Several viaducts still intact or disused are mentioned.

Boyne

Dated 1855 the eighteen - span limestone & iron bridge designed by Sir John Mac Neill was constructed over the river Boyne. Drogheda Railway Station lies to the south of viaduct. Construction included fifteen round - headed stone arches: three of them erected north of the river with twelve on the south side. A three - span wrought - iron bolted girder with trussed section crossed the river with a segmental arched central section. The structure consisted of rock faced ashler limestone walling to abutments & spandrels, tooled - block - & start quoins that ran from the base of abutments to tooled limestone stringcourse at springing line also tooled limestone voussoirs to arches. At deck level was tooled limestone stringcourse surmounted by rock - faced snecked limestone parapet also tooled limestone to parapet. Rock - faced ashlar limestone cutwaters with tooled limestone Stringcourse surmounted by curved stone caps. Channeled limestone piers surmounted abutments to either side of trussed steel spans also roll - moulded rough - punched cornice surmounted by saddle - backed cap. A sandstone plaque was installed to the east & west pier elevation with an inscription of 'Belfast and Dublin Junction Railway,' 'the City Crests' also '1885.' During 1932 the three spans over the Boyne were meters in height. It crosses the river Boyne in Drogheda Co. Louth. When constructed the viaduct was the seventh bridge of its kind in the world also considered one of the wonders of that age. [viii]

Great northern route of the GNR crosses the river Boyne at Drogheda in County Louth. Sir John Mc Neill designed the lattice girder bridge of iron which was (*at that time*) the longest in the world. William Even tendered a quotation of £68,000 so construction with limestone from Skerries began during 1851. Structure is one thousand sixty feet in length. It consists of fifteen semi - circular masonry arch spans of which twelve are on the south side with three on the north side. There are three girder spans of wrought - iron: two of which are one hundred & forty - one feet between bearings also are one of two hundred & sixty - seven feet. These span the quays, waterways & public roads. Once the line included a double line of track. First train crossed the viaduct on 5th January 1855. Information on bridge formation etc. may be viewed at this site. (*The Argus 26th August 2005*) [ix]

Publication that may be of interest:

Crossing the Boyne: The Great Viaduct 1855 - 2005 Shane Bernard Iarnród Eireann is reviewed by Mc Quillen Jack's *The Railway Town* at this link: https://www.independent.ie/regionals/argus/lifestyle/building-the-boyne-viaduct-26901269.html

The Boyne viaduct was referenced in a six – part RTÉ one documentary series with Esras films with Brian Gray: https://architecturefoundation.ie/news/building-ireland-on-rte/

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Ballyvoyle

Ballyvole biaduct in Co. Waterford was opened during 1878. The remains of the earlier viaduct on site are important as evidence of the introduction of the railway network to this locality by the Fishguard & Rosslare Railways & Harbours Company during the late nineteenth century as part of the Great Southern Railway Line development. Constructed during 1923 the four - span railway viaduct over the Dalligan river & valley incorporated the fabric of the original viaduct. Constructed with mass - concrete tapered pylon piers with coping. Coursed square rubble limestone abutments walls continued into Parapets on stringcourses with cut - stone coping. Viaduct had a series of four - flat cast - iron spans on cast – iron girders & trusses also sections of Iron railings to parapets. The railway line was decommissioned during 1982. (Both structures are of additional significance in the locality as the 'before' and 'after' viaducts that followed an episode that related to the Civil War movement in the county 1919 - 1922) Registered number 22903205. Coordinates are 233735, 96055. An image features on the site. (date recorded 5th January 2004) [x]

This viaduct with the civil war historic episode is referenced at this link: https://www.deisegreenway.com/greenway.php

Barrow

Barrow viaduct was a bridge erected to a design by John Chaloner Smith (1827 - 95) chief engineer to the Dublin, Wicklow & Wexford Railway (*DWWR*) Company. Constructed as a five - span railway viaduct over the river Barrow. This line opened during 1887 by the Dublin, Wicklow & Wexford Railway Company (*DWWR*) It closed during 1963. Registered number 15702906. Coordinates are 271728, 129602. (*date recorded 8th January 2008*) [xi]

