heights of nearby benchmarks etc.?</b>	Benchmark (NP 1) = 13,357m Benchmark ( $\odot_{b1}$ ) = 4,308m Tide Gauge Benchmark (NP M) = 4,252m Ordnance Datum = 0,000m Chart Datum (Hydrographic Zero) = 2,08m

Please provide as much as possible other background information and send replies to this questionnaire to Liz Bradshaw either by email ([elizb@bodc.ac.uk](mailto:elizb@bodc.ac.uk)), fax (+44 151 652 3950) or post to:

Liz Bradshaw  
British Oceanographic Data Centre  
Proudman Oceanographic Laboratory  
Bidston Observatory, Prenton, Merseyside. CH43 7RA, United Kingdom  
Many thanks once again for your time and interest in this.

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<b>Location of the historic measurements</b> (station name, country name, if possible latitude/longitude) If possible a local map should be provided showing the location of the measurements within a port or harbour (we realise that sometimes the exact location may no longer be known).	LAGOS PORTUGAL Lat. 37° 05' 56" N (ETRS89) Long. 8° 40' 06" W (ETRS89)
<b>Start and end dates of the measurements</b>	Start – 1908; End – still in service.
<b>Are existing (i.e. probably later) data already available in computer form from this site?</b> If so, for what dates?	Yes. From 1986 until 2000.
<b>Is this site a GLOSS station, or are there existing data from this site in the PSMSL, UHSLC or other international data banks?</b> (We can enter this field if necessary from our knowledge of GLOSS, PSMSL and UHSLC)	It is not a GLOSS station. The data is available in the PSMSL.

<b><i>2. SUPPLEMENTARY INFORMATION</i></b>	
<b>Type of charts.</b> Manufacturer of the charts. Approximate size (cm x cm or inch x inch).	145cm × 68cm
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<b>Is there other detailed knowledge of the relationship between the zero of the chart readings, tide gauge zero, tide pole zero, heights of nearby benchmarks etc.?</b>	Benchmark (NP 142) = 3,835m Tide Gauge Benchmark (NP M) = 3,213m Benchmark (⊙ <sub>p</sub> ) = 3,089m Ordnance Datum = 0,000m Chart Datum (Hydrographic Zero) = 2,00m

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