

Bandon Flood Early Warning System Website Guide

The screenshot shows the website interface for the Bandon Flood Early Warning System. At the top, it identifies the user as 'Cork County Council' and the system as 'Bandon Flood Early Warning System'. A navigation menu includes 'Home', 'About', 'Contact Us', and 'Admin Login'. A sidebar on the left lists various resources such as 'Warning Codes', 'User Registration', and 'Emergency Response Plan'. The main content area displays a 'Flood Warning Status' of 'ALL CLEAR' with a green indicator. Below this, a 'Water Level at Bandon Bridge Gauge (m)' is shown as a dashed line, and a line graph plots water levels over time, with a legend for 'SEVERE', 'SERIOUS', and 'MINOR' levels. The 'Last Updated' timestamp is 'Wednesday, 29 Dec. 2010'. A 'Description' section at the bottom provides a brief overview of the system.



Wednesday, 29 December

Prepared by Cllr Gearóid Buckley

Introduction

Since the early warning online system has become operational I have received several phone calls from residents and business owners looking for help in how to operate the website www.bandonfloodwarning.ie.

The website is relatively basic and this short unofficial document will inform residents how to operate it efficiently.

The new system was first tested on Monday 27th December 2010. On this occasion a yellow level warning was indicated by the system. Although a warning, the significance of this indicator gave peace of mind to many whom feared flooding was inement.

As a local representative I was at all times informed on the level of water, and the risk of flooding to Bandon. This system afforded me to inform residents of the situation as the weather unfolded throughout the day. Those who developed this new system must be commended. As it has already had a positive impact at this early stage.

What is FEWS

The Bandon Flood Early Warning System allows Cork County Council to give prior warning of a potential flood event in Bandon Town. This enables the local authority, its emergency partners & persons in the effected areas of town to take appropriate action to prepare for flood events and therefore reduce damage to property.

The system is designed to give up to 5 hours prior warning of a flood event. This period of time can be of vital benefit to inform the Local Authority Staff, its Emergency response partners (An Garda Síochána, Civil defence, etc) & the general public to mobilise a flood action plan.

The system is based on threshold river level alarms at monitoring stations upstream of Bandon town and issues warnings based on predefined Warning Codes. These codes are:

Emergency Code	Event Type
Green	All Clear, No Flooding
Yellow	Minor Flooding
Orange	Serious Flooding
Red	Severe/Major Flooding

This dedicated website for the Bandon Flood Early Warning System is updated regularly with the current Flood Risk Warning status (e.g. Green Code = All Clear, No Flooding).

Eligible members of the public can pre-register on this website to receive text warning messages.

History of Bandon Flooding

Bandon Town has a long history of serious flooding. The most significant flooding in recent times occurred on 19th & 20th November 2009.

Flooding in Bandon is mainly caused by flows from the Bandon River and its tributaries. Surface water due to rainfall in the catchment enters the river & increases the amount of water in the river. During the development of the town the natural flood plain of the river has been built on, this has created a narrow channel for the river to flow through during flood events. This channel is further narrowed in particular at the Bandon Bridge structure.

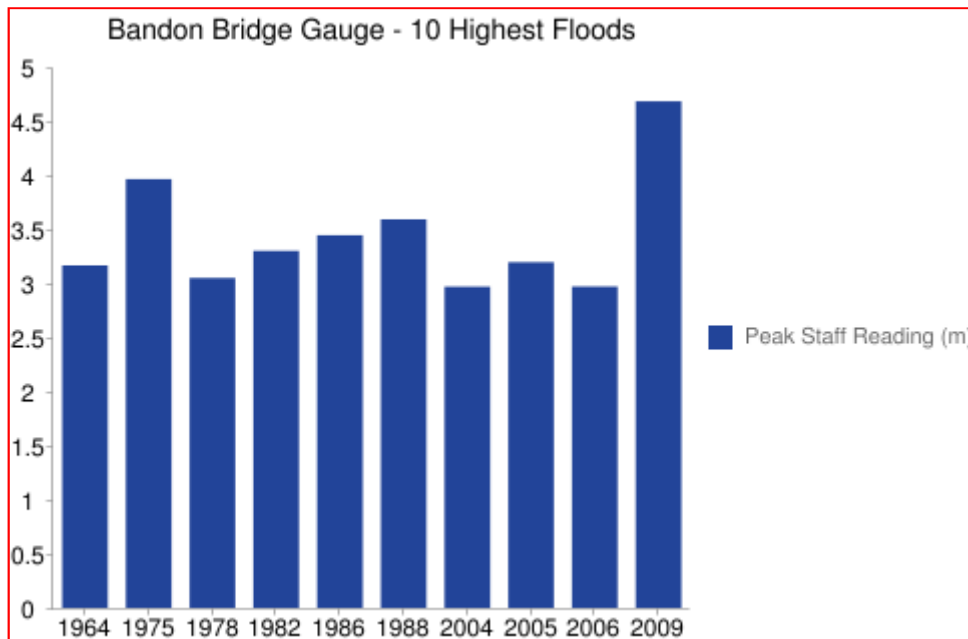
A tributary, the Bridewell River, joins the Bandon River immediately downstream of Bandon Bridge. High flows and levels in the Bridewell River also contributed to fluvial flooding.

