The Royal Canal Architectural, Engineering and Industrial Heritage Assessment 2007.
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Commissioned by Waterways Ireland and carried out by Headland Archaeology Ltd

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WIIAH Numbers 1206-1584
1. INTRODUCTION

This report presents a built heritage inventory and complete survey of the architectural, engineering, industrial heritage of The Royal Canal, with an analysis of the importance of each site/feature identified, to help inform Waterways Ireland on the nature of the surviving cultural heritage features associated with the navigation that may be impacted upon by future development strategies. The assessment was carried out along the navigation corridor as defined by map detail, encompassing a zone extending 50m either side of a discernable centre-line, irrespective of property ownership.

The Royal Canal is located in a mixed urban and rural landscape which has been subject to much change since work began on it in 1789. Throughout its course it runs through Dublin, Meath, Kildare, Westmeath, and Longford counties.

The Royal Canal begins in Dublin on the north bank of the River Liffey and passes through the city to the northwest before entering a more rural landscape. It then alternates between urban and rural settings, passing through the towns of Kilcock, Clonsilla, Abbeyshrule, Maynooth and Mullingar; it splits and then ends in both Longford and Cloondara. The canal promoted the commercialisation and industrialisation of these areas during the late eighteenth/nineteenth centuries and found physical expression in the warehouses, canal hotels and the many houses which were built by the prosperous merchant class. Though many of these features have since disappeared, a number are still visible in today’s landscape and serve as a reminder of the heritage of the canal.

These urban centres have also been subject to much economic and architectural influence relating to the construction of the canal. Evidence of this influence is similarly to be found in the today’s landscape in the form of warehouses and houses that were built by the merchant classes. These serve as a reminder of the prosperity brought to these areas during the late eighteenth/nineteenth centuries and again emphasise the built heritage of the canal and its hinterland.

2. HISTORICAL BACKGROUND

For the purpose of this report, the various construction phases of the Royal Canal have been dealt with separately and accordingly, these have been assigned individual historical background (HB) numbers. In order to contextualise these construction phases, brief overviews of the years preceding this work as well as the construction techniques adopted during the execution of the navigation, are presented below.

Table 2.1: Historical Background Areas.

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<th>Historical Background Number (Figure No.)</th>
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In addition, an economic overview of the Royal Canal is provided following the accounts of the various construction phases (HB01-HB03). This effectively allows the subject of the canal / navigation to be examined against the backdrop of its economic success, subsequent decline and present day circumstances.
Early Years

In 1715, Act 2 Geo I, c 12 (Ir) was passed in an attempt ‘to encourage the draining and improving of the bogs and unprofitable low grounds, and for easing and dispatching the inland carriage and conveyance of goods from one part to another within this kingdom’. In effect, this act authorised extensive navigation schemes throughout Ireland at the public expense. One of the main objectives was to link Dublin with the rivers Shannon and Barrow.

Each improvement was to be in the hands of a body of commissioners. However, little work was achieved and an Act of 1721 revised the appointment of commissioners, henceforth to be Members of the Parliament and Justices of the Peace in the counties where the works were undertaken. This was again altered under an Act in 1729 to a group of commissioners for each province and the same act empowered parliament to collect dues on certain luxury items and to disburse these monies on navigation projects. This act led to the construction of the Newry Canal and the initiation of the Coalisland Canal.

By 1751, complete centralisation had been achieved with the establishment of the ‘The Corporation for Promoting and Carrying on an Inland Navigation in Ireland’, a group more commonly known as the Commissioners of Inland Navigation. Recognising Ireland’s need for an extensive network system to encourage trade during this ever-increasing industrial era, this group was responsible for setting the wheel in motion. Thus began the real era of canal construction in Ireland.

In 1755 £20,000 was allocated to the Navigation Board towards the cost of navigation from Dublin to the River Shannon. Two routes were considered and surveys were subsequently undertaken. The more northern route of the two was to begin at the north-west end of Dublin and to pass through Castlemoore to the Rye water at Kilcock and from there to join the rivers Blackwater, Boyne, Deal, Yellow and, through Lough Derravaragh, the rivers Inny and Camlin from where it would enter the River Shannon.

This line was surveyed by Thomas Williams and John Cooley between 14 August 1755 and 16 January 1756, whilst the more southerly route was surveyed by Thomas Omer. The southern line proposed to begin at the city basin and proceed on the south side of the River Liffey to join the River Barrow and the River Brosna from where it would enter the River Shannon. Huge controversy ensued concerning which route would be the most advantageous, and eventually it was agreed that the southern line, which had become known as the ‘Grand Canal’, should be adopted. Omer was appointed head engineer of the scheme by the Commissioners of Inland Navigation and work began in 1756; for the time being at least all notions concerning the northern line were cast aside.

Various acts continued to be passed which culminated in the establishment of different bodies responsible for the execution of navigation schemes. An Act passed in 1771-72 allowed the Commissioners to transfer works to private undertakers, while at the same time another Act allowed partnerships to be formed to make navigations. The transferring of incomplete navigations to such local bodies was not practical however. As these overseers weren’t eligible for government financing, they were forced to rely on the small income from tolls to survive, and in turn were unable to fund the completion of the works. The government was forced to address the situation and consequently, parliament introduced a debenture scheme in 1788 to help finance private companies to build canals.

1 Quoted in Clarke 1992, 13
2 Commons Journal Ireland 17 February 1755, p. 370; quoted in Clarke 1992, 16
3 Act 29 Geo. III c.33 (1789); quoted in Clarke 1992, 17
Loans at four per cent were offered on one-third of the total cost of a project. These were to be paid in instalments when it was shown that double the amount of the instalment had been expended on the scheme. Under this new initiative a number of navigations materialised in Ireland. Among these was a revised version of the northern canal line from Dublin to the River Shannon which had become known as the ‘Royal Canal’ when it had been previously considered back in 1756.

In response to the incentives offered by the government for inland navigation schemes, the Royal Canal Company was incorporated in 1789. It is unclear who the prime instigator of this project was. In his book, Lives of the Engineers, Smiles states that ‘the canal owes its beginnings to a retired shoemaker and director of the Grand Canal Company who, after a disagreement with his fellow directors, set about starting a canal of his own.’ However, Smiles’ story cannot be substantiated. When one cross references the list of names of the Royal Canal subscribers with the names of merchants and traders in ‘Wilson’s Dublin Directory’ dated to 1789, there is evidence for only two shoe-makers who were subscribers to the Royal Canal. These were Edward Clarke and Ralph Mulhers, and neither was listed as a director of the Grand Canal Company. As none of the records for the Royal Canal Company having survived for the years 1789 to 1813, it is not possible to ascertain who was responsible for the setting up of the company. Nonetheless, an analysis of the evidence available suggests that it may in fact have been John Binns, a director of the Grand Canal Company, or his business partner William Cope, or indeed a culmination of their combined efforts, which led to the initiation of the Royal Canal scheme.

Either way, the subscription list for the Royal Canal closed on Friday 8 October 1789 and the Company’s Charter was enrolled on 24 October 1789. Thus the way was clear for work to commence on this ambitious scheme.

The first act of the Royal Canal Company was to petition parliament for funds which they had agreed to allocate in 1788 to persons intending to build canals, make rivers navigable and improve ports and harbours. Though one would assume that a thorough survey of the route proposed for construction was undertaken prior to presenting their case to Parliament, this was not the case for the Royal Canal Company; a matter which was to prove fundamental to the difficulties encountered by the company further down the line. Only a minor survey had been carried out on a section of the proposed line when serious doubts arise concerning its suitability. Nonetheless, they succeeded in producing plans of the route they intended to use to execute the canal from Dublin to the Shannon at Tarmonbarry as is illustrated by the following:

‘In the first place by Carton to or near Kinnegad, and then to Trim, and in the next place Cloncurry to or near the town of Mullingar, and then from Trim to Kells, Athboy and Castletown Delvin and from Mullingar to Tarmonbarry on the River Shannon’.

They presented an estimation of £198,000 to complete the entire project, which works out at £1,868 per mile. Given that the cost per mile of the first thirty-one miles of the Grand Canal amounted to £10,968, the figure presented to parliament by the Royal Canal Company seems ridiculous. Alas, no one seems to have questioned the accuracy of either the survey or the estimation and the company was
subsequently granted parliamentary aid in the form of debentures amounting to £66,000, which when added to the £134,000 raised by subscriptions, gave the company an opening capital stock of £200,000.

The first act undertaken by the company at this point was to appoint John Brownrigg to carry out the first formal survey. He was instructed to find the most direct route from Dublin to Co. Longford and the River Shannon. This survey was completed by November 1789. During the same month, Richard Evans, who was employed by the Grand Canal as an engineer, was hired by the Royal Canal Company and he began setting out the proposed route. Although these early works provided the company with a backbone upon which they could begin construction works, the line was continually subject to various changes depending on the preferences of whichever engineer was overseeing the works at any particular time.

In February 1790 the company presented a bill to parliament to alter the route of the canal from that proposed in the charter which had secured the company the funding. The most significant of these changes concerned the diversion of the canal through the town of Maynooth. It is believed that this change to the line may have been implemented due to the influence of the Duke of Leinster who was endeavouring to build up the village during this period. As will be exemplified in further discussions concerning the Royal Canal, this diversion was to cost the company dearly as it necessitated the building of an aqueduct over the Rye Water.

It was at this time, during the spring of 1790 that construction work on the ambitious scheme finally began.

Construction Techniques

For the most part private contractors were responsible for executing the construction works, although it was not until the early nineteenth century that large-scale contracting got underway. In the early years of canal construction, most of the work was carried out by small-scale local contractors, to whom the relevant overseeing company supplied all the building materials and work-men’s tools, and transported these materials by boat to the works in hand. Mechanical excavators had not been invented in time to aid with the majority of canal construction, so an immense force of human labour was required. For example, during the year 1790, 3,944 men were reported as working on the Grand Canal, while some 2,000 men were reported as working on the Royal Canal, upon which work had commenced that year. This system of employing small-scale private contractors was challenged when the canal construction company ‘Henry, Mullins and McMahon’ was incorporated in 1808. Their success was unrivalled and they served as a real threat to smaller contractors.

A typical survey to be carried out prior to the construction of a canal is described by Charles Vallency in his book which was first published in 1763. He states ‘The ground should be frequently bored when the canal is to be dug in order to avoid if possible all bogs and rocks which exceedingly increase the expense of building the canal’. He also recommended that cross-sections should be cut across the line of the canal at intervals so as to establish the type of soils that would be encountered during construction works. Subsequent to the proposed route having been surveyed, plans were drawn up concerning the details of features such as locks, lock-keeper’s houses, bridges, aqueducts and sluices which were to be constructed along the route also. Canal construction techniques adopted in Ireland

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10 Commons Journal Ireland 1792/4 XV, Pt. II App. DCLXIX – DCLXXI; quoted from Clarke 1992, 29
11 Commons Journal Ireland 26 February 1789/90, XIII, p. 188; quoted in Clarke 1992, 36
were influenced by continental, as well as British methods in many instances. We see this continental influence in features such as locks, whereby the lock chambers on early canals and river navigations of the 1750s tended to be both wide and long.\textsuperscript{13} Once the route had been set out, the next step involved commencing construction works. A supervising resident engineer was usually elected to oversee the running of this day-to-day work. Along with his assistants he would peg out the line of the cut, allotting sections to a number of canal contractors who would be commissioned to carry out the construction work.\textsuperscript{14}

In order to make the canal watertight, puddle clay was used. This was a light loam or clay mixed with water, the principal of which was to impregnate the earth or clay so that it could hold no more water. Puddle was prepared by finely chopping loam, preferably mixed with coarse sand or gravel as a deterrent to rats, with a spade and mixing it with water to a semi-plastic state. It was then applied in 9 “ or 10 “ layers. This technique had been used prior to the canal age, by tanners to line their pits, and for the Dutch drainage works in the Fens.\textsuperscript{15} If the canal was dug out of permeable ground, both the sides and bed would have been lined with puddle, while if the canal was in a watertight bed, then only the banks thrown up above ground level necessitated sealing with what was called a puddle‐ditch or puddle‐gutter.\textsuperscript{16} In the banks, the puddle ditch was built up as the banks rose, the sides of the ditch being lined with sods or spits of earth. The ditch was generally about three feet wide and went about a foot into the watertight layer to make a good seal.

