



Waterways Ireland

Uiscebhealaí Éireann Watterweys Airlann



The Shannon-Erne Navigation Architectural, Engineering and Industrial Heritage 2007.



HEADLAND
ARCHAEOLOGY Ltd

The Shannon-Erne Waterway Architectural, Engineering and Industrial Heritage Assessment 2007.

Commissioned by Waterways Ireland and carried out by Headland
Archaeology Ltd

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1. INTRODUCTION

This report presents a built heritage inventory and complete survey of the architectural, engineering and industrial heritage of the Shannon-Erne Waterway, 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 waterway 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 Shannon-Erne Waterway is located within a mixed urban and rural landscape which has been largely unaltered seeing only minor modernisation to the waterway villages since the stretch was completed in 1859. In its entirety (63 km), the combination of the canal and waterway passes through the counties of Leitrim, Cavan and Fermanagh.

The Shannon-Erne Waterway, which incorporates the Woodford River, begins the River Shannon near Leitrim village and passes through a rural landscape incorporating the small commercial centres of Keshcarrigan, Ballinamore and Ballyconnell. It is unlikely that the waterway had any major influence on the commercialisation and growth of these areas during the nineteenth century, due mainly to the failure of the waterway as an economic link between the Shannon navigation system and the Ulster navigation in the north.

Unlike the Barrow Navigation, Royal Canal and Grand Canal, the Shannon-Erne Waterway does not contain large urban centres and so did not undergo the same economic and architectural influence as a result of the construction of the canal. There is very little evidence for any direct economic prosperity from the waterway, highlighted by the large absence of canal associated structures such as warehouse, hotels and merchant class houses, seen in abundance in the urban centres of other above mentioned waterways, however there was some development such as hotels etc. in the larger towns of Ballinamore and Ballyconnell.

2. HISTORICAL BACKGROUND

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'.¹ 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 and during the 1720s an attempt was made to make the River Liffey navigable in order to achieve this. This endeavour was a complete failure however, and a costly one at that; as the scheme had been financed by private subscription, the collapse of the company served as a distinct disincentive to private investors regarding navigational projects from then on. In turn, the government was consequently forced to partake in the administration and financing of future navigation schemes for the foreseeable future.

Each navigational improvement and construction 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

¹ Quoted in Clarke 1992, 13

were undertaken.² 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 and thus began the real era of canal construction in Ireland.

In 1842, the Act 5 and 6 of basic arterial drainage law in Ireland was passed. This began a vast number of arterial drainage projects throughout the country undertaken by the Commissioners of Public Works known as the "Bord of Works". A specific section was relevant to waterways and was entitled "An Act to promote the Drainage of Lands, and Improvement of Navigation and Water Power in Connection with such Drainage, in Ireland". Few navigations were built based on this as it was predominantly a drainage act, but the Ballinamore-Ballyconnell navigation was one of them. The first action taken under this Act were to improve drainage between the lock at Corraquill and Leitrim Village, so in late 1844, navigation began to be included in all drainage proposals. On 26 June 1846 approval for the drainage scheme was given, and on 19th November 1847 the waterway portion of the scheme was approved under this Act.³

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 Vallencey in his book which was first published in 1763.⁴ 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 were influenced by continental, as well as British methods in many instances. We see this continental

² Paget-Tomlinson 2006, 18

³ Flanagan 1994

⁴ Vallencey, Charles (1763) *A Treatise on Inland Navigation on the Art of Making Rivers Navigable, of Making Canals in all sorts of Soils and of Construction Locks and Sluices*. Dublin; quoted in Clarke 1992, 27

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.⁵ 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.⁶

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 Shannon-Erne Waterway.