The Bandon River has a catchment of approximately 400km² upstream of the town. A catchment is the area of land that feeds water into a river. The amount of water entering the river can increase greatly due to heavy rainfall.

There are 2 distinctive areas in the Bandon River catchment upstream of the town. Upstream of Dunmanway is a mountainous area with poor soil conditions, significant rock outcrops & small pockets of agricultural lands. The area between Dunmanway & Bandon town is generally low lying agricultural lands with good soil conditions.

In 1960 the OPW established a river water monitoring station at Bandon. The following is a list of the 10 highest floods recorded;

**Data taken from OPW records for Staff Gauge Station at Bandon (20001)*



Historic Flood Events

The following table includes detailed of the 10 highest historic flood events at Bandon. The peak time and the respective Levels at the Bandon Bridge Station (Staff Datum and Ordnance Datum) and equivalent Warning Code is shown for each event.

sement Road (northern end); Well Road (northern end); Market Quay; New road (from Bridewell River); Monarone Road (northern end) (from Mill Stream); Old Quay Road

(northern end) (from Mill Stream); Southern bank of the river through the town;

Northern bank of river:-

The Stretch; Mill Place (southern end); Watery Lane (southern end); Bridge Place; North Main Street (eastern end); Bank Place; Watergate Street (western end); Cork Road (southern end); Northern bank of the river through the town;

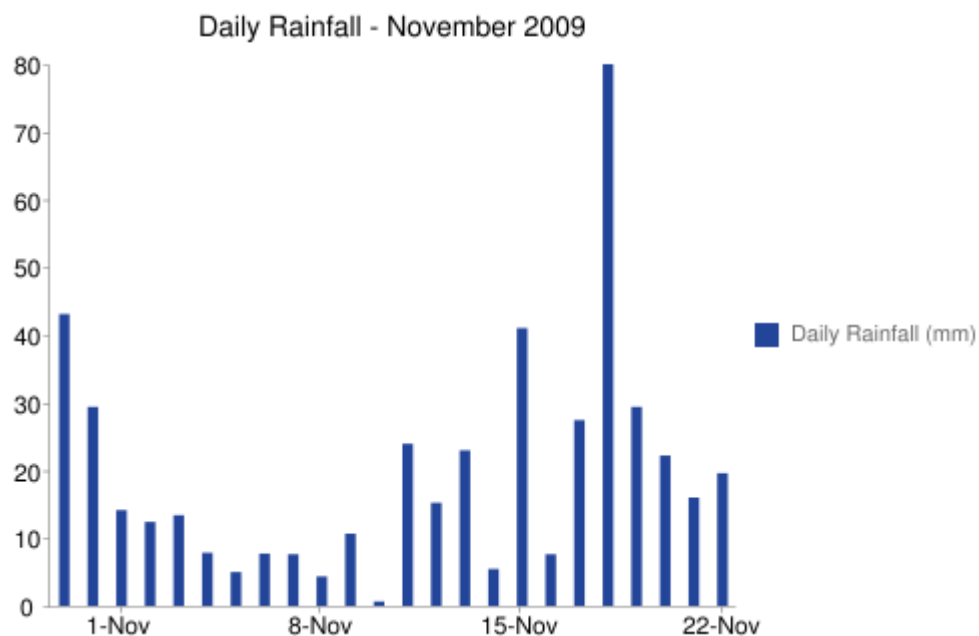
Historic High Flood Events & Warning Codes

