IHAI BULLETIN

Greetings to all our members around the island of Ireland and abroad.

Our Membership Secretary, Ron Cox, writes about an aspect of our industrial heritage that includes civil engineering infrastructure, much of which is connected with transportation and the provision of energy and water supplies. Identified with the last named, water towers are a prominent feature of many parts of Ireland.

A water tower may be defined as an elevated structure supporting a water tank constructed at a height sufficient to pressurize a distribution system for potable water, and to provide emergency storage for fire protection. Water towers often operate in conjunction with underground or surface service reservoirs, which store treated water close to where it will be used. Other types of water towers may only store raw (non-potable) water for fire protection or industrial purposes, and may not necessarily be connected to a public water supply.

Many of the early water towers serving local areas have been made redundant following the development of regional water supply schemes. More particularly, with the closure of many railway lines and the move away from steam traction, many of the early metal towers and tanks, located primarily near railway

Membership Renewals

If you have not yet renewed your membership for 2022, I would be glad if you would send your cheque to the Membership Secretary addressed to Ron Cox, 3 Stonebridge Road, Shankill, Co.Dublin D18 P6F4. Alternatively you can pay by EFT, details below. The membership fee is €30 or €20 for senior citizens.

Details for payment by electronic funds transfer:
Beneficiary Name: The Industrial Heritage Association of Ireland
Beneficiary A/C Designation: Current Account
IBAN: IE03 BOFI 9010 9572 9152 18
BIC: BOFIIE2D
Please identify the person making the payment.

stations and used to supply water for steam locomotives, have been removed for scrap.

A large shallow free-standing circular tower in concrete, constructed in 1950 and probably a replacement for an earlier tower, is located at Ballybrophy station in county Laois.

Ireland has a surprising array of water towers, mostly constructed in reinforced concrete. These are generally located in a broad belt across the centre of the country and along certain of the coastal fringes. If asked, many of our members would probably be hard pressed to name more than a small number of water towers.

Ballybrophy Water Tower

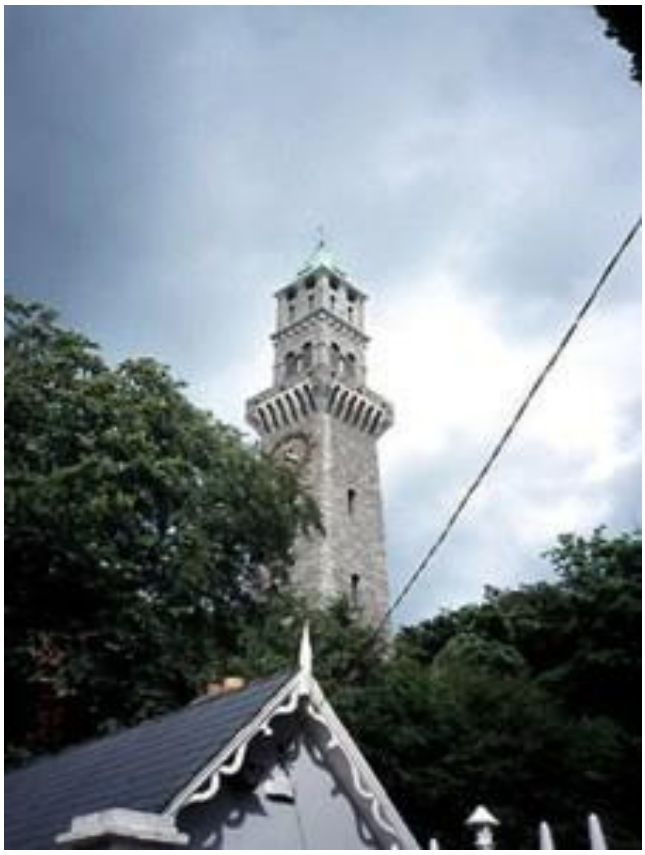
However, once one starts to look, the abundance of such towers becomes apparent. Towers are most obviously part of public water supply distribution networks, but towers providing storage for local supplies can be found at some industrial sites, hospitals, and military sites.

On the left, the reinforced concrete water tower at St Joseph's hospital in Limerick and on the right the military camp on the flat plain of the Curragh in county Kildare, an ideal candidate for a water tower as the photograph indicates. The tower at the Curragh was built in brick between 1900 and 1908. The camp fire-brigade is based in the tower, making it one of the earliest purpose-built stations in the country.