Shannon-Erne Waterway

The Ballyconnel-Ballinamore link of Ireland's inland waterways system was one of the last sections built, the purpose of which was to link the Shannon waterway system with the Ulster navigation in the north. With the completion of the link, Ireland would have one large, comprehensive waterways system from north to south. The Shannon-Erne link was originally proposed in the 1780s, however, through a wide range of mishap and controversy, the waterway was not completed until 1859. From that time, it remained in use until 1873, although it never became the hoped for economic link between the two existing systems. Once the link was proposed it became obvious that it would be quite difficult to build successfully through the difficult terrain and that the combination of waterway navigation system and drainage system was going to be a problem. The link was never a success and fell into disrepair and disuse fairly quickly after it opened. It remained in poor condition for many years until funds were made available for its reconstruction. Since reopening in 1994 it is now in regular use as a recreational waterway.

The Shannon and the Ulster waterway was supposed to be the final piece of a comprehensive system that would link the Shannon, the Erne and the Lough Neagh and connect up the sea access points at Limerick, Ballyshannon, Belfast, Coleraine and Newry. Initially, the proposed developments would be an improvement of the Woodford River from Lough Erne to Ballyconnell. The first lock for this new canal link was built at Caroul on the Woodford River by Richard Evans where the first obstruction to navigation occurred after leaving Lough Erne to the north. This work was in part financed by a parliamentary grant of £1000. However, this was the only funding forthcoming for the project and so after the construction of the first lock, work ceased.

In 1790, a company was formed to link the Erne to the sea which involved making the River Erne navigable from Belleek to Ballyshannon. This link was only 5 miles in length but included a very steep fall. The Ballyshannon company determined that their best course of action would be to make use of the debenture funds available for public works, of which they were allotted £5,100 in 4% debentures to match the £10,200 which the company intended to raise in subscriptions. The work would require twelve locks and work was begun on the first one at Belleek. However, the plan received little support and was soon abandoned with only £2,059 spent.

William Chapman was employed to survey the Woodford River in 1793 and estimated that a waterway could be successfully built from the Erne into Garadice Lough for £5,000. From there an extension westwards would be possible to the Shannon.

⁵ Rynne 2006, 345

⁶ Crowe, N. (1994) *English Heritage Book of Canals*. (London), pp. 25-6; quoted in Rynne 2006, 340

The waterway that could be constructed for this amount would be capable of holding boats from 10-20 tons, drawing 2-2.5ft of water in summer and up to 4ft in winter. His costing was as follows:

| | |
|---|-----------------------------|
| <i>Four Locks of 63 feet between the Gates, 12 ½ width of chamber and of various falls, at £350 each</i> | £1400 |
| <i>Bridges over the Locks at Aughaline and Ballyheady</i> | £120 |
| <i>Removing the Bar below Mullinacough and two shoals below Aughaline-bridge</i> | £150 |
| <i>Deepening the shoals at Kilcorby and at the Eel Weir at Curhoul</i> | £270 |
| <i>Making a Channel within the Island opposite Annagh Wood, and removing all obstructions to as far as the great Island below Ballyconnel</i> | £75 |
| <i>Five miles of Trackway from the junction of Woodford River with the Erne, 2 miles of which I suppose high enough, and the rest to average 2 feet height, which with sodding may amount to 4s 8d per Perch, or 74l 13 s 4d per Mile</i> | £224 |
| <i>Canal above and below the Lock at Ballyconnel Mills</i> | £110 |
| <i>Deepening the Mill-course and repairing the Weir</i> | £80 |
| <i>Deepening and contracting the shallow parts of the River between Ballyconnel and Ballyheady, about 600 Perches of Trackway, at an average of 5s per</i> | £150 |
| <i>Canal at Ballyheady and alterations of the Weir</i> | £140 |
| <i>Deepening and contracting various parts of the River between Ballyheady and Curleach</i> | £160 |
| <i>500 Perches of Trackway, at 5s per</i> | £125 |
| <i>Canal at Curleach</i> | £90 |
| <i>Towing Paths on the communications between the Loughs of Curleach, Burren, Ballymagauran and Woodford, about 200 Perches, at an average of 10s per Perch</i> | £100 |
| <i>Making a deep channel through the Eel Weir below Mr. Gore's, deepening the channel into Woodford Lough, and making a Navigation Arch in the Bridge</i> | £250 |
| <i>Boats and Machinery</i> | £150 |
| <i>Sub -total</i> | £4374 |
| <i>Incidents and Superintendance, 15 per cent</i> | £655 7s |
| <i>Total</i> | £5029 7s⁷ |

At this time, William Chapman foresaw no insurmountable difficulties in the construction. But nothing was done with this information and the project languished until 1801

The Director General of Inland Navigation asked Richard Evans for a new estimate for both the Woodford and the Belleek navigations in 1801. He produced an estimate of £48,000. However, nothing was constructed at this time and no funds were forthcoming. It would be forty years before making the Woodford navigable was considered again and linking to the sea at Ballyshannon was never again attempted or contemplated.