As the canals often took many years to reach completion, a number of engineers and consultants were commonly involved in any one project, as will be exemplified by the following discussions on the various construction phases of the Royal Canal.

HB01: Dublin to Coolnahay

Construction work on the Royal Canal began in the spring of 1790 at the site of the intersection of the Broadstone branch, and proceeded simultaneously westwards towards Ashtown and eastwards towards the River Liffey. Legislation incorporating the Grand Canal Company protected it from construction of another canal, therefore after fourteen miles outside Dublin the Royal Canal had to stay at least four miles away from its rival the Grand Canal.

Some 2,000 men were employed at a rate of 10d per day.\textsuperscript{17} From the onset, a very poorly co-ordinated and organised system was in place. Firstly, a thorough survey was neglected to have been carried out at the very beginning when granting for the project was first petitioned to parliament, thus difficulties which were likely to be encountered were not highlighted. Secondly, the estimate for the cost of completion of the scheme had been seriously under estimated leading the company into financial difficulties soon after construction works had commenced and thirdly, the company failed to ensure the appointment of a full-time engineer to ensure that works were being executed to the required standard.

Although Richard Evans was to fulfil this role, he was frequently away on other navigation projects. This was a significant mistake on behalf of the company as many of the supervisors were incompetent and, as their work often went unchecked, many bridges and locks had to be demolished and rebuilt, or had to have extensive remedial work carried out.

\textsuperscript{13} Rynne 2006, 345
\textsuperscript{15} Paget‐Tomlinson 2006, 35
\textsuperscript{16} Ibid.
\textsuperscript{17} Delany 1992, 31
In 1791 the company applied to parliament for funds to construct docks at the River Liffey which were to be capable of holding up to two hundred ships at any one time. Graving docks were also proposed. Their petition was successful and work commenced on the new docks on 1 March 1792.\footnote{Commons Journal Ireland 1794 Pt. IIXV, App. DCLIII; quoted in Clarke 1992, 41} Although various attempts were made to address the completion of these docks, they never materialised under the Royal Canal Company and it was not until 1873 that this dock, then named Spencer Dock, was finally constructed by the Midland Great Western Railway Company.

At the same time, the canal company also began raising a series of loans; the first was for £30,000 at four per cent but the interest subsequently had to be raised to six per cent to attract investors. As time went on and confidence in the scheme wavered, the loans failed to produce the amount raised.\footnote{House of Commons 1810-11 (190), VI 819; 1810-11 (235), VI 855; quoted in Delany 1992, 34} Prior to this, however, work seemed to be progressing well. Construction of the canal had been completed for some eighteen miles from Dublin and parliament was informed ‘that from thence to Mullingar the line will be completed in less time and with less expense and trouble, the country being flat, and few locks will be required’.\footnote{Irish Commons Journal, XV Part II, app. cccv, 4th Report to Commissioners of Imprest Accounts; quoted in Clarke 1992, 41} This optimistic climate did not prevail for long and in 1793 controversy arose concerning the finances of the company. A committee was established within the Royal Canal Company itself to inquire into ‘so extravagant a disproportion (between the estimates and actual expenditure) as leaves them unable to account for the possibility of it being accidental.’\footnote{Report on the Committee Appointed by the Royal Canal Company dated 12 June 1793 with reports by John Brownrigg and Richard Evans’, ms. In Trinity College Dublin; quoted in Delany 1992, 34} The same year, the Irish Parliament appointed a committee to investigate the part-payment of the £23,000 granted to the company in 1792 for the construction of the docks as the progress of work seemed very slack on this. Essentially, this developed into a full inquiry into the affairs of the company which sought to explain why progress was so slow and expenditure so high.

The inquiry culminated in a heated personal dispute between Richard Evans, engineer to the Royal Canal Company, and John Brownrigg, who had originally surveyed the line. Neither wanted to accept responsibility for the problems encountered thus far. The main issues being addressed included the standard to which the works were being executed, accidents which had resulted in the losses of lives and also the enormous cost of constructing the canal through the quarries at Carpenterstown and across the Ryewater (which had necessitated the construction of an aqueduct). In response to the latter problem, Brownrigg declared that this was not the line which he had surveyed, stating: ‘Had the north line, which God and nature pointed out, been adopted instead of the south, you might have had navigation to Kilcock and a profitable trade thereon in the spring of 1793...’\footnote{Quoted in Delany 1992, 37}

The Ryewater aqueduct canal and the quarries at Carpenterstown were the largest obstacles faced by the company when constructing the canal. When Sir Thomas Hyde Page, an English engineer, had been approached to act as consultant to the company during the early 1790s, he recommended that instead of excavating through the quarries to the proposed depth, the canal should be carried at 9ft higher by building up the embankment. William Jessop, who had also been approached by the company, disagreed with this recommendation and said that like Evans he saw no problems with carrying out the work in the quarries. Thus the works continued in line with Evans’ original plan. This was to cost the company greatly and both concerns far exceeded Evans’ original estimates. The final cost for the aqueduct stood at £28,231, while the cost of building the canal through the quarries amounted to £42,000.
In effect, although neither Evans nor Brownrigg were completely responsible for the various difficulties faced by the company at this time, Evans was dismissed along with the supervisors of masonry and earthworks. However, this dismissal doesn’t seem to have been actually implemented as Evans remained in the employment of the company until his death in 1802.

Hyde Page returned in 1793 and undertook to complete the survey of the proposed line. He made a number of changes to Brownrigg’s original route, although only some of these were actually implemented. In essence, as the overseeing engineers of the scheme changed, so too did the route in accordance with their own recommendations.

By 1794 the financial affairs of the company were dismal and it was declared bankrupt. This situation is hardly surprising when one considers that the foundations of this financial circumstance were inevitably laid down when the cost for completion of the project was seriously under-estimated back in 1789. It was clear from the outset that the company would not have enough funds in terms of the amount they petitioned for, from both subscribers and parliament, to complete the proposed scheme. To put it in context, the amount petitioned for only covered the construction costs of around twenty miles of canal. This was a fundamental mistake on behalf of the company which in turn inevitably portrayed them in an unfavourable light and caused their investors, both current and potential, to lose faith in the scheme. This caused parliament to attempt to withhold the outstanding debentures which they had granted to the company. They were informed that they were not entitled to do so however, and thus were compelled to continue providing the much-needed funds to the company.

In 1796 the company applied to parliament for further assistance and an investigating committee was set up. Binns reported that the total sum expended by the company at this point was £260,000. He informed the committee that between £11,000 and £12,000 was needed to complete the canal from the Broadstone to the Liffey and that the line from Kilcock to Mullingar was now ‘lock-spitted out and determined upon’. 23 Parliament was not encouraged by the picture they were presented with but, given that if they didn’t provide the funding petitioned for that works would have to be stopped, they agreed to grant a further £25,000 in five per cent debentures. Conditions attached to this loan instructed that tighter control would have to be exercised over expenditure and that the docks and junction with the Liffey, together with the aqueduct and harbour works at the Broadstone, be completed without the aid of further grants from the state. Completion of the canal to Thomastown was also to be undertaken in the same manner.24

In 1796 trade boats and passenger services commenced between Dublin and Kilcock. Thereafter as the canal extended westwards, so too did these services.

By 1800 construction works had reached Newcastle in Co. Meath. That same year the Irish Parliament, in one of its last acts before the Act of Union, established the Directors General of Inland Navigation with a fund of £500,000 to be spent as they deemed necessary on inland navigation projects.25 The Royal Canal Company was still in grave financial difficulty at this time. On top of having dealt with the financially-draining Ryewater Aqueduct and Carpenterstown quarries, a further quarry section near Maynooth and boggy terrain beyond Kilcock had since been encountered. Such landscapes required intensive labour and presented high costs to the company. The war in France was also estimated to have cost them in the region of £60,000 resulting from increased costs and wages, and the company had to contend with high interest rates payable on their loans. Thus resources were strained. As a result, the directors were quick to approach the new board in the hope of securing some much-

23 Delany 1992, 40
24 38 Geo. III, c.79 (Ir), 1798; quoted in Delany 1992, 43
25 40 Geo. III, c. 51 (Ir), 1800; ibid.
needed funding. They estimated that the cost of completing the canal from the Liffey to Kinnegad and Coolnahay via Mullingar would be £202,211 7s 8d, while the cost of completing it from Coolnahay to Tarmonbarry would be £95,950.\textsuperscript{26} The company claimed it would reach Coolnahay in three years and Tarmonbarry, as well as a proposed link to Athlone, in four years. Subsequent to the Directors General having been petitioned by the company for funds, they engaged the employment of Hyde Page and John Brownrigg to act as consultant engineers and in January of 1801 instructed Brownrigg to undertake a survey of the company’s affairs.

Brownrigg’s subsequent report, which was submitted on 22 May 1801, provides us with an informative insight into the contemporary situation of the construction works.\textsuperscript{27} He states that the canal was in full working order from North Strand Road to the Broadstone Junction and that the navigation ceased near Newcastle but was cut to the River Blackwater at this time. He also described the sea lock at the Liffey, therefore implying that it had been completed by this stage, and stated that the proposed docks had not yet advanced beyond planning stage. In reference to the quarries through which the canals were constructed, Brownrigg stated the work was:

\begin{quote}
‘one of the most arduous undertakings ever attempted in the kingdom and perhaps is exceeded by few in Europe’, involving work on ‘extremely hard black calcareous stone with only one small vein fit for the limeburner, and none for the stonewdock cutters, the whole extent being nearly one solid mass without joints or beds, but as if run together, closely united and impenetrable to the crow, wedge or pick-axe and was therefore torn to fragments with gunpowder’.\textsuperscript{28}
\end{quote}

The harbour at Maynooth was partly formed at this time and all the embankments along this part of the line were described by Brownrigg as ‘exceedingly slight and liable to accidents, some expensive ones having already happened’.\textsuperscript{29} With regard to construction of the canal through Cappagh Bog, he described the works as;

\begin{quote}
‘tedious, laborious and expensive undertaking …..the bog was of the worst soft fungus kind fed by a lake in the centre and the cut was deep and wide, by slips in the sides and swellings in the bottom often disappointed the company and deceived the experienced workmen. It is now however a very fine canal and in good order’.\textsuperscript{30}
\end{quote}

He was very critical of the diversion which was proposed in order to pass through Kinnegad which he said would bring the line through bog and broken quarry. He recommended that the line should pass through Thomastown, a suggestion which was later adopted by consultant engineer John Rennie, who was employed by the company upon the death of Richard Evans in 1802. When considering the route proposed to travel south of Mullingar, Brownrigg was once again not in agreement and suggested a route north of the town which was also subsequently implemented.

Calculating costs of completing the canal based on Brownrigg’s survey, the Directors General granted £95,866 to the company to cover the costs of completing the canal to the end of the summit level at Coolnahay, building the docks at the Liffey and completing the harbour and aqueduct at the Broadstone in Dublin. In return for receiving this grant, the company was instructed to lower their toll rates. The Directors General imposed this decrease in tolls to all navigation companies who sought parliamentary aid as they believed this would help increase trade. While this decrease may

\textsuperscript{26} Quoted in Delany 1992, 42
\textsuperscript{27} PRO, Public Works, 1/5/7/1, pp. 61-85
\textsuperscript{28} Quoted in Delany 1992, 45
\textsuperscript{29} Ibid.
\textsuperscript{30} Quoted in Delany 1992, 46
have been responsible for a slight boost in traffic, the Directors General failed to recognise that this would compromise the ability of navigation companies to generate a reasonable profit margin.

Prior to this enforced decrease in tolls, the Royal Canal Company was operating at an extremely low profit margin; between the years 1796 and 1800 revenue on the completed section of canal amounted to £1,261 in tolls and £2,708 from passage boats. Needless to say, the imposed condition did not serve the company well.

