# Bathing Water Profile - Carrowniskey, Louisburgh (2013)

<table>
<thead>
<tr>
<th><strong>Bathing Water:</strong></th>
<th>Carrowniskey, Louisburgh</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bathing Water Code:</strong></td>
<td>IEWEBWC250_0000_0350</td>
</tr>
<tr>
<td><strong>Local Authority:</strong></td>
<td>Mayo County Council</td>
</tr>
<tr>
<td><strong>River Basin District:</strong></td>
<td>Western</td>
</tr>
<tr>
<td><strong>Monitoring Point:</strong></td>
<td>75066E, 277833N</td>
</tr>
</tbody>
</table>

## 1. Profile Details:

<table>
<thead>
<tr>
<th><strong>Profile Id:</strong></th>
<th>BWPR00201</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year Of Profile:</strong></td>
<td>2013</td>
</tr>
<tr>
<td><strong>Year Of Identification:</strong></td>
<td>2011</td>
</tr>
<tr>
<td><strong>Version Number:</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Toilets Available:</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Car Parking Available:</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Disabled Access:</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>First Aid Available:</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Sensitive Area:</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Dogs Allowed:</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Lifesaving Facilities:</strong></td>
<td>Yes</td>
</tr>
</tbody>
</table>

*Figure 1: Bathing Water*
2. Bathing Water Details:

Map 1: Bathing Water Location & Extent

Bathing Water location and extent:
Carrowniskey Beach, also known as Sruhir Strand, is located approximately 15km south of Louisburgh town just off the R335, at the end of the L1820. Carrowniskey Beach is a large sandy beach open to the west, with occasional outcrops of exposed bedrock, and shingle and boulder bars. The beach has a gradually sloping gradient.

The beach extends approximately 1.7km, from Carrowniskey River located to the south of the beach, to the rocks at the northern end of the beach. The bathing water is approximately 0.8km² in area.

Main features of the Bathing Water:

Type of Bathing Water

Carrowniskey Beach is a large sandy beach open to the west. The beach has a gradually sloping gradient. The upper section of the beach is stoney in nature. Carrowniskey Beach is an exposed beach and can be subject to rip tides/strong currents.

Flora/Fauna, Riparian Zone

Carrowniskey Beach forms part of the Lough Cahasy, Lough Baun and Roonah Lough Special Area of Conservation (cSAC) and proposed National Heritage Area (pNHA) (Site Code 001529). The site comprises of a chain of wetlands and is of ecological importance primarily for its lagoon habitats, which are listed as a priority habitat on Annex I of the EU Habitats Directive. To the rear of the beach are sand hills and an area of machair, three lagoon type lakes and their associated riverine channels. The largest of the lakes is Roonah Lough which is a natural sedimentary lagoon. Carrowniskey River is the main freshwater input to Roonah Lough and drains into the lake from the North. Bunleemshough River, which is a smaller stream, flows in from the south-east. An outlet from Roonah Lough enters the sea and marks the southern extent of Carrowniskey Beach. Lough Cahasy and Lough Baun are similar to Roonah Lough but are classified as freshwater lakes although there may be a brackish influence from time to time.

Water Depth

The medium and maximum water depth within the designated bathing water would be 0.5m and 5.0m respectively depending on tides.

Tidal Range

In general Carrowniskey Beach is Mesotidal with a tidal range of 2-4m, with a maximum of 5.0m during spring tides based on information for Westport Harbour Tide Tables which is the nearest Standard Port sown on the Irish Tide Tables.
Land Use

Land use immediately surrounding Carrowniskey Beach is agricultural, mainly cattle grazing. Further inland agriculture is relatively intensive.

Sensitive Area

Carrowniskey Beach forms part of the Lough Cahasy, Lough Baun and Roonah Lough Special Area of Conservation (cSAC) and proposed National Heritage Area (pNHA) (Site Code 001529). Approximately 12km to the north of Carrowniskey Beach is Carrowmore Strand which is also a Blue Flag Beach. Carrowmore Strand forms part of the Cloghmoyle Dunes proposed National Heritage Area (pNHA) (Site Code 001483). To the south of Carrowniskey Beach are also two other Green Coast Award Beaches which includes White Strand and Silver Strand. White Strand and Silver Strand are located approximately 25km and 30km respectively south of Louisburgh. Both White Strand and Silver Strand form part of the Mweelrea/Sheefry/Erriff Complex cSAC and pNHA (Site Code 001932). Carrowniskey Races – In June 2010, horse racing returned to Louisburgh at Carrowniskey Beach. The last races held were in 1982 and during the 1950’s the Carrowniskey Races attracted up to 3,000 people. The Carrowniskey Races take place in July each year.

Max. number of visitor during a day in high season: 200
Approx number of visitor during the bathing season: 90

Activities available at the Bathing Water:
The main activities at the beach are swimming and surfing, but the beach is also used for windsurfing, sailing, canoeists, waterskiing, jet ski, scuba-diving/snorkeling and fishing.