The Erne-Shannon scheme finally began to take shape in 1838 when the newly appointed Commissioners of Public Works were investigating schemes that would provide employment. They requested that William Mulvany, an engineer formerly doing Ordnance Survey work and work on the

⁷ Flanagan 1994, 20-21

Shannon, investigate possible routes for a waterway from the Erne to the Shannon. Work was in progress at this point on the Ulster Canal, so this new waterway would be the final link joining the northern waterways to the southern. Mulvany undertook the survey in 1839 to plan the route for the new section of canal. In the 1840s, when the other navigations were nearing completion, it appeared that connecting the two existing waterways would be economically and logistically important.

The year 1842 saw the passing of "*An Act to promote the Drainage of Lands, and Improvement of Navigation and Water Power in Connection with such Drainage, in Ireland*"⁸ giving Commissioners wide powers to carry out schemes for the public good, such as navigations, drainage and water power works. The pressure was twofold; the successful Ulster Canal company were very interested in extending west to the Shannon and local landowners had also been pressing for works to prevent flooding. As a result, in May 1845 John McMahon an engineer for the Bord of Works, was told to draw up a combined drainage and navigation plan. He estimated that the combined scheme would cost £110,301 while a waterway on its own would cost £103,000 and a drainage scheme would cost £23,267. A system of "flash locks" was used originally, which differed from the modern lock system. The final permission for work on the waterway came in 1847, on the 19th November. Work on this section of the canal began on the 30th June 1845 as a joint project using public money.

A combination navigation and drainage scheme was not the best option however, as both have quite different requirements for water and for the actual plans. There was frequent conflict between what was required for each one and, in the end, neither proved entirely satisfactory. From an engineering standpoint, it would have been better to have two projects. Although progress was made, construction was frequently disrupted. There were also difficulties as the two schemes had separate funding allocated to them and the money had to be accounted for separately. The money was provided by the Treasury who made a grant in response to a request from the Irish administration and the Cavan Grand Jury on the 20th March 1846. The sum was fixed at £46,250 and no account was taken of the final total for the scheme. The counties deemed beneficiaries of the canal, Cavan, Leitrim, Fermanagh and Roscommon, provided an additional sum of £49,625. The final estimated cost of £131,858 was given on the 4th March, 1847, which included drainage works, masonry and navigation works, each amount for each section chargeable to either the government, one of the four counties involved or the proprietor of the adjacent land. The costs broke down as follows:

Drainage works – chargeable to proprietors £27,110

Drainage works – works of masonry in connection therewith, chargeable to counties £4,582

Navigation works – chargeable to Government grant and to four counties £100,166

Total £131,858⁹

Frequent delays occurred with receiving the funding for the schemes. There were also problems in locating sufficient number of workers. Employment was set at 7,000 for the schemes, but eventually was dropped to 2,500. Weirs, which were extremely costly, were constructed at each of the locks on the Woodford River, but construction on these was frequently slowed by flooding. There were also problems with millers who had rights to the water and with owners of eel rights.