Date	Peak Time	Peak Staff Reading (m)	Gauge Level (mOD Malin)	Flood Warning Code
13 December 1964	14:15	2.850	14.043	YELLOW
23 October 1975	12:00	3.568	14.761	ORANGE
07 December 1978	6:00	2.746	13.939	YELLOW
21 February 1982	14:45	2.971	14.148	ORANGE
06 August 1986	15:30	3.1008	14.278	ORANGE
22 October 1988	22:45	3.233	14.410	ORANGE
03 February 2004	20:45	2.673	13.850	YELLOW
08 January 2005	11:30	2.877	14.054	ORANGE
03 December 2006	17:00	2.674	13.851	YELLOW
19 November 2009	21:30	4.216	15.393	RED

November 2009 Flood Event

During the 10 days leading up to the November 2009 major flood event in Bandon, persistent rain had fallen in the Bandon River catchment which culminated with very heavy rainfall on the 18th. Met Éireann maintains a number of rainfall recording stations in County Cork. The following graph represents the data recorded for a rainfall station in the Bandon River catchment close to Dunmanway:

Data courtesy of Met Éireann.



The total rainfall in the month of November 2009 was 430.8mm, this represents approx. 20% of the total annual rainfall for 2009 (Data courtesy of Met Éireann).

The rainfall total for November 2008 was 104mm (Data courtesy of Met Éireann).

November 2009 was a 414% increase in rainfall from the same month in 2008.

On 19th November 2009, initially flood waters inundated the streets in the town centre through drains which discharge to the river. As river levels rose further, banks and walls were overtopped leading to significant inundation of a large area of the town centre. The recorded peak flood level occurred at 9.30pm – 9.45pm on 19/11/2009.

On 19th November 2009, initially flood waters inundated the streets in the town centre through drains which discharge to the river. As river levels rose further, banks and walls were overtopped leading to significant inundation of a large area of the town centre. The recorded peak flood level occurred at 9.30pm – 9.45pm on 19/11/2009.

Areas which flooded during the November 2009 event included:

Southern bank of river:-

Riverview Shopping centre; MacSweeney Quay; Glasslinn Road (from Bandon bridge to east of WWTP); Weir Street; Bridge Street; St. Finbarr Place; Brady's Lane; Station Road; Mill Road (northern end); South Main Street; Pearse Street; Oliver Plunkett Street (western end); Market Street (northern end); Bridge Lane.

Who operates the Bandon Flood Early Warning System?

Cork County Council operates the Bandon Flood Early Warning System.

Cork County Council employed the services of RPS Consulting Engineers Ltd. to provide the necessary hydrological analysis, general consultancy and specialised IT services to develop the flood alert model including the provision of the necessary software / hardware to deliver the project to operational status. For an initial 12 month period RPS Consulting Ltd will maintain the system, after which time Cork County Council staff will take over the running of the system.

Do I have to pay for this service?

At present there is no cost to the registered users. The Flood Warning Alert SMS message is free to registered users.

Who can register?

At present it is envisaged that persons working &/or living in the locations directly affected by flooding in Bandon Town will register to receive Flood Warning Alerts through the Bandon Flood Early Warning System. Also the relevant public agencies (Local Authority, An Garda Síochána, etc) shall be registered.

Getting Started

Log onto www.bandonfloodwarning.ie

The screenshot shows the homepage of the Bandon Flood Early Warning System. At the top, there is a navigation bar with links for 'Terms & Conditions', 'Home', 'About', 'Contact Us', and 'Admin Login'. Below this is a sidebar with various links such as 'Warning Codes', 'User Registration', and 'Bandon Town & Historic Flooding'. The main content area features a 'Flood Warning Status' section with a green circle and the text 'ALL CLEAR'. Below this is a 'Water Level at Bandon Bridge Gauge (m)' section, which includes a line graph showing water levels over time. The graph has a y-axis from -0.50 to 4.00 meters and an x-axis from 21/12/2010 to 30/12/2010. The current water level is approximately 1.8m. The graph also shows historical levels, with levels above 3.0m marked as 'SERIOUS' and levels between 2.0m and 3.0m marked as 'MINOR'. The page also includes a 'Description' section and a 'Current Weather' section.

