

National Tide Gauge Network Report of Ireland

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Introduction

Since the previous report in 2005 there has been much progress in the development of an Irish tide gauge network. Many of the existing gauges have been replaced or upgraded and there is an ongoing process of establishing new sites. It is expected that the network will be fully completed, with all gaps around the coastline filled, by 2010.

Current Status

The current network consists of both old and new sites all operating to certain preset standards. The sites now, or soon to be, included are shown in the map below. The following points about the network should be noted,

- Only gauges that are of highest standards and have regular, calibration, servicing and level checks are included.
- All gauges have been accurately surveyed to Ordnance Datum Malin Head
- Other gauges operate in Ireland but are not included as they do not meet the above standards
- The start date given in Table 1 below is the date the network manager was satisfied that the site was of a suitable standard to be included in the network. The exception is the Castletownbere gauge which has been operated satisfactorily by the Department of Communications, Marine and Natural Resources since 2004.
- Water level data is logged at a maximum frequency (i.e. interval not greater than) 6 minutes apart from Castletownbere, which is 15 minutes.
- Data upload to this site is nominally 1 hour in arrears, but may be more frequent.
- Information can be found in web site:- www.irishtides.ie.

The GLOSS sites for Ireland are Castletownbere and Malin Head. The Castletownbere site was established in December 2004 and has been part of the network since then. Malin Head although it has been operational since 1958 has not yet been fully integrated into the network. It is planned to install a second gauge and a CGPS system at this important national site in 2007. This will allow more control over the collection and transmission of data.

From Table 1 it can be seen that every effort has been made to standardise technologies in the network. In most cases the OTT Nimbus gauges are being used. Most sites also include other instrumentation to measure water temperature and meteorological conditions.

Methodologies for disseminating water level data from the Irish tide gauge network have still not been established. However any queries regarding data should be directed to the network manager (contact details are given below).

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Irish Tide Gauge Network Sites

Station	Lat/Long	Gauge Type	Start date	Other Data	Comment
Malin Head		Bubbler		Met Eireann Weather Station	Current gauge was installed in 2003. GLOSS site, new gauge to be installed in 2007
Killybegs	54.6364 -8.3949	Bubbler	28/03/2007	Water Temp., Atmos. Pressure, mean sea level	Gauge installed in Nov. 2000, some data has been lost due to memory overflows in the logger
Galway	53.26895 -9.04796	Bubbler	16/03/2007	Water Temp., Atmos. Pressure, mean sea level	Has been operational since 2004
Inishmore		Bubbler	06/04/2007	Water Temp., Atmos. Pressure, mean sea level	New site
Castletownbere	51.6496 -9.9034	Bubbler	05/12/2006	Weather station and GPS receiver	Installed Dec 2004, GLOSS site
Wexford	52.3385 -6.4589	Bubbler	19/04/2007	Water Temperature Atmos. Pressure	New site
Kish Bank	53.31167 -5.92167	1. Bubbler 2. Submerged PT	28/07/2006	Water Temperature Atmos. Pressure	New site
Dublin Port	53.34574 -6.22166	Druck Pressure Transducer	13/02/2007		Long established gauge site, recently upgraded
Howth	53.39148 -6.0683	Bubbler	25/10/2006	Water Temperature	New site
Skerries	53.5850 -6.108117	Bubbler	26/10/2006	Water Temperature Atmospheric Pressure	New site

Table 1

Future Plans

The network is still in development and as already stated it is intended to fill the gaps in the Irish coastline by 2010. In the current year the following work is planned,

- Establishment of a mini network of 4 gauges in Cork Harbour
- Upgrade the Malin Head site through the addition of a second gauge
- Fill some of the gaps along the west coast of Ireland by the choosing of suitable sites