Corrib

This railway line was constructed over the river Corrib also crossed over Connemara to Clifden from Galway City by the Midland Great Western Railway Company that had been awarded £264,000 during the 1890's by the Government. The Clifden line was opened on 1st July 1895 at a cost of nine thousand pounds per mile. The imposing steel viaduct had three spans of one hundred fifty feet. It had a bascule type lifting navigation of twenty - one feet. Thirty bridges in total are along the line. The railway viaduct closed during 1935. The metalwork was dismantled, just the piers remain. An image features on this site of the viaduct over the Salmon Weir in Galway. [xii]

Craigmore

Craigmore Railway viaduct in Bessbrook County Armagh is known locally as the 'Eighteen Arches.' It was designed by Irish engineer John Benjamin Mc Neill. This railway bridge is above the Newry - Camlough road in County Armagh. Construction began during 1849 for this Dublin - Belfast Junction railway line. It opened during 1852 with eighteen arches of a sixty feet span. The highest span was one hundred & sixty feet. (This was an interesting feature in Armagh of the construction during 1851 of the Egyptian Arch on the Newry section of the Dublin - Belfast line.) It was a collaboration between engineer Sir John Mc Neill & constructor William Dargan. Images feature at this link: https://www.archiseek.com/2011/1852-craigmore-viaduct-bessbrook-co-armagh/

An image features on this site: (https://www.archiseek.com/2011/1851-macneills-egyptian-arch-newry-co-armagh/

Durrow

Durrow viaduct or '*The Oak Plain*' was constructed then opened during 1878. This viaduct spanned the river Tay valley also a roadway. During the late nineteenth century this viaduct was evidence of the development of the civil engineering heritage of this country with the Great Southern railway line by the Fishguard & Rosslare Railways & Harbours Company. Constructed with stone & random rubble limestone walls this viaduct has seven - arches. The tapered piers had rock - faced cut - limestone quoins to the corners. There were rock – faced cut – limestone string / spring courses. The random rubble stone parapets on the cut - limestone stringcourse had verified blue clay coping. The series of seven round arches had rock - faced cut - limestone voussoirs, quoined voussoirs with squared rubble stone soffits of rendered remains. The railway line with viaduct was decommissioned during 1982. Several images of the viaduct feature at this link. Registered number 22902401. Coordinates are 233956, 98742. (*date recorded 5th January 2004*) [xiii]

No longer in use this Durrow Viaduct is referenced at this link: https://www.deisegreenway.com/greenway.php

This link has an image of this viaduct:

https://commons.wikimedia.org/wiki/File:%22Durrow_Viaduct, Stradbally, Co. Laois%22 is probably_not..._(30138786200).jpg

Kilmacthomas

Constructed during 1875 to 1880 the Kilmacthomas Viaduct was constructed over the road to a design of James Otway's Design. (1843-1906) It was opened during 1878 included the single spanned section to the centre. There were square rubble limestone walls with batter to the north west. It featured cut-stone stringcourse also cut-stone coping to parapets. A series of seven round arches on square rubble stone piers has rusticated cut-stone stringcourse to arches springs. There are dressed rubble limestone voussoirs with square rubble limestone soffits with traces of lime render. Single cast-iron span to centre on cast-iron girders have lattice supports. Sections of tabular iron railings were replaced circa 1950. Viaduct was one of a pair within the locality (with 22805035 / WD - 15 - 05 - 35) This viaduct is significant as a reminder of the Great Southern & Western Railway line development by the

Waterford, Dungarvan & Lismore Railway Company during the late nineteenth century. (*To the north* west of viaduct is a freestanding railway Signal circa 1950) It closed during 1982. Registered number 22805032. Coordinates are 239510, 106211. An image of viaduct features on the site. (*date recorded* 22nd July 2003) [xiv]

Newfoundwell

One may view an image from the air of the Newfoundwell Railway viaduct in Drogheda at this site: https://mythicalireland.com/purchase/newfoundwell-viaduct/

A black & white image of the Newfoundwell Railway viaduct in Drogheda by Albert Bridge of 30th May 1983 may be viewed at this link: https://www.geograph.ie/photo/3047381