What is thought to be the earliest reinforced concrete water tower still extant in Ireland or Britain is that near Trim in county Meath. Designed by Mouchel & Partners using the Hennibique system of reinforcement, the tower was erected in 1909 but is now de-commissioned. The cylindrical tank (30ft 6 in. internal diameter, height 12ft.) has a wall thickness of 14in. The base of the tank is supported on a grillage of beams of four different sizes, carried on six legs. The 15in. square legs each have a 7ft sq. pad foundation, all six pads being connected by a "wheel" of ground beams. At 10ft vertical intervals, the 30ft long legs are braced by a ring beam 12in. by 9in. section. Inside the legs are cross-braced in a triangle, a different set of legs being so braced at each level. The tower was cement gunited (sprayed) in recent times to halt corrosion of the reinforcement.

Trim Water Tower

A combined clock and water tower was erected about 1875 by the Engineering Dept of Guinness's brewery for the Guinness family estate at Farmleigh near Castleknock in Dublin. The tower, which is built mainly of limestone, is about 200ft high, the thickness of the walls being 4ft at ground level reducing to about 2ft 6in. at the top. There is a balcony about 2/3rds way up supported on projecting granite brackets. The two storeys above the balcony accommodate on the lower floor an 1800 gallon capacity water tank, the upper floor being reserved for the clock mechanism installed by Sir Howard Grubb. There are two clock faces, each 13ft in diameter. The supply to the tank was originally raised From the river Liffey by water turbine.



Farmleigh Water & Clock Tower

UCD Water Tower

Located on the campus of University College Dublin, this very striking concrete water tower comprises an asymmetric pentoidal tank (max width 41ft 6in.) on a single support/access shaft of pentagonal section (max. side length 7ft 6in.) Wall thickness is 20in. for just over the first third of height, reducing to 14in. The tank walls are 14in. thick. The top is 184ft above ground level. The tank, erected in 1970, is no longer in use, but had a capacity of 150,000 gallons. The base comprises a 5ft thick 44ft square reinforced concrete raft. The whole shape is emphasised by 2in. deep fluting. The architect was Andrew Wejchert, the structural engineers Thomas Garland & Partners, and the contractor John Paul Construction.

Killeagh water tower is located at Killeagh near Castlemartyr in east county Cork. It was constructed on the site of the Royal Navy's unfinished Airship Station in Killeagh/Ballyquirke. Had the British followed the American lead in hiring Irish building contractors, the base might have been finished before the end of the Great War. Today there are still remains visible of the airship station. Most of the huts have gone, but their concrete footings are still visible. A large two-storey structure is believed to be the electricity generating plant, used in the production of hydrogen.

Killeagh Water Tower

Belmullet Water Towers

Designed by Ryan Hanley & Co. of Galway, and constructed in 1992 by Uniform Construction, the water towers at Tallagh near Belmullet in county Mayo consist of three circular tanks of different height and diameter, each on its own cylindrical shaft. Each has central access with overall access through the largest. The design gives the effect, with vertical features on walls, of a set of enmeshed cog wheels.

The largest tank has an internal diameter of 17m and is 6.7m high, the next is of same height and is 14m in diameter. The smallest is 10m in diameter and 8m deep. The maximum height of the towers above ground level is 26m.

The water tower at Oran Beg in county Galway is a freestanding octagonal-plan reinforced concrete water tower, built around 1960. Acknowledging the place of water towers in our architectural heritage, the National Inventory of Architectural Heritage describes the tower as a three-stage tower supporting a projecting water holding tank and goes on to say that *'it has painted channelled rendered walls, having square-headed recessed panels to each face, having fluted platband to base of water holding tank. Square-headed window openings set in recesses, with fixed metal-framed windows with toughened glass.'*

Oran Beg Water Tower

Between 1996 and 2007, a national survey of water towers in the Republic of Ireland and Northern Ireland was completed by Dr Michael Gould of Belfast, assisted by Dr Ron Cox. In 2007, Dr Gould lodged his extensive water tower database and photographs with the Irish Architectural Archive in Dublin.

Bygone Days 11

The fascination of water! Where were we and what was the purpose of the basin carved into the bedrock upstream of the masonry road bridge?

Finally, the answer to the 'Bygone Days' memory test in the last Bulletin was the Kells Water Works, visited on a beautiful day on our Spring Tour of 2012.