This is the home page for BandonFloodWarning.ie

Here you can see the current flood risk status

Here you can see the current water level as well as the water level for the past two days.

If you click on the graph you will see levels for the last 14 days

These two parts of the website are the fastest and most efficient way to measure the risk of flooding.

The website updates automatically so all levels and warnings are displayed live from the river.

Registering for text alerts


Registering for text alerts involves filling out a simple online form.

This registration form complies with the Data Protection Act.

If you do not live or work within the flood zone, please use the "other" options where applicable.

You will be asked to submit a password. Remember this password as you may need it to access, change and amend your information at a

://www.bandonfloodwarning.ie/uregistration.htm



Cork County Council
Comhairle Contae Chorcaí

Bandon Flood Early Warning System

Terms & Conditions
Home
About
Contact Us
Admin Login

Warning Codes

User Registration

Bandon Town & Historic Flooding

Bandon Flood Relief Scheme

Emergency Response Plan

Photo Gallery

Useful Links

Frequently Asked Questions

Bandon FEWS User Registration

To receive Flood Warning Alert SMS text messages you must register your details below. *(Fields with an asterix (*) are mandatory)*

Once registered users will receive a free text warning message when the Bandon FEWS monitoring system predicts a risk of flooding in Bandon Town.

You can **unsubscribe** from this service or **change** your personal details at any time using this [link](#).

Registration

Your Name (*)

Mobile Number (*)
(Digits only no spaces/brackets/dashes)

Property Location:

Reason for Registration

Is there a domestic/residential element to this property

Disclaimer

BANDON FLOOD EARLY WARNING SYSTEM - SMS SERVICE DISCLAIMER

1. Definitions

1.1 'You' and 'Your' mean the person who is registering for the Service.

Reason for Registration

Is there a domestic/residential element to this property

Disclaimer

BANDON FLOOD EARLY WARNING SYSTEM - SMS SERVICE DISCLAIMER

1. Definitions

1.1 'You' and 'Your' mean the person who is registering for the Service.

1.2 'We', 'Us' and 'Our' mean Cork County Council, its

Agree to disclaimer (*)

Choose a Password

(You will be asked for this if you wish to amend or cancel your subscription to text alerts)

Data Protection

Cork County Council is committed to meeting its responsibilities under the Data Protection Acts 1988 & 2003. All data supplied will be stored & handled to meet with Cork County Council's own Data Protection Policy.

Personal information supplied to www.bandonfloodwarning.ie will be used only in connection with Bandon Flood Early Warning System & other relevant local flood issues e.g. updates on Bandon Flood Relief Scheme, Bandon Flood Emergency Plan.

Designed by [RPS](#)



ALL CLEAR, NO FLOODING

No risk of flooding.

After a flood event has peaked & the water levels have receded a **GREEN – All Clear** Alert will be issued. The flood warning is no longer in place. Please note that after a serious flood event it is important to seek appropriate advice & check it is safe to return to your property.

Flood Warning Alert SMS message content
“Bandon FEWS. Flood Warning Code. **GREEN** STATUS, ALL CLEAR. 00:00hrs dd/mm/yyyy.”



MINOR FLOODING

Risk of flooding to walkway on northern bank of river.

This equates to a water level at the Bandon Bridge gauge of greater than approximately **1.34m**; a less than 1year return period event.

Local impacts

Riverside walkway on northern bank of river between Bandon Bridge & footbridge at risk of moderate flooding.

Note: Public Registered users will not be issued a text alert.

Higher flood water levels - water level at the Bandon Bridge gauge greater than approx **1.97m** - submerge all of walkway – walkway dangerous to access – gate at access ramp from playground closed. Gate at river access at Bank Place closed. Playground at risk of flooding.

Note: Public Registered users will be issued a text alert.

These Flood Events generally happen on an annual basis.

What to do

- ✦ Tune into local radio stations for flood / weather updates.
- ✦ Check www.bandonfloodwarning.ie for updates.
- ✦ Be alert of the water levels near you.
- ✦ Be ready to act on your flood plan, if the flood alert is raised to an Orange or Red alert.
- ✦ Check the safety of elderly in flood zone.
- ✦ Avoid open riverbank areas.