Newport

Newport viaduct is a seven - arch railway crossing over the Newport or Owennadarrydivva river on the Westport - Achill line. It was opened during 1892: closed in 1934 then re -opened during 1936. It had a series of segmental arches with drag edged rock faced cut - limestone ashler voussoirs centred on drag edged cut – limestone key stones. Construction consisted of tuck pointed snecked rock faced sandstone walls. These centred on a drag edged rock faced cut - limestone battered triangular cutwater piers that had dragged cut limestone pyramidal capping. Drag edged rock faced cut - limestone chamfered stringcourse supported parapets. Included was drag edged rock faced cut - limestone coping centred on drag edged cut - limestone date stone with an Inscription of '1892.' This viaduct was an important structure of late nineteenth century on account of its connection with the Mayo branch of The Midland Great Western Railway line (opened 1894) by The Midland Great Western Railway Company in that it resembled the Westport viaduct designed by William Barrington. (see Westport 31212192) Railway line closed during 1937: now open as a pedestrian walkway. Registered number 31208018. Coordinates 98461, 293859. (date recorded 3rd November 2010) [xv]

One beautiful feature of the Newport town heritage is its seven - arch viaduct. It was constructed during 1892 over the Black Oak river to carry the Westport to Achill railway line. [xvi]

Newport river flows towards the north - east corner of Clew Bay. A viaduct of red stone was erected over it during 1892. It had a single - line track. The length of the viaduct was 30.5 feet. It had a width of eighteen feet six inches. [xvii]

Newport Viaduct was constructed as one of the so - called 'Balfour Lines' named after Arthur J. Balfour (who introduced an Act that provided State Assistance for the construction of Light Railways to disadvantaged areas within Ireland) Westport line extended to Newport then Mulrany onto Achill during the 1890's. The extended line opened during February 1894. It was constructed with local fine cut stone with a seven arched bridge. The line closed during 1937. An image of the viaduct features on this site, [xviii]

This viaduct at Newport in County Mayo spans the Newport or Black Oak river. It was constructed with local red sandstone with some sandstone facings on its seven arches. Over one thousand people were employed on the bridge during the late 1800's as an extension of the Westport line. The first train crossed over during February 1894: the line closed in September 1935. The disused railway line is now a pedestrian walkway at the present time. [xix]

Newport Viaduct is an historic seven arches bridge constructed over the Black Oak river constructed circa 1892. It carried the Westport – Mulrany - Achill line of the Midland Great Western Railway Company. It is listed as a protected structure (*number 112*) on the record of protected structures within Mayo. Construction cost over seven thousand pounds. It was a seven spanned square red sandstone structure with limestone detailing. The arch rings were sixty - one meters. The single - track viaduct

had a length of ninety – three meters with a width of 5.64 meters. The seven segmented arches had an eleven meters span with a rise of 3.81 meters. The bridge piers with pointed cutwaters had a thickness of 1.8 meters. The line had to await a nearby tunnel construction prior to its opening during 1894. An image from 2011 is featured on this site. [xx]

According to Joe. P. Mc Dermott of Newport Historical Society the name viaduct is a derivative of Latin 'via' & 'ducere.' Viaduct crossings were constructed in cities or towns within Ireland for railway traffic. Land based viaducts connected parts of similar heights of the landscapes as crossings over valleys, rivers, or roadways. [xxi]

Publications that may be of interest:

The Mayo County Development Plan 2014 - 2020 Volume 4, List of Structures on the record of Protected Structures for County Mayo Mayo County Council 2014 may be viewed at this site: https://www.mayo.ie/planning/development-plans-strategies

Civil Engineering - Ireland 1998 Cox Ronald C. & Gould Michael M: https://catalogue.nli.ie/Record/vtls000042742/Reviews

'The Heritage Trail - Newport Viaduct 2007 – 2013 from the Department Environment, Community Local Government. [xxii]

An image may be viewed by Garry Wynne of the Newport viaduct that opened during 1894 at this link: https://www.pinterest.ie/pin/336784878365062298/