It again became apparent that the estimated costs were wrong. The estimated cost per lock was £1,500, of which £1,300 was for masonry. By 1852 a revised costing of £127,276 for the combined drainage and navigation works had been exceeded by £40,000. At the end of 1852 an estimate of an additional £19,007 to finish the canal also proved erroneous. The Board of Works came under scrutiny at this point for their general failure to remain within the estimated costs. W.T. Mulvaney had been

⁸ Flanagan 1994

⁹ Ibid.

responsible for the plans and estimates for this project and became the scapegoat for the problems that had arisen. The plans began to be reduced and were followed quite stringently. The original plan had a depth of six feet for the canal but a depth of four and a half feet was required in the revised plan. This depth was not actually reached for a good part of the finished canal, however. Despite the fact that they had begun to be more stringent to help limit costs, expensive towpaths were constructed. These were doubly impractical and a poor usage of funds as at this time steam towage had been established in many places and the canal ran through several loughs where towage was impossible for large stretches. It began to look as if the canal would not be completed. This did not improve until 1855 when a new act was passed on the 4th August permitting the "Application of certain sums granted by the Parliament for Drainage and other Works of Public Utility in Ireland, towards the Completion of Certain Navigations undertaken in Connection with Drainages"¹⁰. This Act improved the chances of the canal being completed considerably. The Treasury was empowered to cause alterations or curtailments of schemes and could also reduce the portion of the cost to be charged to the counties concerned. Any amounts remitted were to be considered free grants. The Act also allowed the OPW to transfer, with Treasury consent, the completed navigations to the counties as their public property. Previous Acts had stated that the OPW would retain control of the working navigations. The Bord of Works, in 1856, thought that there would likely be very little navigation on this stretch of the waterways system, however, a year later, the head engineers expressed the opinion that the value of the waterway was being increasingly recognized and that it would be opened shortly, likely in 1857.

When the work was completed, it was decided to set up navigation trustees elected from the adjoining counties. A second body of trustees was also going to be established to look after the drainage. This created dual control of some aspects of the combination project, which inevitably led to conflicts of interest. The final total of the waterway costs was £228,651 10s 5d including interest and by 1859 the waterway was nearly ready to be handed over to the trustees. However, a dispute arose as to who was responsible for the sum of over £150,000 by which the estimated costs had been exceeded. The final total for the waterway was £276,992, nearly double the estimated costs with about a sixth of that related to drainage.

In February 1859 the Bord of Works set an award for the waterway that would specify the costs of the works up to the previous June and the portion which would be charged on each of the carefully defined districts. The mode of repayment was also determined for this sum.

| | |
|-------------------|------------------------|
| <i>Drainage</i> | £48340 |
| <i>Navigation</i> | £224460 |
| <i>Mill Power</i> | £1472 |
| <i>Total</i> | £274,272 ¹¹ |

This was £140,942 over the estimate. It was recommended that the landowners who benefited from the drainage works were liable for £27,110, although this sum was reduced to £25,500, payable in instalments with 4% interest per year. The counties, however, felt that they should not be accountable for the cost over the original estimate. An inquest was held and their claim was upheld. The verdict at the time stated that "The prospect of advantage, however, and of a remunerative return which the project was originally considered to hold out, have we believe, been materially interfered with and lessened by the altered circumstances of the country at large and the general extension of railways."¹²

¹⁰ Ibid.

¹¹ Flanagan 1994, 36

¹² Quoted in Delany 1984, 158

It was decided that all but £30,000 would be deemed a free grant and this would be repaid in ten half-yearly instalments with each county responsible for a certain amount as follows:

| | |
|------------------|------------------------------|
| <i>Cavan</i> | <i>£10,029 12s</i> |
| <i>Fermanagh</i> | <i>£2,550 18s</i> |
| <i>Leitrim</i> | <i>£12,720 6s</i> |
| <i>Roscommon</i> | <i>£4,699 4s</i> |
| <i>Total</i> | <i>£30,000s¹³</i> |

The proportions were very important as they would be used in the future to determine maintenance costs in each county. The final valuation was challenged, however, and the repayment was reduced from £25,500 to £24,412 to be paid over 22 years at 4% interest by the relevant landowners.

The completed waterway was a total of 63 km in length running through sections of canalized river, river navigation with artificial cuts and several loughs. The canal included 25 miles of canalized river, eight miles passing through lakes, and six miles of still water canal. Sixteen locks had been constructed, eight rising from Upper Lough Erne to the summit level of Lough Scurl and eight falling to the Shannon. Each lock was 82 feet long and sixteen and a half feet wide and had a depth of five and a half feet over the cills. The terrain the canal cut across was a challenging landscape of low hills and small lakes. These drawbacks were outweighed by the hoped for economic benefits and the canal was put through the near-empty area.