Flood Warning Alert SMS message content
“Bandon FEWS. Flood Warning Code. **YELLOW** ALERT. 00:00hrs dd/mm/yyyy.”



SERIOUS FLOODING

Risk of flooding in streets. Risk of flooding of low lying property.
Action required!

This equates to a water level at the Bandon Bridge gauge of greater than approximately **2.89m**; a 5-10year return period event.

Local impacts

Streets & property in the lowest parts of town & the playground at risk of flooding. Flooding is likely to commence in the vicinity of Hickeys Corner, Brady's Corner, Bank Place. Playground flooded.

Flood events similar to October 1975, February 1982, August 1986, October 1988 & January 2005.

What to do

- ✦ Tune into local radio stations for flood / weather updates.
- ✦ Check www.bandonfloodwarning.ie for updates.
- ✦ Move valuables, cars, documentation, pets and other items to safety
- ✦ Put flood protection equipment in place.
- ✦ Turn off electricity/ gas/ water if applicable & safe to do so.
- ✦ Evacuation of property may be required.
- ✦ Protect yourself, family & assist others.
- ✦ Check the safety of elderly in flood zone.
- ✦ Act on your flood plan. ([See Q10 on FAQ page](#))
- ✦ Charge your mobile phone.

Flood Warning Alert SMS message content
"Bandon FEWS. Flood Warning Code. ORANGE ALERT. 00:00hrs dd/mm/yyyy."



SEVERE / MAJOR FLOODING

Severe flood event expected. Extensive areas of town at flood risk. Risk to property & life. Act Now!

This equates to a water level at the Bandon Bridge gauge of greater than approximately **3.74m**; a 50-100year return period event.

Local impacts

Significant flooding of streets & properties in town centre area & Bank Place.

Glasslinn Road (Cork Road) may become impassable. Quay walls & existing flood defences may be over-topped.

Electricity & telecommunication services may be interrupted.

Footbridge may be impassable.

Transport services may be disrupted.

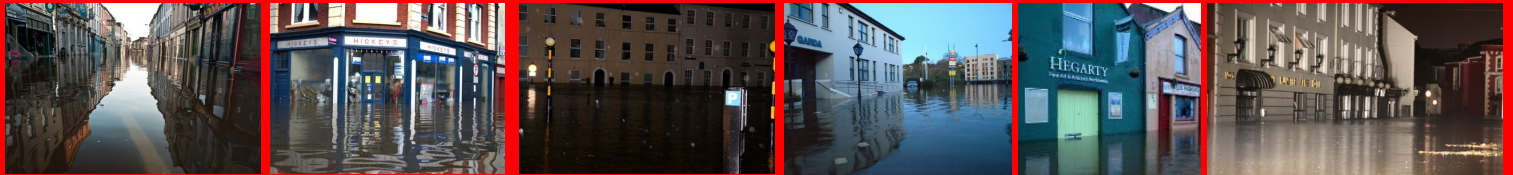
Flood event similar to November 2009.

What to do

- ✦ Evacuation of property may be required. Prepare for evacuation, assemble essential items e.g. medication, clothing, etc.
- ✦ Tune into local radio stations for flood / weather updates.
- ✦ Check www.bandonfloodwarning.ie for updates.
- ✦ Act on your flood plan (where available).
- ✦ Move valuables, cars, documentation, pets and other items to safety.
- ✦ Put flood protection equipment in place.
- ✦ Turn off electricity/ gas/ water if applicable & safe to do so.
- ✦ Protect yourself, family & assist others.
- ✦ Check the safety of elderly in flood zone.
- ✦ Charge your mobile phone.
- ✦ Do not turn on light switches or use power sockets if property becomes flooded.
- ✦ Evacuate in advance of flood waters if safe to do so.
- ✦ Cooperate with the emergency services.

Flood Warning Alert SMS message content
"Bandon FEWS. Flood Warning Code. RED ALERT. 00:00hrs dd/mm/yyyy."

For more information on the early warning system
check out www.bandonfloodwarning.ie, email
info@bandonfloodwarning.ie
Or contact Cllr Gearóid Buckley



*Information in this document is accredited to
the partners of www.bandonfloodwarning.ie
Wednesday, 29 December 2010*

Prepared by Cllr Gearóid Buckley



Chapel Street,
Bandon.

023 88 44415
085 243 8330