Contributing catchment details:

Carrowniskey Beach is located in the townlands of Carrowniskey and Roonah, approximately 15km south of Louisburgh town on the west coast of Co. Mayo within the WRBD. Carrowniskey Beach lies within the Carrowniskey River and Bunleemshough River catchments, which cover an area of approximately 74km² in total, as per 2009 WRBD Catchment Data Water Bodies Draining to Bathing Water. The main river bodies draining to Carrowniskey Beach are the Carrowniskey River and Bunleemshough River Catchments. The Carrowniskey River rises in the Sheeffry Hills in Barclashcame. Biological monitoring of the Carrowniskey River by the EPA in 2009 in the lower and upper sections of the Carrowniskey River assigned Q-values of 3-4 (Site Code 32C010250) and 4-5 (Site Code 32C010100) respectively. The short section of the Carrowniskey River flowing out of Roonah Lough to Carrowniskey Beach has been classed as Poor Status by the WRBD due to land use in the area. The Carrowniskey River has also been listed as one of the key priority polluted rivers in Mayo in the Integrated Water Quality Report 2011 – Galway, Mayo & Sligo, published by the EPA in 2012. The main source of the pollution is attributed to diffuse agricultural sources.

The Bunleemshough River rises in the Mweelrea Mountains between the Corrymailey and Tawnydoogan Hills and flows northwesternly draining Lough Nahaltora, through Roonagh Lough to the sea at Carrowniskey Beach. There is no biological monitoring data available for Bunleenshough River but the river has been classed as Poor Status based on extrapolation from similar land use in neighbouring river catchments by the WRBD.

Topography

The upper sections of the Carrowniskey River and Bunleemshough River catchments consist of steeply sloping hills and valleys. The upper section of the Carrowniskey River rises at a height of 700m at Barclashcame. The Bunleemshough River rises in the Mweelrea Mountains between the Corrymailey and Tawnydoogan Hills at heights of 286m and 312m respectively. The lower sections of both river catchments lie within the Lough Cahasy, Lough Baun and Roonah Lough Special Area of Conservation (cSAC) and proposed National Heritage Area (pNHA) (Site Code 001529), which is relatively low-lying.

Monitoring point details:
The grid reference for the routine bathing water monitoring point at Carrowniskey Beach is E 079,753 N281,689. The precise location of the bathing water monitoring point can vary depending on tides and weather influences.

Carrowniskey Stream is also monitored regularly as part of the monitoring programme for Carrowniskey Beach. The grid reference is E 074,892 N 276,666.

Reason for selection of the monitoring point:
The location of the bathing water monitoring point is the location where most bathers are expected to use the bathing water. The bathing water monitoring point is always within the area patrolled by the lifeguards which is marked by the lifeguards flags.
Water quality assessment:

Bathing water quality monitoring for Carrowniskey Beach began in 2008. From 2008 to 2010 water quality at Carrowniskey Beach was consistently good. Carrowniskey Beach achieved good water quality status and complied with the EU Guide and Mandatory Values as set out in the Quality of Bathing Water Regulations, 1992 (S.I. 155 of 1992) and the EC Directive concerning the Quality of Bathing Waters (76/160/EEC).

Since 2011, two microbiological parameters, *Escherichia coli* and *Intestinal enterococci* are used for bathing water quality monitoring of identified bathing waters as required under the Bathing Water Quality Regulations, 2008. In 2011, the overall status of Carrowniskey Beach was Good, however in 2012 the overall status declined to Sufficient. In 2013 all five samples for Carrowniskey Beach met the requirements for Good water status. It is expected that Carrowniskey Beach will meet the minimum required compliance standard for Sufficient Water Status in 2014 and subsequent years.

3. Identified Pressures:

*Map 2: Bathing Water Catchment*

3.1 Potential pressures in the catchment assessed as posing no risk:

<table>
<thead>
<tr>
<th>Description</th>
<th>Forestry related activities including planting and clear felling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>Forestry</td>
</tr>
<tr>
<td>Type</td>
<td>Other</td>
</tr>
<tr>
<td>Short Term Pressure</td>
<td>No</td>
</tr>
</tbody>
</table>

3.2 Potential pressures in the catchment assessed as posing risk:

<table>
<thead>
<tr>
<th>Description</th>
<th>Intensive agricultural practices within catchment area.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>Agriculture in the Catchment Area</td>
</tr>
<tr>
<td>Type</td>
<td>Run off from agricultural land</td>
</tr>
<tr>
<td>Short Term Pressure</td>
<td>Yes</td>
</tr>
<tr>
<td>Nature</td>
<td>High Risk</td>
</tr>
<tr>
<td>Frequency</td>
<td>3 per season</td>
</tr>
<tr>
<td>Duration</td>
<td>&lt; 72 hours</td>
</tr>
</tbody>
</table>
## Risk Assessment Methodology:

