

= Thomas Harrison (architect) =

Thomas Harrison (7 August (baptised) 1744 ? 29 March 1829) was an English architect and bridge engineer who trained in Rome , where he studied classical architecture . Returning to England , he won the competition in 1782 for the design of Skerton Bridge in Lancaster . After moving to Lancaster he worked on local buildings , received commissions for further bridges , and designed country houses in Scotland . In 1786 Harrison was asked to design new buildings within the grounds of Lancaster and Chester castles , projects that occupied him , together with other works , until 1815 . On both sites he created accommodation for prisoners , law courts , and a shire hall , while working on various other public buildings , gentlemen 's clubs , churches , houses , and monuments elsewhere . His final major commission was for the design of Grosvenor Bridge in Chester .

Some of Harrison 's designs , including his buildings at Lancaster Castle , were Gothic in style , but most were Neoclassical , particularly those at Chester Castle . He was regarded at the time , and since , as a major influence in the emergence of the Greek Revival in British architecture . A bridge he designed at the start of his career , and another towards the end of his career , incorporated innovative features ; Skerton Bridge was the first substantial bridge in England to have a flat roadway , and the Grosvenor Bridge was the longest single @-@ arched masonry bridge in the world at the time of its construction . Many of Harrison 's structures have survived , most of them now designated by English Heritage as listed buildings . Despite his work being nationally admired he spent his entire career in northwest England , visiting London only occasionally ; most of his buildings were in Lancashire , Cheshire , and the nearby counties .

= = Early life and training = =

Thomas Harrison was born in Richmond , Yorkshire , England , the son of a joiner , also named Thomas . His precise date of birth is not known , but it is likely that he was baptised on 7 August 1744 . Little is known about his early life , other than he attended Richmond Grammar School , and it is presumed that he worked with his father . In 1769 he was sponsored by a local landowner , Sir Lawrence Dundas of Aske Hall , to join George Cuiitt (who later became a landscape painter) to study in Rome . Here he studied at the Accademia di San Luca , and during his seven years in Rome , amongst other activities , made drawings of Roman structures , including temples and Trajan 's Column . In 1770 Harrison submitted a design to Pope Clement XIV for converting the Vatican Cortile del Belvedere into a museum for antique statues . This was " favourably received but not in the end adopted " . Three years later he entered the Accademia 's competition to re @-@ plan the Piazza del Popolo . His design was unsuccessful , but it was exhibited at the Royal Academy in 1777 . Following the failure of this design to be accepted , he petitioned the pope , and was awarded gold and silver medals , and made Accademico di Merito . He was then commissioned by the pope to alter the sacristy of St Peter 's , but the pope died before the work started . Harrison returned to England in 1776 , probably via France , as he made drawings of buildings in Nîmes and Paris . He produced designs for a bridge and a road in London , which were not accepted , and he returned to Richmond in 1778 .

= = Works = =

= = = Bridges = = =

The major works executed by Harrison at the start and end of his career were bridges : Skerton Bridge in Lancaster and Grosvenor Bridge in Chester , both of which incorporated innovative features . In 1782 he won the first prize in a competition to design a bridge to cross the River Lune at Lancaster and to replace a medieval bridge . After some amendments to the design , the foundation stone was laid in June 1783 , and Skerton Bridge was completed in September 1787 , at

a cost of £ 14 @, @ 000 (equivalent to £ 1 @, @ 600 @, @ 000 in 2015) . The bridge was carried on five elliptical arches , and was the first in England to have a flat road surface . Harrison subsequently received further commissions for bridges , including St Mary 's Bridge in Derby (1788 ? 93) , Harrington Bridge near Sawley , Derbyshire (1789 ? 90) , and Stramongate Bridge in Kendal , Cumbria (1791 ? 94) , followed by smaller bridges in Lancashire and Cheshire . He was appointed unofficially as the bridge master of Lancashire , and having carried out the duties of country surveyor for Cheshire since 1800 , was officially appointed to the post in 1815 . Harrison 's later bridges in Cheshire included the Mersey Bridge at Warrington (1812 ? 17) , and Cranage Bridge near Holmes Chapel (1815 ? 16) . These were the only bridges he designed to be built in timber rather than in stone , and both have been replaced . They were the first bridges of their type to be built in England , and were his only bridges to be regarded as " failures " . During his career , Harrison was consulted about the design of other bridges in the country .