Construction works continued and in October 1805 Thomastown was reached. By December of the following year, Mullingar had been reached. There had been a delay in the canal arriving here which was caused by the need for a deep sinking near the town. In an attempt to reduce costs and to speed up the works, the company was forced to make this section of canal a narrow channel, measuring twenty-eight feet at top and twenty-four feet at the bottom.31 Once the canal was open as far as Mullingar, this contemporary account appeared in the Freeman’s Journal on December 15;

“For the first time the Countess of Granard new packet boat arrived at Mullingar Harbour from Dublin with a number of passengers of distinction. It being a novel sight with a number of spectators assembled and the band of the Sligo Militia ushered it in with appropriate music’.32

Thereafter the number of boats trading on the Royal Canal increased as did the number of passenger boats. However, these numbers only amounted to about one-third of that which was operating on the Grand Canal which was now trading the entire length between Dublin and the River Shannon, as well as the River Barrow.

By 1809 the canal had been completed to Coolnahay, three years ahead of its scheduled completion date. Although it had been estimated in 1801 that it would cost £95,866 to complete the line from Thomastown to this point, the final cost amounted to £193,608. The company’s debt now amounted to £862,000 and no dividend had been declared until 1808 with the exception of a token ¼ per cent in 1797; a grim reflection of the financial standing of the company.

The company was determined to fulfil their proposal to link the completed section of canal with the River Shannon and in 1810 a route was finally agreed upon with the Directors General regarding the line they would take from Coolnahay to the Shannon. This line comprised locking down into the River Inny and entering the Shannon in Lough Ree instead of further north at Tarmonbarry. Upon learning of this intended route, the Grand Canal Company objected strongly, fearing that this line would impact upon their trading to and from Athlone. A bitter dispute ensued which eventually ended up in the courts of the Westminster Parliament. Given that both canal companies were at this point experiencing grave financial difficulties, the government decided to launch a series of investigations into their affairs.33 The result of these inquiries was parliament’s decision to dissolve the Royal Canal Company and hand the whole concern over to the hands of the Directors General in 1813. Subsequently in 1815, they were authorised to complete the canal to the Shannon.34 Thus it was in this manner that the final stretch of the Royal Canal from Coolnahay to Tarmonbarry was executed.

HB02: Coolnahay to Tarmonbarry

31 Clarke 1992, 58
32 Quoted in Delany 1992, 51
33 House of Commons 1810-11 (190), VI 819; House of Commons 1810-11 (235), VI 855 (minutes of evidence); quoted in Delany 1992, 57
34 55 Geo. III C 182. (1815); quoted in Clarke 1992, 67
Once the Royal Canal was handed over to the Directors General in 1813, they instructed John Killaly to carry out a survey of the route proposed to link the canal with the River Shannon. Prior to this, surveys had been carried out by Richard Evans at various times between 1790 and 1801. Killaly followed these initial plans closely but so as to avoid a long embankment over the River Blackwater, which would have entailed considerable deep sinking through Ballymagladdy Bog and several large embankments, he chose a route to the north of Rathkelet and crossed the River Inny at the Ford of Driminure. From here to the Shannon, Killaly’s line was again similar to that as laid out by Evans. By moving the positions of the locks and entering the Shannon through the Camlin River, the expense of an aqueduct was saved. It had been estimated that Evan’s line would take ten years to complete, however incorporating the aforementioned alterations, Killaly intended to complete the work in four years at a total cost of just over £198,000.

Once the Directors General were authorised to commence construction works, they set about seeking tenders in March 1814. David Henry, Bernard Mullins and John McMahon, the most successful Irish canal contracting company in Ireland, won the contract. They undertook to begin work on 7 May 1814 and complete it on 1 March 1817 for the sum of £145,000.35 Henry, Mullins and McMahon also secured the contract for the construction of the large aqueduct over the River Inny. The figure for completion of the aqueduct amounted to £5,000.36 From the outset the Directors General were successful in organising a well-structured and capable team of engineers and supervisors; a fundamental aspect for the execution of such a large project. Killaly had turned down the offer of superintending the works, although he agreed to act as directing engineer, and so the Directors General appointed two resident engineers, Alexander Jones and Thomas Whitehead. In addition to this, six overseers were also appointed.

An indication of the scale of works involved is illustrated in the following report written by the contractors in December 1814;

‘……Forges have been built and considerable quantities of culm and slates laid down, large purchases made in oak, pitch, pine and other timber. Horses, wagons, drays, machinery etc. etc. in which they have expended nearly £10,000 exclusive of the sum of £6,000 advanced by the Board on that account’.37

In April 1815 Killaly carried out an inspection of the works. He reported that five locks, ten tunnels and eight bridges had been completed but that there was little progress with the earthworks. This, he concluded, was due to many of the labourers being engaged in farming work at the time. By September however, it was reported that the works were being ‘prosecuted with a vigour beyond all example in this country’.38 Work continued to be executed in a professional manner and in January 1817, Killaly reported that the canal was opened to Ballynacargy Harbour and that the whole extension would be completed on or before 1 May.

It was at this time that problems arose concerning some sections of the canal which needed to be puddled with clay in order to make them staunch. The contract regarding the works had stipulated that where the natural surface of the adjoining ground was lower than the surface of the water in the canal, puddle clay was to be applied ‘three feet thick carried up the banks from one foot below the surface of

35 Delany 1992, 63
36 Ibid
37 PRO, Public Works, 1/5/1/16, 23 December 1814; quoted in Delany 1992, 64
38 Quoted in Delany 1992, 66
Despite the adjoining land to one foot above the surface of the water. Killaly now recommended that all bog embankments should be puddled in this way. Further trouble subsequently arose in some bog sections where subsidence had occurred. In order to rectify this, wooden tunnels were inserted under the canal to cause the water to drain away. Despite these unforeseen difficulties, the canal was completed and handed over to the Directors General on 26 May. It had been an ambitious project and comprised twenty-one locks, thirty-eight bridges, one aqueduct and several harbours and quays upon completion.

The work had been undertaken in a most professional manner and completed at the estimated cost and close to the agreed timescale. The only major difficulties encountered during the construction phase of this section of the Royal Canal were malicious breaches to the embankments. These breaches were carried out in response to fears that the canal was going to be instrumental in causing a local potato scarcity as large shipments of potatoes were being sent to Dublin via the canal. The potato trade on the Royal Canal was good, resulting from low rates that had been set by the Directors of Inland Navigation in Ireland in 1800. The fee charged for the transportation of potatoes was ½d per ton per mile on the Royal Canal, while on the Grand Canal it was 1½d per ton per mile. Consequently, although the Grand Canal was certainly targeted by the gangs responsible for carrying out breaches and threats, the Royal Canal endured their wrath to a higher degree. Such breaches were also carried out in the hope that work would be created for the locals when the canal banks required reconstruction. Resulting from these acts of destruction, military protection of the works had to be implemented.

Despite these security measures, the perpetrators persisted in their attacks. On the night of 25 July 1814, forty men armed with guns, swords and pistols attacked the canal. Cars belonging to the canal company had been burnt and others broken to pieces. In April 1815 the contractors reported that except where the military were stationed, the country was in possession of ‘a Banditty styling themselves Carders, (an illegal rural organisation) who parade the country every night seizing arms and ammunition wherever they are to be had’. In this instance, the threats against workers who had come from other districts had been so terrifying that all the works had been left idle for a number of days and a call for extra military protection was made. The situation seems to have come under a certain degree of control by 1816, following convictions at Mullingar and Longford and subsequent executions, when the contractors reported that the troops at Tinnelick were no longer needed.

However, as is illustrated in the discussion on the economic overview of the canal, these attacks presented problems which the company continually had to address, especially during the famine-stricken years of the 1840s.

It had never been intended that the Directors General would continue to oversee the completed navigation and so during September 1818 the New Royal Canal Company was incorporated. On 30 September the completed canal was officially handed over to the company. The Act which had established this new canal body had stipulated that its activities were to be subject to a Board of Control. Thus the government ensured that maintained an influential role in the running of this enterprise, into which so much public money had been expended.

39 Quoted in Delany 1992, 68
41 PRO, Public Works, 1/51/16, 16 April 1815; quoted in Delany 1992, 64
42 58 Geo. III, c.35, 1818; HC 1817 (470), VIII 91.; quoted in Delany 1992, 70
43 58 Geo, c. 35, 1818; Board of Control records (1818-35) and letter books (1818-49) in PRO, Dublin; quoted in Delany 1992, 72
The canal was taken over by the Midland Great Western Railway Company in 1845, and by Coras Iompar Eireann (CIE) in 1944; these incidents are discussed in greater detail in the ‘Economic Overview of the Royal Canal’ within this report. On 1 July 1986 the Royal Canal system, together with the Grand Canal and Shannon Navigation, became the responsibility of the Department of Arts, Culture and the Gaeltacht and was under the aegis of “Duchas”, The Heritage Service.

Following the British-Irish Agreement in 1999 Waterways Ireland was established. Waterways Ireland is the North/South Implementation Body for the inland navigable waterway systems of Ireland and was established North and South by means of the North/South (Implementation Bodies) (Northern Ireland) Order 1999 [SI No 859 Northern Ireland] and the British Irish Agreement Act, 1999, respectively. The Statutory remit of Waterways Ireland is to manage, maintain, develop and restore the inland navigable waterways, principally for recreational purposes. Waterways Ireland is now under the remit of the Department of Community Rural and Gaeltacht Affairs in the south and the Department of Culture Arts and Leisure in the North.

HB03: Longford Branch

Construction of the Longford Branch of the Royal Canal commenced subsequent to the traders of the town writing to the New Royal Canal Company in 1822 when they highlighted the advantages of such an extension to the town. After considering the proposal, the company recognised the benefits to be reaped from the scheme and set about carrying out a survey of the route from Killashee to Longford town. This was undertaken by J.J. Byrne, surveyor and William Tarrent, company engineer.44 It was estimated that the work would cost just over £17,000 to complete and the board set about appealing for funding from the Exchequer Loan Commissioners. This body had been established in 1817 to help relieve distress and poverty in Ireland and the commissioners were empowered to finance schemes which would provide employment and improve the country’s economy. During September 1823 the company was informed by the loan commissioners that they would receive funding if the entire deeds of the proposed branch were lodged as collateral. Although this did not present a problem for most of the proprietors of the scheme, Bernard Mullins, who was one of the directors of the company at this time, rejected the offer. Consequently, the loan commissioners offered £5,430 towards the work if the tolls were mortgaged and thus offered as collateral. The company rejected this offer also and decided to attempt to fund the construction works from its own financial resources.

In May 1827 tenders were sought for the construction of the line. Three proposals were received; the first was for £9,400 from Denis Hayes and Patrick Kelly, the second was for £8,750 from John McMahon who had formed part of the successful contracting company Henry, Mullins and McMahon, and the third was from James Hagan for a considerably higher cost than the first two proposals.45 The contract was awarded to John McMahon who undertook to complete the works by 1 November 1828. As will be exemplified further on, the fact that McMahon won the contract was to serve as cause for major controversy in later years.

Work forged ahead and when the date proposed for completion arrived, the canal works were still unfinished. McMahon attributed this to ‘unforeseen difficulties which had occurred and are occurring daily’.46 One of the problems that was being encountered during this period related to a section of embankment through boggy terrain which required revised construction techniques comprising a wall of clay similar to that as had been constructed by William Jessop at the end of the eighteenth

44 Delany 1992, 90
45 Delany 1992, 90
46 Ibid.
century on the Grand Canal. Difficulties were also encountered with rock at Newtown and near Garvagh and the harbour at Longford town had to be made longer than originally planned. Resulting from these problems, it was not until November 1829 that McMahon reported there was water in the extension branch of the Royal Canal. The clay wall presented further problems however, and due to the shrinking of the wall the embankment subsided. This ended up costing him more than he had initially accounted for when presenting his estimated cost and in the end the Board agreed to pay half of the £2,500 which he claimed he had been forced to exceed the initial estimate.

Finally, on 18 January 1830 the branch was opened to traffic. The final cost for completion of the works had amounted to £12,651.47 Charles Tarrant described the scene of the opening of the line;

‘On the arrival of the packet which was attended by a vast concourse of people, amounting to as near as he could guess six or seven thousand – the Band of the first Regiment of Dragoons, that are stationed at Longford met the boat about a mile from the town and after her arrival in the town, Mr Williamson entertained them at the hotel. That next day on the boat returning she proceeded as far as the junction, but in consequence of the strong ice she was obliged to put back’.