The lands in the immediate vicinity of Carrowniskey Beach are classified as being of extreme groundwater vulnerability by the GSI. In 2012, bathing water quality monitoring of Carrowniskey Beach indicated slight impact from the relevant River Catchments. EPA biological monitoring of the Carrowniskey River Catchment assigns a Q-Value of 3-4 for the lower section of the catchment as opposed to a Q-value of 4-5 for the upper section of the catchment respectively. Agriculture has been identified as a pressure on the lower sections of the Carrowniskey and Bunleemshough river catchments under the Carrowniskey/Killary Water Management Unit Action Plan (WRBD, March 2010). The Carrowniskey River has also been listed as one of the key priority polluted rivers in Mayo in the Integrated Water Quality Report 2011 – Galway, Mayo & Sligo, published by the EPA in 2012.

## Risk Assessment Results:

Bathing water quality monitoring of Carrowniskey Beach in 2012 indicated an impact from surface water quality from both the Carrowniskey and Bunleemshough River Catchments. In 2012 there was unusually heavy rainfall throughout the bathing season and consequent increased surface water run-off.

## Details:

Water quality monitoring of the outflow of Roonah Lough, into which both the Carrowniskey and Bunleemshough rivers drain, indicates elevations in microbiological parameters at times of heavy rainfall which can impact on the bathing water quality at Carrowniskey Beach. Any impact is of short duration.

Bathing water monitoring at Carrowniskey Beach in 2012 showed two failures (of 6) of the guide limits for Escherichia coli. The failures occurred in August 2012 after heavy rain, in combination with higher than average rainfall for the months of June and July.

There were no corresponding failures in Intestinal enterococci which would indicate that the most probable source of the elevations is from agricultural practices.

## Management Measures:

If heavy rain is anticipated warning notices will be erected at the beach and notification made to the EPA.

Field studies including SSRS surveys will be carried out in the lands adjacent to Carrowniskey Beach to try and identify any visual evidence of direct discharges from agricultural practices. Additional sampling of any nearby watercourses will also be carried out to determine nature and source. Any issues identified will be referred to DAFF for a full farm inspection.

Regular monitoring during the bathing season of the outflow of Roonah Lough as it enters Carrowniskey Beach will be carried out on an annual basis.

## Description:

Carrowniskey Races take place in July each year on Carrowniskey Beach.

## Source:
Carrowniskey Races

## Type:
Domestic animals on beach

## Short Term Pressure:
Yes

## Nature:
Low Risk

## Frequency:
1 per season

## Duration:
< 24 hours

## Risk Assessment Methodology:

Carrowniskey Horse Races take place on a Sunday in July each year. In June 2010, horse racing returned to Louisburgh at Carrowniskey Beach. The last races held were in 1982 and during the 1950’s the Carrowniskey Races attracted up to 3,000 people. There are normally approximately 7-8 races with up to 8 horses in each race. A permit is issued each year by the local authority to hold the event.

## Risk Assessment Results:

There is a low risk that the Carrowniskey Races may impact upon bathing water quality at Carrowniskey Beach. All waste material is required to be removed immediately following the event. There have been no complaints to date following the event. Both the event organisers and local community groups are involved in the clean up.

## Details:

There have been no incidents to date with regard to the Carrowniskey Races impacting on the bathing water quality of Carrowniskey Beach.

## Management Measures:

A permit is issued by the local authority each year with regard to holding the event on Carrowniskey Beach. Under the permit all waste material must be removed immediately following the Races. The beach is inspected following the event also.

If any impact on bathing water is anticipated following the event a warning notice will be erected and notification made to the EPA.
3.3 Other Risks:

**Assessment of the potential for proliferation of cyanobacteria:**
- N/A

**Proposed management measures for cyanobacteria:**
- N/A

**Assessment of the potential for proliferation of macroalgae:**
- N/A

**Proposed management measures for macroalgae:**
- Monitoring of the beach since 2008 indicates that there is no significant potential for proliferation of Marine Phytoplankton on this beach.

**Assessment of the potential for proliferation of marine phytoplankton:**
- Monitoring of the beach since 2008 indicates that there is no significant potential for proliferation of Macroalgae on this beach.
Proposed management measures for marine phytoplankton: N/A

Additional Information: Data was assessed from the following websites, WFD Ireland, Western RBD, National Parks and Wildlife, EPA, WFD Hydrotool, Mayo County Council, Central Statistics Office.

4 Bathing Water Status From Previous Sampling Years:

<table>
<thead>
<tr>
<th>Carrowniskey, Louisburgh</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Good</td>
<td>Sufficient</td>
<td>Good</td>
</tr>
</tbody>
</table>

5 Contact Details:

Contact: Mayo County Council
Email: bathingwater@mayococo.ie
Address: Belmullet Area Office, Church Road, Belmullet, Co. Mayo
Phone: 097 81004