Towards the end of his career , Harrison worked on two bridges in Chester . At the time the only road crossing over the River Dee was the medieval Old Dee Bridge , which was becoming inadequate for the increasing volume of traffic . In 1825 Harrison added three new arches on the upstream side of the bridge , and built a footway that was corbeled @-@ out , also on the upstream side . Meanwhile , negotiations had been underway for a much more substantial bridge . In 1825 an Act of Parliament was passed for the Grosvenor Bridge to be built downstream from the Old Dee Bridge . To provide access to the new bridge , properties , including a church , had to be demolished , and Harrison was involved in designing the new approach to the bridge , which was named Grosvenor Street . He also prepared three different plans for the bridge , one in iron , the others in stone ; one of the stone bridges had three arches , the other a single arch spanning 200 feet (61 m) . The single @-@ arch bridge would be the longest single @-@ arch stone bridge in the world at the time , and there were doubts about its stability . Harrison 's design was supported by the engineers James Trubshaw and John Rennie , and Trubshaw made a limestone model of the bridge to confirm its stability . By this time Harrison was aged over 80 , and in 1826 he resigned from the commission . Later that year the design was costed by Thomas Telford , and the town council subsequently accepted the design . Trubshaw was in charge of the construction , with Jesse Hartley as his clerk @-@ of @-@ works . The foundation stone was laid in 1827 by the Earl of Grosvenor (after whose family the bridge was named) , and work began the following year . It was formally opened in 1832 by the future Queen Victoria , and traffic began to cross it the following year . The total cost of the bridge was just under £ 50 @, @ 000 (equivalent to £ 4 @, @ 300 @, @ 000 in 2015) . Harrison did not live to see it completed , as he died in 1829 .

= = = Lancaster and Chester Castles = = =

Around the time that Harrison was involved in the construction of Skerton Bridge , he received other commissions for work in Lancaster . These included the addition of a clock tower to the Town Hall , the addition of a tower and spire to St John 's Church , and the building of Bridge Houses on the east side of Skerton Bridge . In October 1786 Harrison was asked to prepare plans for substantial improvements to Lancaster Castle ; in January that year he had also won the competition for major improvements to Chester Castle . He worked on both projects simultaneously for the next 30 years , and beyond that until 1815 in Chester , where he added further new buildings . In both projects he designed buildings for prisoners and prison staff , courtrooms and a Shire Hall . Both towns already had gaols , but there was a national move in the later part of the 18th century to improve them , following the campaigns by penal reformers led by John Howard . Amongst these reforms were the separation of men and women , and of criminals and debtors , which were incorporated into Harrison 's designs .

= = = = Lancaster = = = =

Harrison did not create an overall plan for his work on the site ; a series of plans for different buildings were prepared and building works continued until 1792 . The new buildings had to be

placed between the existing medieval castle buildings , including the keep , towers and the gatehouse . Harrison decided to design them with Gothic motifs , such as battlements and windows with pointed heads . Construction started in 1788 , and the first building to be completed was the Keeper 's House , standing to the right of the gatehouse . The next substantial building to be completed was the Female Felon 's Prison on the other side of the gatehouse . He designed an arcade on the south side of the keep to give some shelter to the debtors as they walked round their courtyard . He later added two storeys to provide more accommodation for debtors , and completed the Male Felon 's Prison to the north of the keep . By 1794 these buildings and other improvements had cost £ 10 @, @ 853 (equivalent to £ 1 @, @ 120 @, @ 000 in 2015) , more than had been expected . By 1795 Harrison had moved from Lancaster to Chester , from where he continued to supervise the work on both sites . At Lancaster this work included rebuilding the Crown Court and the Shire Hall . At that time the Crown Court was held in the medieval hall of the castle , and civil cases were held in the Shire Hall in the keep . The new buildings form a symmetrical group to the west of the keep , and were completed in 1798 , although the internal decoration and furnishings were not finished until some years later by Joseph Gandy . The Crown Court is a simple rectangular room , measuring about 50 feet (15 m) by 30 feet (9 m) high and wide . The Shire Hall has a plan of half a polygon about 80 feet (24 m) in diameter . Six Gothic columns support a panelled vault covering the main part of the courtroom . Around the perimeter is an arcade , and the judge 's bench has an elaborate canopy in Coade stone . The precise cost of these buildings is unknown , but in 1807 an estimate of more than £ 40 @, @ 000 (equivalent to £ 4 @, @ 550 @, @ 000 in 2015) was given .