There is some evidence that a few boats began to pass through the waterway in the late 1850s, however, the first official trip did not take place until June 1858. The Ulster Canal Company had made a lighter available and this was loaded with goods to be delivered to destinations on the Upper Shannon. The craft was also to make a return trip from Lough Allen with coal for the steam dredgers that were being used on the Lough Garadice section of the waterway. J.B. Pratt, the Leitrim County surveyor was authorized to use a screw steamer on the waterway and a double bend in the Woodford River was widened "to prevent accident to the fan of the screw steamer which, with the Board's permission had been running between Carrick-on-Shannon and Belturbet since the previous month."¹⁴ It has been suggested that this is evidence that Pratt was attempting to establish a service between the two towns. The Ulster Canal Company also ran a boat on the canal at least as far as Ballinamore carrying bread. In December of 1856 the lock house contractor was granted permission to use a boat on the waterway and a little later the Ulster Canal's agent at Belturbet was told there was no objection to the trial trips proposed to be made at Ballyconnell. Patrick Buchan, a tenant of the Creevelea ironworks and of coal-pits in the Arigna region was told in August 1857 that he could pass a barge laden with coal through the junction canal. A year later, a Mr. O'Donovan was told he could convey timber from Ballyconnell to Belfast provided he covered the cost of working the lock at Corraquill and that he did not attempt to work it without giving due notice in order to secure the presence of an officer of the Board of Navigation Trustees. In mid-1858 a steam yacht launched for the Earl of Erne made its way to the Erne although no formal record of this trip was made. A request to raise sluices to reduce water levels so that a Mr. Close could raise a boat sunk in the canal in April of 1860. The waterway was a disaster as far as traffic was concerned, with few boats using it for trade and only occasional pleasure craft.

On July 4, 1860, the waterway was officially handed over to the twelve Navigation Trustees. The route was complete but its usefulness remained uncertain. Within five months of the transfer of the

¹³ Flanagan 1994, 38

¹⁴ Delany 1986, 158

waterway to the trustees, J.B. Pratt, who had been appointed secretary and engineer for the trustees, had prepared a report listing the many deficiencies in the works. His preliminary report was submitted on the 4th July 1860, the day he took charge of the canal. Although he had expected a canal in poor shape, he had not expected it to be quite as bad as what he found. The deficiencies of the canal included a depth of less than three and a half feet, water leaking through the stonework of the locks, banks that sloped too steeply and were giving way causing mud deposits up to two feet deep, poorly constructed towpaths, defective fencing, badly made locks and leaks in the masonry. The lock houses were also made of poor quality material, the approaches to most of the bridges had subsided and most of the wooden bridges were so poorly made that they were unsafe for traffic. Sluices had also been installed at several weirs that were not automatic, which caused major problems when flooding occurred.

Pratt's report stated:

*"The works have been executed for a depth of only four and a half feet, and this depth ... has not been carried out, as there are parts of the navigation not more than three feet deep, unless when the water is kept up by putting a board on the weir walls. The water in the lakes between Castlefore and Ballyconnell is kept about two feet higher than the level proposed by Mr McMahon in his original report and plans, and this is done in order to keep four and a half feet of water on the shallows of these lakes, which swallows ... were to be removed. When there are six feet of water on the lock of Castlefore, the shallows in Lough Scur, the summit level, vary, from four to five feet, and in dry weather, in summer, the supply to the summit level is not sufficient to maintain the water at this height, the leakage through the lock and weir at Castlefore and through the banks and lock No. 9, at Kilclare, reduce the water about sixteen inches."*¹⁵