In consequence of the threat which the local people of Killashee and Richmond Harbour felt that this new line posed to their trade, many malicious breaches were carried out to the new route. The perpetrators of these attacks feared that they would lose substantial business when the passage-boat terminus was relocated to Longford. Their attempt at intimidation was not successful however, and their fears were realised when Longford began to serve as the passenger terminus with connecting Bianconi coaches to Sligo.

Like all sections of the canal systems at the time, many raids were attempted to plunder the boats travelling on the Longford Line of their goods such as potatoes and oats. For example in June 1830 a trade boat had been stopped by upwards of five hundred men, women and children. The horse towing the boat had been unharnessed and the boat held up while the constables and boatmen were severely pelted with stones. The local magistrate of the area stated ‘from the dearness of provisions and the general distress felt by the poorer classes, boats conveying provisions run great risks of being plundered unless protected by armed force’. In response to these acts, the Royal Canal Company set about assigning troops along their routes as well as instructing the boats to travel in convey. A harsh punishment system was also in place for those found guilty of carrying out such offences. The culmination of these factors served to lessen the occurrence of these attacks but they persisted in presenting themselves as problems which continually needed to be addressed by the company.

The extension of the Royal Canal into Longford town had a great impact on the area as it contributed immensely to the trade at the town markets. There was a large trade in corn and potatoes to and from the town to Dublin and from Dublin a large variety of provisions as well as coal were transported to the region. Resulting from this prosperity a butter market and market house were erected at the harbour by the Earl of Longford, as well as a number of other structures built by those who succeeded in capitalising on this affluent market. The canal’s sphere of influence stretched into the hinterland surrounding Longford also which in turn encouraged agriculture in these areas and helped create various market centres.

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47 Royal Canal Minutes January 1830; Clarke 1992, 73
49 Royal Canal Company minutes, vol. 13, 25 June 1830; quoted in Delany 1992, 100
Like the other sections of the Royal Canal system, the Longford branch was closed to navigation in 1961 during which time it was under the care of Coras Iompair Eireann (CIE). Today the Longford branch is under the care of Waterways Ireland which is now under the remit of the Department of Community Rural and Gaeltacht Affairs in the south and the Department of Culture Arts and Leisure in the North. This body is currently implementing measures to restore the canal system to its former glory and offer it as an amenity for tourism and recreational sports.

**Economic overview of the Royal Canal**

The Royal Canal opened to traffic from Dublin to Kilcock in 1796 for the transport of both goods and passengers. Trade, especially in terms of transporting goods, was slow to establish itself. This was due to a combination of factors. During the early years the canal passed through only two villages, Maynooth and Kilcock, thus its potential was limited. Also, trade between these two centres and Dublin was well established, no doubt resulting from their close proximity to the city, and goods such as flour continued to be transported by road even after the initial arrival of the canal.\(^{50}\) In addition, there was a lack of proper harbours on the canal, and the system in place for traders concerning storage at harbours and transport facilities to and from the canal was poorly structured. While Kilcock did have a canal dock, Maynooth did not. In Dublin, work on the docks at the North Wall had been abandoned; the Broadstone Harbour was still not yet completed.

The passenger service enjoyed a higher degree of success at this time. In line with the practice adopted by the Royal Canal Company, transport services were extended as work on the canal progressed westwards. By 1799 the canal operated westwards as far as Maynooth. For the period 1796 to 1800 revenue on the completed portion of canal amounted to £1,261 from tolls and £2,708 from passenger boats. Given that payment of rents was over £1,000 per annum and that more than £8,000 was needed to pay interest on the loans and debentures alone, the company was clearly in a difficult financial position once again, having run out of money in 1794.

The company’s huge under-estimation concerning the cost of completion of the entire project was a fundamental factor which served to place the company in the difficult financial position it continually found itself. Original estimates concluded that £198,000 would be sufficient to meet the costs of the entire project. As it transpired, this was only adequate to oversee the construction of the first twenty miles of canal. As a result of the serious error, the company did not have enough money to establish or maintain itself from the onset which thus required it to seek enormous loans on which high interest had to be paid.

The grant received from the Directors General of Inland Navigation in 1801 helped to alleviate some of the company’s financial distress. However, conditions which would affect the economic running of the company were attached to this contribution. It was instructed to reduce its tolls to 2d per ton per mile instead of 3d per ton per mile, 1d per ton on a number of agricultural cargoes such as grains, potatoes, lime, sand, fuel or manure, and 3d per mile for passengers.\(^{51}\) The directors perceived their act as fulfilling their duty to encourage trade throughout the country. A further analysis of the situation may have illustrated however, that this in turn would curtail the company’s ability to operate profitably at a time when it was imperative for it to do so.

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\(^{50}\) *Commons Journal Ireland*. 1798 XVIII Pt. 11. App. CCCCCXXV; Clarke 1992, 88

\(^{51}\) Delany 1992, 48
From 1801 to 1806 revenue from passenger services more than doubled. For example in 1801 revenue amounted to £1,958 2s and by 1806 this figure stood at £4,372 10s 5d. It is likely that an increase in fares may have contributed to this rise. The company had by this point established a good system whereby coaches were provided to convey passengers to their destinations once they disembarked from the canal boats. When the canal reached Mullingar, a coach service was provided to Longford, Jamestown, Carrick-on-Shannon, Boyle and intermediate points. This policy was undoubtedly instrumental in the consolidation of their position in the transport industry at this time.

When the canal reached Mullingar, which was the largest town on the route, the amount of trade operating on the canal was greatly increased. Business continued to increase at a slow and steady pace as can be seen from the following table;

**Total Revenue, Revenue from Trade Boats and Approximate Passenger Revenue from 1807-1811**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Revenue A</th>
<th>Revenue from Trading Boats B</th>
<th>Approx. Passenger Revenue A-B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1807</td>
<td>£9,989 13s 2d</td>
<td>£3,406 6s 7d</td>
<td>£6,583 6s 7d</td>
</tr>
<tr>
<td>1808</td>
<td>£13,021 16s 5d</td>
<td>£4,202 3s 0d</td>
<td>£8,819 13s 4d</td>
</tr>
<tr>
<td>1809</td>
<td>£12,599 0s 5d</td>
<td>£4,638 0s 3d</td>
<td>£8,396 17s 4d</td>
</tr>
<tr>
<td>1810</td>
<td>£15,024 10s 6d</td>
<td>£5,025 7s 11d</td>
<td>£9,999 2s 6d</td>
</tr>
<tr>
<td>1811</td>
<td>£15,172 0s 0d</td>
<td>£6,230 3s 6d</td>
<td>£8,841 16s 5d</td>
</tr>
</tbody>
</table>

Even though trade was obviously improving the company’s financial position continued to deteriorate and the loans they were forced to seek relentlessly increased along with the interest payable on these amounts. The company simply was not generating enough revenue to oversee completion of the construction works as well as to meet maintenance costs for the sections that were already operational.

In 1813 parliamentary investigations uncovered extensive evidence of financial mismanagement and it was decided that the company should be dissolved and the whole concern handed over to the Directors General. This transaction was authorised by Act 53 Geo. III. c. 101. During the period the canal was under the control of the Directors General and, until the New Royal Canal Company was incorporated in 1818, the canals witnessed an overall decrease in business. The average toll receipts amounted to just under £6,000 per year during this period and the fares from the passenger boats to nearly £1,500; a substantial difference to the corresponding figures for the latter as illustrated in the above table. These figures offer a grim reflection of the effort exerted by the Directors in operating the canal economically and profitably. This lack of exertion is further highlighted when one considers that the canal had continued to be extended westwards and a number of additional passenger stops had been added.

Thus by the time the New Royal Canal Company was established and authorised to take over the canal in 1818, an ambitious feat lay ahead. This comprised using the canal to its full potential in order to maximise profits, while also meeting its debts and paying out dividends. In order to achieve this, they set about restructuring the company. Firstly, two of the boats which had been withdrawn in 1814

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52 Petition of Royal Canal Company. 1811. *British Parliamentary Papers* 1810-11 (235), VI, 41; Clarke 1992, 77
53 Petition of Royal Canal Company. 1811. *British Parliamentary Papers* 1810-11 (235), VI, 41; Clarke 1992, 78
56 Delany 1992, 60
were reinstated and a new night service was introduced between Dublin and Killashee, Co. Longford. Secondly, they set about re-negotiating the contract price they paid to private individuals to tow the boats from £50 per annum per mile to £46 13s 4d per annum per mile in 1819. Thirdly, they engaged in extensive advertising regarding the services provided by the company and lastly, they re-established connecting coaches from various towns in counties Westmeath, Sligo, Roscommon and Leitrim. The cumulative effect of these factors gave rise to success and by the end of the first six months the toll receipts exceeded a full year’s worth under the Directors General and the passenger receipts were almost four times higher. The fact that the canal had been completed as far as Tarmonbarry in 1817, where it formed a link with the River Shannon, needs to be taken into account also, as this naturally helped trade to increase on the navigation. The total receipts for the first six months amounted to £10,698 0s 10d. This figure allowed for a nice profit when the expenditure amount of £4,537 5s 3d was subtracted. A dividend of 6s 8d per cent was subsequently declared on half the profit and the remainder was invested in the reserve fund which the company was now obliged to contribute to.

With the onset of the 1820s this new prosperity of the company was checked. Although these were reasonably successful years for the company, a number of difficulties presented themselves. The country was in the grip of an economic depression and this had a two-fold impact on business on the canal. Firstly, this affected the amount of trade being carried on the canal and secondly, in response to the poverty which had engulfed the country many breaches and attacks on the canal and canal boats were carried out. The latter had a significant impact on business as traders were discouraged from transporting their goods on a service which consequently had become dangerous and unreliable. The perpetrators hoped that by carrying out these breaches they would stop cargoes of much-needed food leaving local regions for Dublin, whilst also creating employment opportunities for locals as the banks they breached would require reconstruction. Although all regions along the canal route were susceptible to attack, the Long Level in the vicinity of Moyvalley was particularly vulnerable. Addressing the situation, the directors announced that to encourage the planting of potatoes, cargoes of not less than 20 tons of ‘pink eyes’ seed potatoes could be boated free from Dublin to any place on the canal west of Coolnahay between 1 February and 1 May 1819.57

Furthermore, they tried to implement a system of bringing men from Dublin and Mullingar to work on the reconstruction of the breaches in the hope that this would deter locals from causing breaches in an attempt to gain employment. Although the company continued to implement various measures including stationing troops along the route, the attacks prevailed. The situation was not helped when a campaign for higher wages was initiated and attacks were launched on trade boats and crew members who failed to combine for higher wages. In a period of six weeks in the spring of 1821, five boats were sunk or burned, and there was a reported reluctance to transport goods by canal.58 A memorial was sent by the traders to the board in January 1822 which illustrates the power being exercised by these marauding gangs;

‘...as soon as they accomplished the advance in wages the combiners have made other laws which they are enforcing to the destruction of the company and of the boat owners. The trade has and is declining and will be utterly destroyed if protection is not immediately afforded’.59

These attacks continued at various frequencies throughout the 1820s, thus impacting on trade, but by 1828 a significant reduction of these had been achieved. A combination of stepped up security

57 Ibid. 75
58 Ibid. 76
59 Ibid. 80
measures comprising the stationing of guards along much of the route, instructing the boats to move in convoy and to stop over at designated places, as well as the offer of financial rewards for informers led to this overall reduction. Nonetheless, although the conflicts of the 1820s were played out with a more politically orientated approach in the 1830s due to the establishment of trade unions during this time, attacks did continue albeit at a much more reduced rate; at least until the onset of the 1840s when famine engulfed the country, thus laying the platform for raids to be carried out at an alarming rate once again.

Competition from road operators had begun to present itself during the 1820s too and, coupled with the raids as outlined above, passengers began to be drawn from the canals. Consequently, the day boat service was reduced in 1824 to three days a week operating between Dublin and Mullingar. This decision saw the transfer of some of the business from the day boat to the night boat which still ran seven nights a week and travelled beyond Mullingar. The canal was also threatened by improved schedules in coastal shipping resulting from the introduction of steamships. These began to attract trade away from the canal to the Port of Sligo on the west coast and to Dundalk and Drogheda on the east coast.