== == Chester == ==

In contrast with Lancaster , Harrison was able to prepare an organised plan for the gaol , as it was to be built on a new site behind the Elizabethan Shire Hall on land sloping down to the River Dee . Also in contrast to Lancaster , the buildings were to be in Neoclassical style . The Gaoler 's House would stand behind the Shire Hall , overlooking the exercise courtyards . Inside the semi @-@ octagonal perimeter wall of the site would stand two @-@ storey blocks to house the prisoners . The site was staked @-@ out in November 1786 , but nothing could be done until the necessary Act of Parliament was passed the following July . Work started on the prisoners ' accommodation early in 1789 and on the Gaoler 's House in early 1792 , and was completed two years later . Plans were then put in place for a new Shire Hall to replace the Elizabethan building , which was completed in 1802 . The Shire Hall was another structure in which Harrison made innovations , in this case the use of Greek architectural motifs . Its façade is about 250 feet (76 m) long and 25 feet (8 m) high , in nineteen bays with two storeys . At its centre is a Doric @-@ style portico with twelve columns , projecting forwards by about 10 feet (3 m) . Its interior contains a semi @-@ circular courtroom with a diameter of 80 feet (24 m) . Its curved wall has a colonnade of ten Ionic columns , and on each side of the judge 's bench are two similar columns . The room has a coffered semi @-@ dome .

In addition to courts , and now a gaol , Chester Castle also housed a garrison of soldiers . The forecourt of the Shire Hall formed a parade ground for the garrison , and Harrison designed two new buildings for the soldiers . On the west side of the parade ground he built an Armoury , and on the east side a matching block , with more utilitarian buildings behind , to act as the Barracks . Both of the blocks consists of a two @-@ storey building in nine bays , the fronts of which are decorated with Ionic half @-@ columns about 23 feet (7 m) high . Harrison 's final building in the complex was a monumental gateway or Propylaea at the entrance to the forecourt . This consists of a central block , with two lateral pavilions that originally served as guardhouses . The central block has a portico extending some 10 feet (3 m) in front of the pavilions , with a double colonnade of four Doric monolithic columns standing 18 feet (5 m) high . Above them is a triglyph frieze , and a low attic . The pavilions are lower than the central block , and decorated at their front with two Doric half @-@ columns between pilasters . At the back the pavilions project 10 feet (3 m) beyond the central block and have four Doric columns . The structure , which was built between 1813 and 1815 ,

contains 22 monolithic columns .