This site features an image of Newport viaduct: http://www.askaboutireland.ie/learning-zone/primary-students/looking-at-places/mayo/aspects-of-mayo/history-of-transport-in-m/bridges/

An image by Joseph Myschyshyn from 2013 of Newport County Mayo - seven - arch railway viaduct over Black Oak river may be viewed at this link: http://www.realizedvision.com/railways.php

Several images of Newport viaduct may be viewed at this link: https://commons.wikimedia.org/wiki/Category:Seven Arches Bridge (Newport)

Suir

Co. Tipperary Viaduct was a triple span railway viaduct between Limerick & Rosslare Harbour. Constructed during 1852 over the river Suir in Cahir. It has elaborate limestone details to the massive masonry piers & abutments. A crenelated turret faces towards the bridge ends. [xxiii]

Taylorstown

This Co. Wexford viaduct was constructed by Sir Robert McAlpine & Company Glasgow over two years from 1904 to 1906. It spanned the Owenduff river valley. This seven - arched viaduct opened during 1906. Viaduct was constructed with red brick English bond walls centred on red brick English bond piers upon precast concrete chamfered cushion courses on plinths. Precast concrete stringcourses supported parapets with precast concrete coping centred on corbelled pedestrian refuges. There were a series of seven round arches with red brick header bond voussoirs. The viaduct was damaged during the 1919 - 23 'The Troubles' then reconstructed in 1923. Registered number 15704015. Coordinates

are 282029, 114584. Images of this viaduct are featured on this page. (*date recorded 27th September 2009*) [xxiv]

Taylorstown viaduct is listed as a protected structures on this PDF: https://www.wexfordcoco.ie/sites/default/files/content/Planning/WexCoPlan13-19/Volume2.pdf

An image of the Córas Iompair Eireann locomotive 005S (*with a Wellingtonbridge - Campile beet transfer*) as she crosses the seven - arches Taylorstown viaduct that spanned the Owenduff river in Co. Wexford features on this site (*Albert Bridge 26th October 1984*): https://www.geograph.ie/photo/2851422

Taylorstown Railway viaduct was destroyed during Wexford's civil war: https://wexfordcivilwararchaeology.com/2021/03/04/wexfords-civil-war-the-destruction-of-the-bridges/

A German bomber during WW2 attacked the railway viaduct at Taylorstown. (25th August 2010): http://cllrjoeryan.blogspot.com/2010/08/campile-70-years-on-can-make-us-tink.html

An image of Taylorstown viaduct features at this page: https://elevation.maplogs.com/poi/1 kilmannan cleristown co wexford ireland.72224.html

An image of the Taylorstown viaduct dated 6th November 1978 features at this link: https://www.steamtrainsireland.com/members/galleries/93/south-wexford-railtour-1978

Taylorstown viaduct is referenced at this link: http://ariadne-portal.dcu.gr/page/27445726

Taylorstown viaduct was the longest railway bridge within Ireland at six hundred & fifty meters long. It closed to rail traffic during 2010 when the Rosslare to Waterford line closed. (*August 2009*): https://www.antaisce.org/barrow-viaduct-greatisland

Thomastown

This viaduct designed by Charles R. Galwey originally opened during 1877. Bridge was designed for the Waterford & Central Ireland Railway Company. Constructed with a wooden central span of timber latticed girders. When proved unsatisfactory Galwey re - designed a metal central span. The newer design included two iron bowstring girders of two hundred & twelve feet apart. The height was twenty - five feet at the highest point. Total length of the bridge was four hundred & twenty - eight feet of railway track. Sketches feature on this page from *The Engineer* 19th April 1879. [xxv]

Westport

The nine - arch viaduct over the Westport or Carrowbeg river was dated 1892. (?) It was erected to a design attributed to William Barrington (1825 - 95) of Limerick (Gould 1998 pages 200/1) Viaduct was opened during 1894: closed in 1934 then re - opened during 1936. Constructed with pointed snecked rock faced limestone walls centred on tuck pointed snecked rock faced limestone battered piers with drag edged rock faced – cut – stone - limestone coping. A series of nine segmental arches with drag - edged rock - faced ashlar voussoirs centred on drag edged rock faced cut - limestone keystones. The rock - faced surface finish demonstrated excellent workmanship. The elegant 'sweep' of the Arches makes a dramatic visual statement as it crosses the Carrowbeg river. The viaduct finally closed during 1937. It now is a pedestrian walkway. Registered number 31212192. Coordinates are 100379, 284373. An image of the viaduct features on the site. (date recorded 15th August 2008) [xxvi]