Although the 1820s presented challenging times for the new company, the board succeeded in developing business on the canal. The revenue from tolls had increased steadily from about £9,000 in the early 1820s to over £19,000 in 1828. This enabled the company to declare a dividend of a steady £1 per cent by the end of the 1820s and to increase its reserve fund to over £37,000. Even though coal trade had been put forward as the original reason for building the canal, trade in this commodity never prospered to the extent it had been hoped. Although large quantities of coal were available in the Arigna district near Lough Allen, difficulties were experienced in transporting the coal on the Shannon navigation and more importantly, large quantities of better quality coal were imported from Britain. The other principal trade at this time was in horse-dung and general merchandise from Dublin to local areas, while trade to Dublin comprised potatoes, grain, meal, flour, butter, eggs and building materials. By this period the canal was carrying some 40,000 passengers each year. Although this was a healthy figure, it was significantly lower than that as was carried on the Grand Canal which amounted to an average of 100,000 passengers each year. As they entered the 1830s however, both canal companies were feeling the pressure of increased competition from road operators who were benefiting from improved road conditions and in turn posed as a real threat to navigation services.

The provision of connecting coach services continued to be an integral part of the passenger service offered by the Royal Canal Company and served to allow the canal to contend, to a certain degree, with independent road operators. Bianconi was the most notable coach operator with whom the Royal Canal pursued business arrangements. During the 1830s he operated two horse cars which transported canal passengers from Athlone, Co. Westmeath to Toombridge and from Roscommon, Castlerea and Sligo to Longford town.60

The competition was such between the canal and road operators however, that the Royal Canal Company was forced to reduce its charges a number of times to make it more competitive. When the innovative fly boats, initially referred to as Scotch boats, were first launched on the Royal Canal waters in 1833 it was hoped that a faster, more efficient service would secure the survival as well as promote the potential of the canal. While the introduction of these boats did help to increase the number of passengers travelling on the canal, it did not help to generate a greater profit for the company. As the boats were now travelling at a greater speed, damage was caused to the banks from

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60 Report on the half yearly account 30 September 1825 in Minute book Royal Canal Company 2 July 1832; Clarke 1992, 84
the over-wash of the water and the galloping horses. Once the company met the cost of these repairs the extra revenue generated from the use of the fly-boats was greatly reduced.

The 1840s brought with them difficult times economically for Ireland, and in turn for the canal company, as a general depression swept through the country; a situation which was further exacerbated by the extensive failure of the potato crop in the late 1830s and early 1840s. As mentioned above, malicious breaches and attacks were frequently carried out during this time and the employment of troops was necessary once again along various sections of the route. Opposition from coaching establishments continued to present itself and posed a considerable threat to the canal passenger service. As the Act allowing the canal companies to be traders on their own waters was not passed until 1845, the canal company was compromised in this regard also and therefore could not attempt to exploit this service to generate revenue. In spite of these difficulties, the canal company was still managing to generate a reasonable profit. For example in 1840 total revenue amounted to £24,113 and a dividend of 0.75% was declared. When viewed against preceding figures however, it is possible to observe that business had not in fact increased since before 1820, when total revenue had amounted to £25,935 for that particular year; thus highlighting the plight of the company.

Consequently, when the threat of the railways began to manifest itself at this time, its potential to ruin the canal industry began to be seriously considered by the directors of the Royal Canal. They began to examine the possibility of selling out.

A dissident group made up of some of the board of the Dublin and Cashel Railway Company approached the canal company when they heard that they may be interested in selling the entire line. Lengthy negotiations ensued between the two bodies and finally on 21 July 1845 Westminster agreed to the proposal before it and royal assent was given to the incorporation of the Midland Great Western Railway Company (MGWR), which the negotiating dissident group now called itself, and to its purchase of the Royal Canal.61 The canal was bought for the total sum of £318,860.62 It was a wise decision on behalf of the directors to sell out as the company would not have been able to sustain itself once the railway networks were established throughout the country. Such a feat was barely obtainable by the Grand Canal Company as it transpired, and they had been in a much stronger position than their rivals, the Royal Canal Company.

There were a number of reasons why the Railway Company sought to purchase the canal line. By doing so, the MGWR was provided with an uninterrupted linear route from the west of Dublin as far as Mullingar and avoided delays that would otherwise present themselves when trying to purchase land. Initially, it had been proposed that the railway line be constructed in the bed of the canal. This was later decided against by the Board of Control and construction of the railway line commenced parallel to the canal. Although it had not been a prime motivator, the canal system offered a convenient transport system for the delivery of necessary building equipment and materials during the construction phase.

Thus the Royal Canal entered a new operational era. When the Act of Parliament had authorised the takeover in 1845, us the stage was set for an inevitable battle whereby the MGWR attempted to assert its dominance over the canal in a bid to transfer trade to the railways.

Once the MGWR began commencing its service of transporting both goods and passengers along its completed sections of railway, the canal passenger service was unable to compete and so the railway

61 8 & 9 Vic. c. 119, 1845; Delany 1992, 137
company began phasing out this service. In 1847 fly-boats were operating between Dublin and Mullingar, while only the night boat was operating between Dublin and Longford.\(^63\) In 1848, when the railway reached Mullingar, the canal passenger service was completely discontinued. In terms of tonnage carried on the canal, figures remained high. For instance in 1847, 112,181 tons were transported on the line. However, this figure is reflective of the navigation having been used to convey building materials during the construction phase of the railway and this would have accounted for a large portion of the cargo. Until the 1860s, revenue generated from tolls remained marginally profitable as is exemplified by the following table:\(^64\)

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue from tolls</th>
<th>Revenue from passengers</th>
<th>Total Revenue</th>
<th>Total Expenditure</th>
<th>Tonnage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1845</td>
<td>13,738</td>
<td>8,520</td>
<td>26,946</td>
<td>10,954</td>
<td>88,142</td>
</tr>
<tr>
<td>1848</td>
<td>13,579</td>
<td>3,446</td>
<td>20,637</td>
<td>9,392</td>
<td>109,802</td>
</tr>
<tr>
<td>1850</td>
<td>12,455*</td>
<td>--</td>
<td>14,935</td>
<td>3,894</td>
<td>93,719</td>
</tr>
<tr>
<td>1855</td>
<td>13,782*</td>
<td>--</td>
<td>6,144</td>
<td>3,679</td>
<td>--</td>
</tr>
<tr>
<td>1860</td>
<td>10,618*</td>
<td>--</td>
<td>13,195</td>
<td>5,038</td>
<td>c.96,000</td>
</tr>
<tr>
<td>1865</td>
<td>8,262</td>
<td>--</td>
<td>11,062</td>
<td>5,042</td>
<td>--</td>
</tr>
</tbody>
</table>

* tolls and water rates

It is possible to observe nonetheless, that the canal had experienced a significant loss in business; an indication of the slack efforts exerted by the directors of the MGWR with regard to the navigation. In 1867 the MGWR applied to have the canal tolls increased in an attempt to further aid their cause in transferring trade to the railway. Intervention by the Board of Control resulted in the application being refused by the Lord Lieutenant, however. The failure to have these measures implemented provided the catalyst for the railway company to establish themselves as traders on the canal in 1870.\(^65\) The company provided this service until 1886. Although it failed to generate much of a profit for the company, the MGWR succeeded in taking business from the other traders on the canal which in effect could then be transferred to the railway. Once the company ceased providing this service, it had even less interest in maintaining the navigation and as a result it fell into great disrepair. From this point onwards the canal went into rapid decline.

Between 1883 and 1892 the number of boats operating in the canal fell from forty-five to thirty-one and the tonnage declined considerably. In 1888 total revenue amounted to a mere £6,495. Numerous complaints were lodged to the Board of Trade regarding the situation; the Board of Control had ceased to operate effectively after 1885 and consequently these matters were directed to the Board of Trade. They subsequently held an enquiry into the matter. Major Marindin undertook a survey on their behalf in 1895. His report compelled the government to instruct the railway company to begin a maintenance programme on the canal. This was undertaken, but only half-heartedly and progress was very slow.

The affairs of the navigation continued to deteriorate and in 1905 there was only twenty-two boats operating on the canal, the tolls collected for the year amounted to £2,304. In 1922 one of the first actions of Dail Eireann was to set up a Commission on Canals and Inland Waterways. The Commission was informed that the number of boats on the canal had been reduced to thirteen and the revenue from the tolls was less than £2,000. The Commission endorsed the findings of a previous

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\(^63\) Thom’s Directory 1847; Clarke 1992, 87
\(^64\) Figures taken from Delany 1992, 204
enquiry, the Shuttleworth Commission which had been carried out in 1895, and recommended the canal be removed from the care of the railway company. This was failed to be implemented by the government.

In 1925, twenty-six separate railway companies operating in the Irish Republic were amalgamated to form the Great Southern Railway (GSR). This amalgamation was instigated by an almost three-fold rise in labour costs compared to pre-World War I rates and ever-increasing competition from motor transport. The Royal Canal thus became part of the GSR. In 1944 GSR and the Dublin United Transport Company amalgamated to form Coras Iompair Éireann, the Royal Canal had now become part of an even larger transport system. Alas the canal could not be saved. When Tom Rolt made a journey on the navigation in 1946, he reported only two boats using the canal.66

In 1958, the Transport Act introduced a provision that navigations which had no traffic on them for a period of over three years could be closed. Though this did not have an immediate implication for the Royal Canal, it was officially closed to navigation on 6 April 1961.67 The end of this once awe-inspiring project had finally arrived. Though it had fought hard to survive in an environment dominated by railways and motor cars, the canal was simply not suited to this new and fast paced world.

For over one hundred and fifty years, the Royal Canal was operated by various boards and companies, including the Royal Canal Company which owned the canal from 1789 to 1813. At this time concern for the canal was handed over to the Directors General of Inland Navigation. By 1818, a change of ownership resulted in the New Royal Canal Company taking control under the supervision of a government Board of Control. In 1845 the entire canal was purchased by the Midland Great Western Railway Company which transferred ownership to The Great Southern Railway in 1938. By 1944, ownership of the canal was again changed as CIE took charge of the waterway. On the 1st July 1986 the canal became the responsibility of the Office of Public Works. In 1996 these functions were transferred to the Department of Arts, Culture & the Gaeltacht under the Heritage (Transfer of Departmental Administration and Ministerial Functions) Order 1999 (SI No 62 1996) and Heritage (Transfer of Functions of Commissioners of Public Works in Ireland) Order, 1996 (SI No. 332 of 1996) and became the responsibility of “Dúchas”, The Heritage Service.

In 1999 the responsibility for the Shannon, Grand Canal, Royal Canal, Barrow Navigation and Shannon-Erne Waterway (South) was transferred to the Minister for Arts, Culture, Gaeltacht and the Islands. Following the British Irish Agreement in 1999, Waterways Ireland was established. Waterways Ireland is the North/South Implementation Body for the inland navigable waterway systems of Ireland and was established North and South by means of the North/South (Implementation Bodies) (Northern Ireland) Order 1999 [SI No 859 Northern Ireland] and the British Irish Agreement Act, 1999, respectively. On the 2nd December 1999 the Shannon Erne Waterway in the North was transferred from the Rivers Agency in the Department of Agriculture Northern Ireland (Now the Department of Agriculture and Rural Development) to the newly established Waterways Ireland.

On the 1st April 2000, the responsibility of the remaining navigations, north and south, including the Grand Canal, Royal Canal and Barrow Navigation, the Erne and the Lower Bann officially became the responsibility of Waterways Ireland whose statutory remit is to manage, maintain, develop and restore the inland navigable waterways, principally for recreational purposes. Waterways Ireland is now under the remit of the Department of Community Rural and Gaeltacht Affairs in the South and the Department of Culture Arts and Leisure in the North.

67 The Transport Act, 1960
Today the associated heritage of the canal, as well as the potential it offers for tourism has began to be acknowledged. Consequently, restoration works have been taking place in parts, under the supervision of Waterways Ireland, to re-establish this extensive canal system to its former glory and allow an interface between this fascinating period of Irish history and today’s modern world.

3. **ASSESSMENT METHODOLOGY**

The assessment comprised a baseline survey (documentary research and field survey) followed by an assessment of the significance of identified areas, groups of features and individual structures and artefacts associated with the canal/navigation.

The focus of the assessment concentrated on sites of architectural, engineering and industrial heritage interest pre-dating the 2nd Edition Ordnance Survey and those sites of more recent date that have a direct relationship with the canal.