== = Gentlemen 's clubs and public buildings == =

The first gentlemen 's club to be designed by Harrison was the Lyceum in Liverpool . This contained a newsroom , a coffee house , and new premises for the Liverpool Library . It was the first building in Liverpool to incorporate Greek motifs in its design . It includes one of the earliest recessed porticoes in England , and its exterior includes Doric and Ionic columns . Inside the building , the library is a circular room about 50 feet (15 m) in diameter ; it is top @-@ lit with a dome . The newsroom and coffee room measure about 70 feet (21 m) by 50 feet (15 m) . The club was built between 1801 and 1802 at a cost of £ 11 @,@ 000 (equivalent to £ 890 @,@ 000 in 2015) . In 1803 building commenced in Manchester of the Portico Library , which also incorporated a gentlemen 's club , and introduced Greek motifs to the city . Like the Liverpool club , it contains a recessed portico with Ionic columns and half @-@ columns . The interior measures about 60 feet (18 m) by 40 feet (12 m) ; the ground floor was used as the newsroom , the library books were arranged around a gallery , and again it was top @-@ lit with a dome . The building was completed in 1806 and cost about £ 6 @.@ 800 (equivalent to £ 500 @,@ 000 in 2015) . The third gentlemen 's club was the Commercial News Room in Chester , with three Ionic half @-@ columns on its main front . The newsroom measures about 40 feet (12 m) by 25 feet (8 m) . It opened in 1808 , and is smaller than the other club 's , costing about £ 2 @,@ 700 (equivalent to £ 190 @,@ 000 in 2015) . All the gentlemen 's clubs are still in existence , but two major buildings Harrison designed in Manchester have not survived . The Theatre Royal was built in 1806 ? 07 at a cost of about £ 12 @,@ 000 (equivalent to £ 860 @,@ 000 in 2015) ; it could seat 1 @,@ 020 people , but was destroyed by fire in 1844 . Harrison also designed the Manchester Exchange to replace an earlier building with the same purpose . It contained a newsroom , library , dining room , and post office . The exchange was built between 1806 and 1809 , and had a semi @-@ circular front decorated with Doric half @-@ columns , but it has since been superseded by a larger building .

== = Domestic and related structures == =

While Harrison was working on Lancaster and Chester castles , he was also involved with domestic projects , four of them around Edinburgh in Scotland . The first consisted in making alterations to Gosford House for the 7th Earl of Wemyss . There is circumstantial evidence that he also designed the mausoleum in the grounds of the house , but a definite attribution cannot be made . This commission led , through personal contacts , for further work . The first was to build Kennet House near Clackmannan (now demolished) for Sir Thomas Dundas ; it was Harrison 's first major house . He then made extensions to Broomhall , a house near Dunfermline , for Thomas Bruce , 7th Earl of Elgin . Finally in Scotland , Harrison prepared plans for another new house , Colinton House near Edinburgh , for the banker Sir William Forbes . Following this , Harrison is credited with the design of Quernmore Park Hall , near Lancaster , for Charles Gibson , a house built between 1795 and 1798 .

In 1804 Harrison made a series of plans for the rebuilding of Lowther Hall in Westmorland , but these were not accepted . However he was successful with his plans to enlarge and remodel Gredington , a house in North Wales , for Lord Kenyon , executed between 1807 and 1811 at a cost of £ 6 @,@ 675 (equivalent to £ 440 @,@ 000 in 2015) . Between 1808 and 1810 Harrison converted three rooms on the west side of the first floor of Tabley House , near Knutsford , Cheshire , into a picture gallery for Sir John Fleming Leicester . This was followed by a series of new houses , Oughtrington Hall , near Lymm , Cheshire , Woodbank , on the edge of Stockport (then in Cheshire) , Glan @-@ yr @-@ Afon in Llanferres , North Wales , Dee Hills House in Chester , and Grove House in Allerton near Liverpool .

In 1820 Harrison designed Watergate House on a corner site in Watergate Street , Chester ; it is one of the largest private houses in the town . The entrance to the house is on the corner , leading to a circular lobby and a square entrance hall , which is top @-@ lit by a dome with a lantern .

Harrison 's last commission for a country house in Cheshire was his design for Tilstone Lodge near the village of Tilstone Fearnall ; this has a porte @-@ cochère supported by four Doric columns . At about this time Harrison was also designing alterations to the east wing of Chirk Castle in North Wales . In late 1821 he was commissioned to work on Hardwick Grange near Hadnall in Shropshire for Rowland Hill , 1st Viscount Hill , which involved alterations to the front of the house , and the addition of a new dining @-@ room . At the request of the owner , this was in Gothic style ; the house has since been demolished . In 1822 ? 23 Harrison built a house for himself , St Martin 's Lodge in Nicholas Street , Chester , which consists of a simple villa . His last work for a private client was again for Roland Hill , a building called the Citadel in Hawkstone Park , Shropshire . It was built as a dower house for his mother , and has the appearance of a small castle , with three circular battlemented towers .