A Lawrence Collection photograph by Robert French from 1865 may be viewed at this link: http://catalogue.nli.ie/Record/vtls000322048/Map?ui=standard

An image by Mike Reynolds 29th October 2016 of the Westport viaduct that closed during 1937: https://www.flickr.com/photos/26144770@N04/30147681534

Footnotes

[viii] Ireland's Iconic Bridges (https://www.irelandbeforeyoudie.com/irelands-most-iconic-bridges/)
[Assessed 25th March 2021]

[ix] Boyne (https://www.independent.ie/regionals/argus/lifestyle/building-the-boyne-viaduct-26901269.html) [Assessed 25th March 2021]

[x] Ballyvoyle (https://www.buildingsofireland.ie/buildings-search/building/22903205/ballyvoyle-railway-viaduct-ballyvoyle-waterford) [Assessed 27th March 2021]

[xi] Barrow Viaduct (https://www.buildingsofireland.ie/buildings-search/building/15702906/barrow-viaduct-mountelliott-wexford) [Assessed 27th March 2021]

[xii] 1893 Corrib Viaduct (https://www.archiseek.com/2013/clifden-railway-viaduct-galway/) [Assessed 26th March 2021]

[xiii] Durrow Railway Viaduct (https://www.buildingsofireland.ie/buildings-buildings-buildings/22902401/durrow-railway-viaduct-durrow-county-waterford) [Assessed 27th March 2021]

[xiv] Kilmacthomas (https://www.buildingsofireland.ie/buildings-search/building/22805032/kilmacthomas-railway-viaduct-kilmacthomas-kilmacthomas-waterford) [Assessed 27th March 2021]

[xv] Newport (https://www.buildingsofireland.ie/buildings-search/building/31208018/carrowbaun-burr-by-newport-county-mayo-3) [Assessed 26th March 2021]

[xvi] Local Info (https://www.mayodarkskyfestival.ie/local-info) [Assessed 26th March 2021]

[xvii] Bridges (http://www.askaboutireland.ie/reading-room/environment-geography/transport/transport-infrastructure-/bridges/) [Assessed 26th March 2021]

[xviii] Heritage Trail (http://www.newportmayo.ie/h-viaduct.html) [Assessed 26th March 2021]

[xix] The Railway Viaduct (https://www.mayo-ireland.ie/en/towns-villages/newport/history/the-railway-viaduct.html) [Assessed 26th March 2021]

[xx] Seven Arches Bridge (https://en.wikipedia.org/wiki/Seven_Arches_Bridge_(Newport))
[Assessed 26th March 2021]

[xxi] The Railway Viaduct (https://www.mayo-ireland.ie/en/towns-villages/newport/history/the-railway-viaduct.html) [Assessed 26th March 2021]

[xxii] Seven Arches Bridge (https://en.wikipedia.org/wiki/Seven_Arches_Bridge_(Newport)) [Assessed 26th March 2021]

[xxiii] 1852 Suir Railway Viaduct (https://www.archiseek.com/2009/1852-suir-railway-viaduct-cahir-co-tipperary/) [Assessed 27th March 2021]

[xxiv] Taylorstown Viaduct (https://www.buildingsofireland.ie/buildings-search/building/15704015/taylorstown-viaduct-loughnageer-county-wexford) [Assessed 27th March 2021]

[xxv] 1877 Viaduct (<u>https://www.archiseek.com/2014/1877-nore-viaduct-co-waterford/</u>) [Assessed 26th March 2021]

[xxvi] Knockranny (https://www.buildingsofireland.ie/buildings-search/building/31212192/cahernamart-westport-county-mayo) [Assessed 26th March 2021]