**Survey Area and Sub-Divisions**

All identified sites have been allocated a unique number with a WIIAH prefix (Waterways Ireland Inventory of Architectural Heritage) and are included in Appendix 3, Plates and Figures 3-9.

The assessment has been divided into 6 areas:

**Area 1** (Fig. 3, 3a, 3b, 3c) - Spencer Dock to Castelknock
**Area 2** (4, 4a, 4b) - Castelknock to Kilcock
**Area 3** (5, 5a, 6, 6a, 6b) - Kilcock to Mullingar
**Area 4** (7, 7a, 7b, 8, 8a, 8b) - Mullingar to Cloonsheerin
**Area 5** (9, 9a) - Cloonsheerin to Cloodara
**Area 6** (9) - Cloonsheerin to Longford Town

Within each area above, all sites of architectural, engineering and industrial heritage interest have been assessed within the navigation corridor as defined by map detail, encompassing a zone extending 50m either side of a discernable centre-line, irrespective of property ownership. In order to ensure that any features associated with the canal out-with the 50m buffer zone were included within the assessment; the initial desk based assessment introduced a temporary 100m buffer to ensure exclusivity. This was particularly the case in built-up areas and those that contained concentrations of structures and features of interest. Once peripheral sites had been identified, these were added to those within the canal corridor and the 50m buffer zone.

**Desk-Based Assessment**

A complete and exhaustive desktop study was undertaken to include a summary of key issues relating to relevant architectural heritage features in Ireland in a waterways/canals context which are relevant to this study. The study included a comprehensive historical, cartographic and archaeological search of all published and publicly available material. This included as a minimum (where relevant):

- Record of Monuments and Places (RMP)
- Sites and Monuments Record (SMR)
A full list of sources consulted is listed in the Reference.

Field Survey

A walkover survey of the assessment area was undertaken by G. Laban, A. Golden, and D. Yates of Headland Archaeology Ltd between the 28/11/2007 & 11/01/2008. The walkover visited those sites identified during the desk-based assessment (182 sites) and those unrecorded features not previously identified (196 sites). The walkover survey was assisted by jeep where appropriate. A guide with local knowledge was appointed by Waterways Ireland to assist and / or advise the survey team.

4. SIGNIFICANCE RATING

For the purposes of this assessment, a significance rating is given to all the sites within the assessment. This significance is measured in terms of the contribution of a site or group of sites to the architectural, engineering and industrial heritage of the canal, canal corridor and immediate hinterland. These criteria are summarised in Table 4.1 below and presented for all sites in Appendix 3.

Table 4.1: Criteria for assessing the significance of sites of architectural, engineering or industrial heritage interest.

<table>
<thead>
<tr>
<th>SIGNIFICANCE</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Any sites that make a large contribution to the architectural, engineering or industrial heritage of the canal. This includes sites of a date that are contemporary with its construction, operation, administration and / or applications in trade and transport, but also sites that are not related to the canal but still of architectural interest.</td>
</tr>
<tr>
<td>Medium</td>
<td>Any sites that make a moderate contribution to the architectural, engineering or industrial heritage of the canal by being contemporary with its construction, operation, administration and / or applications in trade and transport but having been altered to an extent in modern times that its heritage value is reduced.</td>
</tr>
<tr>
<td>Low</td>
<td>Any sites that make a low contribution to the</td>
</tr>
</tbody>
</table>
architectural, engineering or industrial heritage of the canal by appearing to be of relatively modern construction with the possibility of an earlier site or feature having being incorporated into its layout or fabric.

Negligible

Any sites that make very little or no contribution to the architectural, engineering or industrial heritage of the canal by being of modern construction.

5. CONDITION RATING

For the purposes of this assessment, a condition rating is given to all the sites within the assessment. This rating is not intended to be an authoritative or technical comment on the structural condition of a structure / feature. It is an observation made in the field of the overall state of repair of the structure / feature at the time of inspection. The condition associated with each condition rating is given in Table 5.1 below and presented for all sites in Appendix 3.

Table 5.1: Condition ratings for sites of architectural, engineering or industrial heritage interest.

<table>
<thead>
<tr>
<th>HERITAGE CONDITION RATING</th>
<th>HERITAGE CONDITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Ruin or Absent</td>
</tr>
<tr>
<td>1</td>
<td>Derelict</td>
</tr>
<tr>
<td>2</td>
<td>Poor</td>
</tr>
<tr>
<td>3</td>
<td>Fair</td>
</tr>
<tr>
<td>4</td>
<td>Good</td>
</tr>
<tr>
<td>5</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

6. ACTION RATING

For the purposes of this assessment, an action rating is given to all the sites within the assessment. This rating is not intended to be an authoritative or technical comment on the need for structural repair or other maintenance. It is an observation made in the field based on the overall state of repair of the structure / feature at the time of inspection (see condition rating above), intended to indicate either the need or potential for repair or maintenance. Details of the nature of the condition and subsequent action can be gleaned from the description. The action associated with each action rating is given in Table 6.1 below and presented for all sites in Appendix 3.

Table 6.1: Action ratings for sites of architectural, engineering or industrial heritage interest.

<table>
<thead>
<tr>
<th>ACTION RATING</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Needs immediate intervention</td>
</tr>
<tr>
<td>2</td>
<td>Significant repairs</td>
</tr>
<tr>
<td>3</td>
<td>Minor repairs</td>
</tr>
<tr>
<td>4</td>
<td>Minimal aesthetic work</td>
</tr>
<tr>
<td>5</td>
<td>Stable</td>
</tr>
</tbody>
</table>
7. **PLANNING POLICY CONTEXT**

Archaeological conservation operates under the National Monuments Acts, 1930 – 1994 which provides formal and legal protection of monuments and places of particular heritage interest. This includes the Register of Sites and Places / Sites and Monuments Record comprising some one hundred and twenty thousand protected archaeological sites throughout Ireland affording them a level of statutory protection. The Department of the Environment, Heritage and Local Government manages over eight hundred major archaeological monuments in state ownership or state guardianship under the National Monument Acts. Many important or threatened archaeological sites which are not in the ownership of the state are also protected under legislation from being damaged or interfered with.

*The Sites & Monuments Record (SMR) consists of Ordnance Survey 6-inch maps with annotated known and suspected archaeological sites that generally pre-date AD 1700. The SMR was collated from documentary sources; various editions of Ordnance Survey maps, aerial photography, historical and archaeological literature, seventeenth century Down Survey and Civil Survey maps, eighteenth century estate maps and folklore/oral traditions. The National Monuments Act (1994) made provision for a Record of Monuments & Places (RMP). The RMP is a revised set of SMR maps, on which newly-discovered sites have been added and locations which proved not to be of antiquity have been de-listed by the National Monuments Service.*

Of the 378 sites and features recorded in this assessment none were listed on the Record of Monuments and Places.

It is important to note however that many towns in Ireland are assigned an RMP number as the town itself is of historical value. The extent of the zone of protection often extends to the limits of the original settlement: Mullingar Town (WM019-089)

The National Inventory of Architectural Heritage (NIAH) is a state initiative under the administration of the Department of the Environment, Heritage and Local Government. The aim of the NIAH is to complete the preliminary surveys of the post-1700 built heritage of all counties in the Republic of Ireland in order to provide sufficient information to allow the Minister to make informed recommendations to local authorities for inclusion of sites/structures/groups of structures in the Record of Protected Structures as per Section 53 of the Local Government (Planning and Developments) Act 2000.

A Record of Protected Structures list is compiled and maintained by each local authority and available online or on request. For the purposes of this assessment lists were obtained for each county. Due to the varying nature of the information provided by each county authority, that was in turn used for cross-referencing with the sites featured in this assessment, the results are not entirely conclusive or inclusive. The following is a list of identified protected structures along the Royal Canal.

**Table 7.1: List of known protected structures on the Royal Canal**

<table>
<thead>
<tr>
<th>WIAH</th>
<th>NIAH_No.</th>
<th>Bridge_ID</th>
<th>Name</th>
<th>Reference</th>
<th>Reference_No.</th>
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<tr>
<td>1222</td>
<td></td>
<td>280</td>
<td>Clarke Bridge</td>
<td>Dublin City Development Plan 2005-2011</td>
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<tr>
<td>1230</td>
<td></td>
<td>284</td>
<td>Binn's Bridge, Dumcondra</td>
<td>Dublin City Development Plan 2005-2011</td>
<td>Ref. 905</td>
</tr>
<tr>
<td>Code</td>
<td>No.</td>
<td>Type</td>
<td>Location</td>
<td>Plan/Year</td>
<td>Reference</td>
</tr>
<tr>
<td>-------</td>
<td>------</td>
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<td>-------------------</td>
<td>----------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>1252</td>
<td>288</td>
<td>Broombridge Road</td>
<td>Dublin City</td>
<td>Dublin City Development Plan</td>
<td>Ref.906</td>
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<td>Development Plan</td>
<td>2005-2011</td>
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<tr>
<td>1222</td>
<td>280</td>
<td>Clarke’s Bridge,</td>
<td>Dublin City</td>
<td>Dublin City Development Plan</td>
<td>Ref.907</td>
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<tr>
<td></td>
<td></td>
<td>Ballybough</td>
<td>Development Plan</td>
<td>2005-2011</td>
<td>288</td>
</tr>
<tr>
<td>1218</td>
<td>502</td>
<td>Newcomen Bridge,</td>
<td>Dublin City</td>
<td>Dublin City Development Plan</td>
<td>Ref.908</td>
</tr>
<tr>
<td></td>
<td></td>
<td>North Strand</td>
<td>Development Plan</td>
<td>2005-2011</td>
<td>502</td>
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<tr>
<td>1254</td>
<td></td>
<td>H. S. Reilly</td>
<td>Dublin City</td>
<td>Dublin City Development Plan</td>
<td>Ref.909</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bridge, Ratoath</td>
<td>Development Plan</td>
<td>2005-2011</td>
<td>502</td>
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<tr>
<td>1253</td>
<td></td>
<td>Footbridge: see</td>
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<td>Dublin City Development Plan</td>
<td>Ref.990</td>
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<tr>
<td></td>
<td></td>
<td>Bridges: Rivers</td>
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<td>1353</td>
<td>489</td>
<td>Aqueduct</td>
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<td>1331</td>
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<td></td>
<td></td>
<td></td>
<td>Development Plan</td>
<td>2007 - 2013</td>
<td>489</td>
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<tr>
<td>1345</td>
<td>490</td>
<td>Enfield Bridge</td>
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<td>MH048-200</td>
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<tr>
<td></td>
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<td></td>
<td>Development Plan</td>
<td>2007 - 2013</td>
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</tr>
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<td>1357</td>
<td>14404702</td>
<td>Canalworkers</td>
<td>Meath County</td>
<td>Meath County Development Plan</td>
<td>MH047-204</td>
</tr>
<tr>
<td></td>
<td></td>
<td>House</td>
<td>Development Plan</td>
<td>2007 - 2013</td>
<td>14404702</td>
</tr>
<tr>
<td>1359</td>
<td>484</td>
<td>Longwood Road</td>
<td>Meath County</td>
<td>Meath County Development Plan</td>
<td>MH047-203</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Aqueduct and</td>
<td>Development Plan</td>
<td>2007 - 2013</td>
<td>14404703</td>
</tr>
<tr>
<td>1360</td>
<td>483</td>
<td>Boyne Aquaduct</td>
<td>Meath County</td>
<td>Meath County Development Plan</td>
<td>MH047-201</td>
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<td></td>
<td></td>
<td>Development Plan</td>
<td>2007 - 2013</td>
<td>14404704</td>
</tr>
</tbody>
</table>

6. **BASELINE DESCRIPTION**

The study has identified a total of 378 recorded and unrecorded sites/features within the area of assessment. Of these 196 had not been identified during the desk based study. The 182 sites identified
during the desk based assessment became apparent through a variety of means such as the NIAH, The Waterways Ireland Bridge Survey, RMPs, cartographic sources, and literary sources.