= = = Ecclesiastical buildings = = =

Only a small proportion of Harrison 's work was on churches . In 1804 he re @-@ faced the south side of St Peter 's Church in Chester , and he carried out further alterations to the church in 1813 . Between 1805 and 1806 he redesigned the nave of St John the Baptist 's Church in Whittington , Shropshire , which had been badly damaged in a storm . He did design one new church , the Wesleyan Methodist Church in St John Street , Chester , which was built in 1811 . Although his design was used for the exterior , the internal decoration and fittings were planned by his main contractor , William Cole , and the church has been much altered since . In 1810 came the commission for what is described as " without doubt his [Harrison 's] best work at a church " , to rebuild the steeple of the Church of Our Lady and Saint Nicholas , Liverpool . Earlier that year the spire on the medieval tower had collapsed , destroying the tower in the process . The work was completed in 1815 at a cost of over £ 22 @,@ 000 (equivalent to £ 1 @,@ 470 @,@ 000 in 2015) . The steeple has a height of 120 feet (37 m) , its buttresses rising above the top of the tower as pinnacles , the open @-@ work spire being supported by flying buttresses . Harrison also designed a domed ceiling for St Paul 's Church in Liverpool , but this has since been demolished .

Between 1814 and 1816 a chapel was built to Harrison 's design at West Hall , High Legh to replace an earlier chapel . This was a simple building that burnt out in 1891 , some of its fabric being incorporated into a new church on the site , St John 's Church . In 1818 the Right Revd George Law , bishop of Chester , asked Harrison to carry out work on the south transept of Chester Cathedral , which was showing signs of instability . This work involved building deep buttresses at the south end of the transept , and giving some attention to the gutters .

= = = Other works = = =

Harrison designed a variety of other structures , one of the most important of which was the replacement of Northgate in Chester , at the suggestion of Earl Grosvenor , mayor of the city in 1807 . The other three gateways , Eastgate , Bridgegate , and Watergate , which carried the footway of the City Walls over the medieval entrances to the city , had been replaced during the 18th century . The earl wanted the structure to be designed in Gothic style , but Harrison advised that it would be more fitting to the adjacent Roman walls for it to be Neoclassical , and after much debate this was accepted . The gateway consists of three arches , a wide central arch for vehicles , and two narrower arches for pedestrians , incorporating pairs of monolithic Doric columns . Harrison then designed Denbighshire Infirmary in North Wales , built between 1810 and 1813 , and in about 1820 he made some internal alterations to the Chester Exchange . In 1820 Harrison was consulted by Magdalen College , Oxford , about improvements to New Building , a block of the college built in 1733 , and on other alterations . His plans for New Building were adopted , and the additions were made in 1824 at a cost of £ 2 @,@ 600 (equivalent to £ 210 @,@ 000 in 2015) .

Harrison was also involved in the building of a series of monuments . His first commission was to design the Jubilee Tower on the summit of Moel Famau , the highest point of the Clwydian Range in North Wales , to celebrate the Golden Jubilee of George III in 1810 . This consisted of an obelisk in

two stages on a broad base . The obelisk collapsed in 1862 , and the base was remodelled in 1970 to make a viewing platform . The design of Lord Hill 's Column in Shrewsbury , Shropshire , has been attributed to Harrison , but this is incorrect . The architect was Edward Haycock , but Harrison did make alterations to the design , changing the style of the column , and adding a pedestal with statues of lions ; and Harrison did supervise the construction . Harrison designed The Marquess of Anglesey 's Column in Llanfairpwll on Anglesey to commemorate the feats of Henry Paget , 1st Marquess of Anglesey . This was constructed in 1816 ? 17 at a cost of nearly £ 2 @,@ 000 (equivalent to £ 130 @,@ 000 in 2015) . His last memorial was a ceremonial gateway at Holyhead , also on Anglesey , to commemorate the landing there of George IV in 1821 . It consists of an archway with Doric columns , and cost £ 600 (equivalent to £ 38 @,@ 000 in 2015) , and was opened in 1824 .