**Area 1 – Spencer Dock - Castleknock (Fig. 3, 3a, 3b, 3c)**

Spencer Dock marks the beginning of the Royal Canal on the north bank of the River Liffey in East Dublin. From here the canal initially runs in a northerly direction, after which it changes to run westwards, passing through the North Strand, Croke Park, Phibsbour, Cabra and Finglas regions of Dublin before entering Castleknock from the north-east. At the time of the study, Spencer Dock was undergoing major redevelopment and was practically inaccessible. This initial stretch of the canal at Spencer Dock (WIIAH 1212) has an entrance (WIIAH 1207), sea gates (WIIAH 1208), bridge (WIIAH 1206), drawbridge (WIIAH 1211), harbour (WIIAH 1213) and the remains of a coal yard (WIIAH 1209). Although in this area, the towpath is no longer retained, east of Broadstone Harbour (WIIAH 1213) a track is cut into the east bank. To the west of this area towards Clark Bridge, the towpath exists as a modern walkway on the south bank and as grassy embankment to the north.

West from Spencer Dock to Westmoreland, the canal contains many sites relating to the infrastructure of the navigation, while also passing features relating to the railway and modern structures built close to the canal banks. There are five masonry bridges (WIIAH 1218, 1222, 1228, 1230, 1238), four locks (WIIAH 1219, 1229, 1231, 1233), one lock-keeper's cottage (WIIAH 1220), quay sides (WIIAH 1221, 1225, 1235) and a feeder (WIIAH 1232). These features are all directly associated with the canal while other features including railway bridges (WIIAH 1214, 1215, 1216, 1217), pedestrian bridges (WIIAH 1226, 1227) and an enclosing wall (WIIAH 1234) may not be directly associated with the original canal construction but now play an important social role. Also within this area, there are a number of possible canal related structures that have been modernised or altered since the canal ceased as a commercial navigation. These include store houses, sheds (WIIAH 1223, 1224) and commercial premises (WIIAH 1236, 1237).

The towpath in this area exists mainly as a grass verge interspersed with quay sides and concrete paving material. Both canal banks have modern concrete walkways, particularly around Locks 2 and 3 (WIIAH 1229, 1231) with areas of tree lined canal banks and cut block walling enclosing the canal from the railway line which generally runs parallel to the canal. This pattern of grassy verges and occasional quay sides continues west to Lock 9 (WIIAH 1256).

From Westmoreland Bridge (WIIAH 1238), the canal continues west towards Castleknock encountering many features directly associated with the navigation including bridges (WIIAH 1249, 1252, 1254, 1260, 1267, 1268, 1269), footbridges (WIIAH 1253, 1259), locks (WIIAH 1239, 1242, 1250, 1255, 1256, 1261, 1264), lock-keeper's cottages (WIIAH 1244, 1262, 1265), aqueducts (WIIAH 1247, 1270), overflows (WIIAH 1251, 1266, 1271), mills (WIIAH 1240, 1243), a quay side (WIIAH 1257), milestone (WIIAH 1245), feeder (WIIAH 1258), overpass (WIIAH 1272), factory (WIIAH 1248) and canal cottage (WIIAH 1246).

Other sites along this stretch of the canal relate to structures not directly associated with the canal but were included in the study due to their socio-historical importance or their close proximity to the canal, such as a railway bridge (WIIAH 1241) and railway cottage (WIIAH 1263). Many sites associated with the canal have been modernised, particularly the cottages and original industrial buildings such as mills and factories. The locks and bridges have also been altered and/or improved to facilitate nearby modern structures or access tracks. Throughout this area, the towpath runs east-west as a modern footpath on the north bank and as an overgrown embankment at the south, with the train line generally continuing to run parallel to the canal.
As the canal approaches Castleknock from the Western Overpass (WIIAH 1272), it passes Lock 12 (WIIAH 1274) with its bridge (WIIAH 1273) and tailrace (WIIAH 1275), Castleknock Marina (WIIAH 1276) and the site of a former mill (WIIAH 1277), before passing under Granard Bridge (WIIAH 1278). In this area, the south bank towpath is obstructed and overgrown. Within Castleknock, it is the intention of local residents to develop and improve the marina and lock. The stretch of the canal from Spencer Dock to this point is a largely built up area with the canal passing through Dublin city and its suburbs, which would indicate major changes such as industrial and residential developments close to the canal banks. This kind of modernisation is not seen again along the canal, with the exception of smaller developments within the towns and villages along the route.

**Area 2 – Castleknock – Kilcock (Fig. 4, 4a, 4b)**

Leaving Castleknock, the navigation continues west through Clonsilla, before turning to run south-west towards Leixlip, skirting the north and west of the village, before exiting north-west on route to Maynooth. The banks along this stretch of the canal consist of largely inaccessible grassy embankments, which in some instances have become completely overgrown. Most of the sites of interest along this part of the navigation have a direct association with the canal’s operation and history, namely bridges (WIIAH 1279, 1280, 1282, 1283, 1286, 1291, 1296, 1299, 1305), footbridges (WIIAH 1288), aqueducts (WIIAH 1292, 1295, 1298, 1303), an outflow (WIIAH 1293), culvert (WIIAH 1281), drainage ditch (WIIAH 1300) and siphon (WIIAH 1301).

As with previous stretches, some features have been included due to their proximity to canal or their socio-historical importance. Such features include a railway station (WIIAH 1287), railway keeper’s cottages (WIIAH 1284, 1294), a railway bridge (WIIAH 1290) and Clonsilla National School (WIIAH 1285). Other less significant features, but canal associated sites nonetheless include a pipe at an abandoned railroad (WIIAH 1289), a modern Royal Canal Amenity Group building (WIIAH 1297) and another ruinous structure on the west bank, close to Leixlip. The canal itself is used as an amenity walkway in this area with ongoing construction work altering the previous canal banks. Close to Cope Bridge (WIIAH 1299), the south canal bank has been altered to accommodate a railway platform, extending west for c. 200m before continuing as a grassy embankment. As the canal nears Ryewater Aqueduct (WIIAH 1301), the north bank carries the towpath, while the south bank has been altered to prevent access to the parallel railway tracks.

Leaving Leixlip heading westwards, the canal passes through open landscape before entering Maynooth village. Canal associated features encountered on route include bridges (WIIAH 1304, 1306, 1308) and a lock (WIIAH 1307), as well as the walling of an estate (WIIAH 1309) and a north bank drainage ditch (WIIAH 1310). Within Maynooth village the canal passes a modern bridge (WIIAH 1311), footbridge (WIIAH 1314) and two masonry bridges (WIIAH 1312, 1313) located close to Maynooth Harbour basin and dock (WIIAH 1315). The entire area is well developed as an amenity area making use of the canal for both employment and recreational purposes.

The canal banks in the Maynooth area have been modernised as tarmac footpaths west up to and beyond Lock 14 (WIIAH 1319), after which the originally wider canal was filled with silt from the dredging of Kilcock Harbour (WIIAH1328), which in turn resulted in a wider north bank. However, west to Kilcock the towpath is once again evident on the south bank of the navigation.

Along the stretch between Maynooth and Kilcock, the canal continues north-west entering the village from the south-east encountering bridges (WIIAH 1317, 1321, 1324), two locks (WIIAH 1319, 1325), a pedestrian tunnel (WIIAH 1318) and possible lock-keeper’s cottage (WIIAH 1320). These are definite canal associated features of interest, while other features on this stretch may not be as significant but
still linked to the canal. These features include a drainage ditch (WIIAH 1322), access path to the towpath (WIIAH 1323) and a refurbished boat house (WIIAH 1326).

The canal enters the east of Kilcock passing through a significant number of canal associated features highlighting the importance of the canal infrastructure to the growth and development of the village. It is evident that the canal is regularly used as a sports and recreational amenity for the locality. Canal associated features within the village include the harbour (WIIAH 1328), a bridge (WIIAH 1327), lock (WIIAH 1329), lock-keeper’s cottage (WIIAH 1330), public house (WIIAH 1331) and a mid-nineteenth century cottage (WIIAH 1332). The western exit from the village allows the canal to pass under Allen/Spin Bridge (WIIAH 1333) before navigating north-west towards Enfield. The area around Kilcock has both a north bank towpath and a south bank trackway.

Area 3 – Kilcock – Mullingar (Fig. 5, 5a, 6, 6a, 6b)

Moving west from Kilcock, the canal banks have earthen mounds as well as large amounts of vegetation growth. McLoughlin’s Bridge (WIIAH 1335) allows for the cross over of the towpath from the north to south bank, which is used as an amenity for users of the Royal Canal Way in this area. The towpath is evident on the south bank to the west of Enfield village. The canal accesses Enfield passing many canal associated features west from Kilcock, including bridges (WIIAH 1335, 1340, 1345, 1346), milestones (WIIAH 1342, 1343), a lock (WIIAH 1336), lock-keeper’s cottage (WIIAH 1337), aqueduct (WIIAH 1341), a mooring, slipway (WIIAH 1347) and modern overflow (WIIAH 1338). These features are of direct functional and historical significance with other features namely, walling (WIIAH 1339) and a possible canal associated dwelling (WIIAH 1344) being of less importance.

Leaving Enfield, the canal meanders north-west to Thomastown features including canal basin gates (WIIAH 1352, 1356), aqueducts (WIIAH 1353, 1354, 1359, 1360), bridges (WIIAH 1348, 1350, 1349, 1362, 1364, 1369, 1374), culverts (WIIAH 1363, 1368, 1372), a footbridge (WIIAH 1355), canal worker’s house (WIIAH 1357), harbour (WIIAH 1358), overflow (WIIAH 1361) and milestone (WIIAH 1366). Other surveyed features included those with a possible canal association but which were mainly surveyed due to their socio-historical importance, namely domestic structures (WIIAH 1365, 1367, 1370, 1371, 1373). All the features are found along the canal banks which are often tree lined and which mainly feature the towpath as a grassy track along the south bank. This is inaccessible in large sections, however the area to the east of Moyvally has a trackway on both sides of the canal. To the west of Hill of Down, a track way is visible on the north bank, while a roadway is carried on the south side of the navigation.

From Hill of Down, the towpath continues on the north bank and enters Thomastown passing a culvert (WIIAH 1377), harbour (WIIAH 1375), bridge (WIIAH 1376), lock (WIIAH 1378) and public house (WIIAH 1379). West of this point, it is unclear as to which bank held the original towpath as a track is again present on both sides of the navigation. However, the towpath is carried under the south side of Down’s Bridge (WIIAH 1399) as far west as Mullingar, during which there are areas where the canal is seen as a rock cut channel with stretches of trackway along the north bank.

Approaching Mullingar town from Thomastown, a large number of canal associated features are passed, namely seven locks (WIIAH 1380, 1381, 1382, 1385, 1388, 1389, 1391), three lock-keeper’s cottages (WIIAH 1383, 1390, 1392), seven bridges (WIIAH 1384, 1393, 1394, 1395, 1399, 1404, 1405), culverts (WIIAH 1401, 1406), canal gates (WIIAH 1400), canal worker’s cottages (WIIAH 1386, 1403), a lifting bridge (WIIAH 1398), footbridge (WIIAH 1402), aqueduct (WIIAH 1396), milestone (WIIAH 1387) and overflow (WIIAH 1397).

Navigating past these, the canal changes course slightly, approaching Mullingar town from the south
passing numerous canal associated features before it enters the town centre and turns to loop around in an east-west direction, before returning to continue south exiting Mullingar to the south-west. The towpath is accessible as an amenity walkway throughout the town. Sites of interest within the locality include bridges (WIIAH 1407, 1410, 1415, 1419, 1421, 1423), footbridges (WIIAH 1416, 1420, 1422) harbour basins (WIIAH, 1417), mooring basins (WIIAH 1408, 1409) a canal feeder (WIIAH 1412), aqueduct (WIIAH 1411), dry dock basin (WIIAH 1413) and canal store (WIIAH 1414). Bridges are the most common canal related features within the town and it is obvious from the features listed above that the town was a commercial centre for the canal but the lack of canal related buildings is likely as a result of redevelopment within the area, leading to the destruction of these structures.