= = Personal life = =

Harrison married Margaret Shackleton at Lancaster Priory in 1785 . The couple had three children who survived childhood ; a son , John , who died in 1802 , and two daughters . Harrison died aged 85 at his home , St Martin 's Lodge , Chester , in 1829 . He was buried in the churchyard of St Bridget 's Church , Chester , but his remains were moved to Blaenau Cemetery when the churchyard was cleared in about 1964 . His estate amounted to £ 6 @,@ 000 (equivalent to £ 480 @,@ 000 in 2015) .

= = Present day = =

An additional arch was added to Skerton Bridge in about 1849 to allow for the passage of the " Little " North Western Railway (since closed) beneath it . The bridge continues to be used by heavy traffic . A survey in 1995 concluded that the bridge is still strong enough to carry vehicles ten times the weight of the heaviest vehicles of the time it was built . Grosvenor Bridge remains in use , carrying the A483 road over the River Dee , and is still the longest single @-@ span masonry bridge in Britain .

Other than the smaller bridges , almost all the structures designed by Harrison have been designated as listed buildings by English Heritage , Cadw , or Historic Scotland . Some of the buildings he completely designed (rather than altered) have been listed at the highest levels , Grade I in England and Wales , and Category A in Scotland . Grade I includes buildings that " are of exceptional interest , sometimes considered to be internationally important " ; only 2 @.@ 5 % of listed buildings are in this Grade . Category A consists of " buildings of national or international importance , either architectural or historic , or fine little @-@ altered examples of some particular period , style or building type " , and includes about 8 % of the Scottish listed buildings . These structures are , in Chester , Grosvenor Bridge , and Northgate , and in Scotland , the Mausoleum at Gosford House , and Colinton House . Lancaster Castle as a whole is listed at Grade I , and at Chester Castle four of Harrison 's buildings are listed separately at this Grade : the main block containing the Shire Hall , the Propylaea , and the two blocks flanking the forecourt .

A number of Harrison 's structures in England and Wales are listed at Grade II * , the middle grade for those that are " particularly important buildings of more than special interest " ; 5 @.@ 5 % of all listed buildings are Grade II * . They include Skerton Bridge , Bridge Houses , Lancaster , St Mary 's Bridge , Derby , Quernmore Park Hall , the Lyceum in Liverpool , The Portico Library in Manchester , Woodbank in Stockport , the Marquess of Anglesey 's Column , Watergate House in Chester , and the Citadel at Hawkstone Park .

= = Appraisal = =

That Harrison was a fine innovative designer of bridges is evidenced by the continuing successful use by modern heavy traffic on Skerton and Grosvenor Bridges , and on St Mary 's Bridge in Derby . As an architect , the editors of the Cheshire volume of the Buildings of England series describe him

as " one of the most important of Cheshire 's architects " . Harrison 's first biographer , Arthur Blomfield , said he was " almost , if not quite , the first architectural genius in the kingdom " .

Although most of his designs were in Neoclassical style , he also created buildings in Gothic style , for example at Lancaster Castle , and Hardwick Grange . Nevertheless , he is considered to be one of the main influences in the Greek Revival of architecture in the late 18th and early 19th centuries . The architectural historian Giles Worsley describes him as " the first English architect to grasp the full potential of the Greek Revival " , and David Watkin says he is the " finest " of the architects who revived the forms of Greek architecture . Of the Shire Hall in Chester Castle , Worsley says it is " the first serious monument of the Greek Revival " . Writing about Harrison 's designs at Chester Castle , Pevsner says " What he [Harrison] has achieved here is one of the most powerful monuments of the Greek Revival in the whole of England " .

Harrison spent the whole of his career in the northwest of England and , other than his houses in Scotland and his work in Oxford , his works were confined to Lancashire , Cheshire , Shropshire , Cumbria , Derbyshire , and North Wales . He was never a member of the Royal Academy or any other London @-@ based institution , and only a rare visitor to London once his practice was established . Nevertheless , Charles Cockerell (later to become the president of the Royal Institute of British Architects) said of him in 1828 that he was " undoubtedly the noblest genius in architecture we have had " .