**Area 4 – Mullingar – Cloonsheerin (Fig. 7, 7a, 7b, 8, 8a, 8b)**

On exiting Mullingar the canal carries The Westmeath Way along the south bank towpath, which for the most part has been widened to accommodate modern vehicles; however, there are numerous gates in place along both canal banks. Entering Ballynacarrigy, the harbour widens the canal considerably, with the towpath continuing west to Lock 36 (WIIAH 1472). The north bank is also accessible within the village. Accessing Ballynacarrigy from Mullingar, the canal navigates through a large number of features which are directly linked with the history and function of the canal, including bridges (WIIAH 1424, 1426, 1428, 1429, 1431, 1432 1435, 1447, 1448, 1456, 1459), culverts (WIIAH 1427, 1433, 1440, 1441, 1446, 1463), nine locks (WIIAH 1438, 1442, 1444, 1449, 1451, 1453, 1455, 1457, 1460), eight lock-keeper’s cottage (WIIAH 1437, 1443, 1445, 1450, 1452, 1454, 1458, 1461), a canal feeder (WIIAH 1439), amenity area (WIIAH 1430), milestone (WIIAH 1434) and harbour (WIIAH 1436).

Ballynacarrigy village demonstrates the close association of the canal with the industrial growth of the area. This is seen through the presence of a lock (WIIAH 1464), keeper’s cottage (WIIAH 1465), culvert (WIIAH 1467), bridge (WIIAH 1470) and possible store (WIIAH 1469), but particular commercial associations are seen with the presence of the harbour (WIIAH 1468) and the canal hotel (WIIAH 1466).

West of Ballynacarrigy village, the canal navigates westwards, curving regularly resulting in the canal changing from an east-west to north-south direction. To the north-west of Ballymahon town, the canal turns sharply to a north-west to south-east flow, continuing north as far as Cloonsheerin. The towpath between here and Ballynacarrigy is mainly carried along the south and west banks, where it has been widened for the most part and paved in some places. In some instances, there is a vehicle accessible track along the north bank. The Royal Canal is currently navigable to Ballybrannigan Harbour. A restoration project is currently ongoing and it is hoped that Royal Canal will fully open to navigation in 2009. As the canal approaches Cloonbreany it narrows considerably and the west bank towpath is no longer evident; however, a track way on the east bank provides access to the canal. Continuing north to Cloonsheerin, the towpath is evident as a west bank roadway before changing again north of Lower Lyneen/Crossover Bridge (WIIAH 1544). Here it is carried on both canal banks as the canal divides at Cloonsheerin, thereby providing access to both Cloondara and Longford town.

On the approach to Cloonsheerin from Ballynacarrigy, the canal navigates through many features relating to the functional and historical use of the canal. Such features include numerous bridges (WIIAH 1471, 1474, 1476, 1480, 1481, 1483, 1484, 1487, 1488, 1494, 1498, 1500, 1501, 1504, 1505, 1507, 1512, 1513, 1517, 1519, 1520, 1524, 1525, 1529, 1535, 1538, 1542, 1544), seven locks (WIIAH 1472, 1475, 1479, 1495, 1516, 1536, 1539), seven lock-keeper’s cottages (WIIAH 1473, 1477, 1478, 1496, 1518, 1537, 1540), aqueducts (WIIAH 1482, 1485, 1497, 1541, 1545), overflows (WIIAH 1486, 1489), four harbours (WIIAH 1490, 1508, 1523, 1532), canal associated structures (WIIAH 1491, 1492, 1509, 1514, 1515, 1522, 1526, 1528, 1533, 1546), underpasses (WIIAH 1499, 1502, 1510, 1521, 1527), sluices (WIIAH 1503, 1506, 1534), culverts (WIIAH 1530, 1543) and one milestone (WIIAH 1493).
Area 5 – Clooonsheerin – Cloondara (Fig. 9, 9a)

To the north of Clooonsheerin aqueduct (WIIAH 1545) the canal divides with the west stretch heading north-west towards Cloondara and onto the R. Shannon. On route from Clooonsheerin it passes numerous features which show direct association with the construction and functional use of the canal, namely seven bridges (WIIAH 1548, 1553, 1554, 1556, 1558, 1559, 1560), three culverts (WIIAH 1547, 1555, 1557), three locks (WIIAH 1549, 1552, 1561) and two lock-keeper’s cottages (WIIAH 1550, 1551). Within Cloondara village, it is evident that the area developed commercially around the canal and its associated structures including Richmond bridge (WIIAH 1562), harbour (WIIAH 1563), lock (WIIAH 1565), keeper’s cottage (WIIAH 1567) and dry dock (WIIAH 1566) as well as the harbour associated dwellings and public house (WIIAH 1564).

Area 6 – Clooonsheerin – Longford Town (Fig. 9)

On the east stretch from Clooonsheerin, north-east to Longford town, the navigation takes in numerous features that are associated with the canal, including culverts (WIIAH 1568, 1578), bridges (WIIAH 1569, 1571, 1575, 1576, 1580, 1583, 1584), culverts (WIIAH 1570, 1572, 1579), canal structures (WIIAH 1573, 1574, 1577) and culverts (WIIAH 1581, 1582). Within this stretch of the canal, the towpath is carried on both banks. However, the west bank is largely inaccessible due to ongoing improvement works relating to the dredging and reopening of the canal. The towpath is used as a recreational walkway and comes to an abrupt end as the canal discontinues just south of the railway line in Longford town. It is likely that the canal may have originally continued further north.

7. SUMMARY

The nature of the Royal Canal and its hinterland, as defined within this assessment, has changed considerably since the canal was completed in the late eighteenth/early nineteenth century. Despite this, the majority of the canal is still navigable and managed and maintained by Waterways Ireland, principally for recreation purposes. As a result, much of the canal’s associated heritage has been afforded some protection. A great number of sites and features found along the canal that are featured in this assessment highlight the many characteristics inherent in its architectural, industrial and engineering heritage and as such define particular facets of this important heritage asset. It is recommended that the heritage value of the canal is developed alongside its role as a recreational asset.

Recommendations

Due to fact that the Royal Canal is maintained as a navigable canal, there is a certain amount of maintenance afforded to the canal itself and its locks. As a result, both are in relatively good condition.

Although functionality and safety must be of primary importance when adapting bridges for road and pedestrian usage, it is recommended that the original character of the bridge be maintained if possible. This is especially true when repairs are being made (e.g. WIIAH 1571). Although some bridges may have been adapted with modern materials to facilitate heavier loads (e.g. WIIAH 1333, 1345), others are still of the original construction, and clearly at risk from the effect of heavy traffic (e.g. WIIAH 1280). As with buildings, the growth, spread and effects of ivy needs to be monitored and managed in order to prevent structural damage (e.g. WIIAH 1369).
Lock-keepers cottages are of heritage and aesthetic value to the canal and its environs. Their occupancy and upkeep should be encouraged. Similarly, other buildings such as houses and farm buildings not directly linked to the canal can be of architectural interest and contribute to the aesthetic character of the canal (e.g. WIIAH 1514, 1533, 1564, 1573). Derelict or ruinous lock-keepers cottages (e.g. WIIAH 1390) and other former dwellings, still add to the character of the canal but need to be maintained in their present state if they are not to be renovated. At a minimum this could involve the clearance of vegetation and the stabilisation of the remaining structure to prevent further deterioration or collapse. Re-roofing, where possible, is recommended as an immediate preservation action. Lock-keepers cottages that are semi-derelict still have the potential for development through renovation (e.g. WIIAH 1496). Where the original character of the building is still evident, it is recommended that such a renovation is in keeping with the original materials.

Public houses (e.g. WIIAH 1379, 1564) sited next to the canal are indirectly linked to the heritage of the canal and are therefore of socio-historical interest. In addition to this they are often of architectural interest. Publicans, without encouragement, often display old photographs of the area as a means of decoration and source of interest for customers. This form of public information should be supported and, where appropriate and welcomed, supplemented with archive photos and accompanying text.

Warehouses, stores, mills (e.g. WIIAH 1223, 1414) and other such complexes provide excellent opportunity for preservation through renovation (WIIAH 1243). In the absence of such a scenario these buildings should be maintained, stabilised and preserved as a visual reminder of the canal’s rich industrial heritage. Derelict buildings (e.g. WIIAH 1466, 1302) that are strategically located in a populated town and available for development provide an excellent opportunity to revamp such locations for modern usage. The positioning of a new development on such a site could be equally beneficial to both the aspect of the new buildings and that of the canal. Existing buildings of heritage interest derelict or otherwise can be incorporated to good effect (e.g. WIIAH 1277).

Canal-side locations centrally located in a town provide an ideal opportunity to enhance the lives of inhabitants and visitors by bringing recreation activities to the canal bank either by means of a public space or a new development that makes the most of the aspect. Excellent examples of this can be seen in

Lift-bridges (e.g. WIIAH 1398 and other mechanical devices should be maintained where possible. Aqueducts (e.g. WIIAH 1303), culverts (e.g. WIIAH 1377), feeders (e.g. WIIAH 1258), overflows (e.g. WIIAH 1486), and siphons when of aesthetically pleasing construction and visible from the road, canal or walkways should be maintained to add visual interest and to illustrate the technology and engineering associated with the canal. There are scant remains of canal furniture such as milestones (e.g. WIIAH 1245, 1493). The few remaining examples should be preserved in situ, or, where salvaged, incorporated into new developments or relocated to a similar setting.

Richmond Harbour (WIIAH 1563) is still an active location and has an atmosphere that is reminiscent of the former activities of the canal in its heyday. On the day of inspection there were several occupied boats and people coming and going. The presence of many boats and more than a few structures built around the same time as the canal lends to the character of the harbour but require some management.
General Recommendations

- Management of the canal as a living heritage resource for this generation and future generations.
- Development of a strategic approach to the management of the architectural, industrial and engineering heritage of the canal.
- Use the canal and its surviving architectural heritage as a catalyst for local development, whilst maintaining control over the blending of the new structures with the receiving environment and existing structures.
- A long term conservation plan for the entire length of the canal, including maintenance of the canal basin, associated infrastructure, canal contemporary structures and other older or more recent structures or features that add to the aesthetic and heritage value of the canal environs.
- Inclusion of these recommendations in the relevant County Development Plans.
- Restoration, where feasible, of buildings including lock-keeper’s cottages, houses, mills, stores, warehouses etc.
- Regular monitoring and reviews of the condition and action required for structures and canal banks, recording any deterioration, alteration, damage or improvements.
- Regular maintenance and upkeep of all canal associated structures and features.
- Mitigate the impact of modern additions to the canal and its environs:
  - Ensure that new additions or changes to existing structures are in keeping with the original character of the structure.
  - Ensure new development is appropriately sited, complimenting and adding to the value of the canal, whilst continuing public access.
- Repair work is recommended for many features which were built as part of the initial construction phase of the canal. These works should include re-pointing in lime render and they should interfere as little as possible with the original character of the structure.
- Re-roofing is recommended as an immediate preservation action for as many ruined structures in WI ownership as possible, particularly those that are at the early stages of collapse.
- Use the canal and its associated structures as a recreational and commercial amenity:
  - Repair and use original structures to enhance the canal and house services such as toilets, showers etc. needed for canal users.
  - The repair and subsequent use of derelict buildings could be made available to local enterprise e.g. artists residences / studios / workshops, cafes, shops, accommodation, clubhouses, storage, offices, information centres etc.
  - Placing of benches, archaeological and geographical information boards etc. along various lengths of the canal.
- Removal of graffiti on many structures, evident particularly in towns and villages.
- Repair and upkeep of the entire length of the towpath for recreational purposes, thereby allowing access for all canal users and ensuring a greater interest in the canal as well as making it safer for all users.
- Repair and upkeep of numerous quay sides and harbours for boaters, tourists and locals, with the possibility of developing parks, recreational areas or greenways close to the canal banks.
- Restrict access for large vehicles across masonry canal bridges in order to prevent accidental damage to the bridge faces and its overall structural stability.

The Royal Canal and its associated architectural, industrial and engineering heritage are to a limited extent offered some level of protection by ongoing maintenance in the interest of recreation. However, if the full potential of the canal is to be realised in terms of its heritage value and subsequent benefits to local communities and tourism, the multitude of sites and features worthy of preservation presented in this assessment must be afforded further protection, maintenance and restoration when needed. It is recommended that this is achieved by the consolidation and monitoring of all available data; most importantly the results of this assessment, the current details of site ownership, the Sites and Monument Record and the Record of Protected Structures. It is in the interests of Waterways Ireland to both pursue and promote the protection, maintenance and restoration of its waterways and associated heritage in order to maximise their appeal for both recreation and sympathetic redevelopment.

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