It has also been noted that there were problems with a loss of water in the rock-cut sections. Lock No. 9 leaked so badly that a mill downstream from it was able to turn the whole year on the spillage. Pratt requested the sum of £1,718 to correct the various problems. However, the Bord of Works refused to accept responsibility for fixing any of the problems as they were the duty of the trustees to fix, and they remained unattended to. The trustees placed newspaper ads to advertise the opening of the canal and to try to lease the tolls, however, this did not work particularly well, so additional, larger ads were placed. The trustees would likely have been able to maintain the condition of the canal when it was given to them, but they were not able to perform the necessary repairs. The Bord of Works suggested to Pratt that he should cut and sell the hay from along the canal to prevent people claiming rights through usage and that mill rights should be leased out. Both of these would generate some income for the canal's maintenance. Pratt's total request to repair bridges and other works totalled £1718, which the Bord of Works flatly refused to pay, stating that it was the responsibility of the waterway districts to pay and he was told to apply to the Treasury for a £500 loan for one year's maintenance. This loan was granted to the Trustees who supplemented it with levies on the counties to carry out the few repairs they could then afford. They began with the maintenance of the locks, followed by the bridges and fences. Boats did not materialize and although there was no clear decision to abandon the waterway, the trustees began to focus on maintaining the waterway for drainage. It is debatable as to whether nothing was done because there was no traffic on the canal or whether there was no traffic because the canal was in such poor shape. At this time, the Ulster canal had also fallen into disrepair and there was no incentive to develop the Lough Allen coal trade. It has been stated that this decision was made in 1865; however, works were carried out on locks as late as 1871.

Most of the evidence of the working years of the canal comes from the evidence presented at two inquiries. The first was the Crighton Committee of Inquiry into the activities of the Board of Works in 1878. The second was the Monck Commission which was established as a direct result of the previous

¹⁵ Flanagan 1994

inquiry to investigate the through route from Belfast to Limerick. At the first inquiry Pratt stated that he had done his best to keep the waterway operational until 1865 but that because there was no traffic it was nearly pointless to try to maintain the waterway.

J.G.V. Porter, who was a trustee for a period and who had fought hard to keep the waterway maintained, related his experience of bringing a steamer, the Knockninny, through from the Shannon to Lough Erne in 1868:

*"...only through the kindness of the people and Mr. Pratt, the engineer, was I able to get through the canal. They took the greatest trouble to get the water from one reach to another to float me down. But my coming through is no proof for it took me three weeks to get through."*¹⁶

One of the last boats known to have made the trip through the waterway was the Audax, a yacht owned by W.R. Potts. By 1873, sections of the canal had become far too shallow for boats to navigate.

Between 1860 and 1869, a total of eight toll paying boats passed through the waterway earning a total of £18 in tolls. Other boats passed through without paying tolls. This included one boat owned by the son of a Trustee and to whom fees were not charged. Official records list only the eight toll-paying boats in nine years on a quarter of a million pound link.

The canal was considered a failure, both economically and in fulfilling its purpose of linking the two navigations as it was seldom used. Several reasons have been given as to why the waterway did not develop into the hoped for trade link between river navigation systems. There was generally very little traffic between Enniskillen and Limerick at the best of times and by this time the Ulster Canal was also in poor condition, so trade on the Upper Shannon was fairly limited. There was very little reason to develop the Lough Allen coal trade. There were no towpaths around the lakes and barges without engines could not easily make the journey as the summit levels were very poorly designed. Another contributing factor may have been that competition began from the railway. Although the competition was indirect, the expansion of the railways in the country had reduced the value of a waterway route from Belfast to Limerick and the construction of the Cavan-Leitrim railway at nearly the same time in nearly the same area decreased the possible amount of traffic.

From the early 1870s onwards, the canal began to deteriorate and was seriously neglected as the Trustees had ceased to maintain the works due to the low levels of usage. In 1875, it was briefly suggested that the canal should be restored. Bord of Works engineer Robert Manning conducted a survey of the canal from Ballinamore west and provided an estimate of £4,400 for the restoration. The limited chances of ever recouping the outlay killed the plan before it had a chance to take off with both the Bord of Works stating that *"The prospects of any trade on the navigation, or on any benefits to the surrounding districts there from, are not such as would appear to warrant the expenditure estimated at £4,400"*¹⁷. Talk of restoring the waterway ceased and the waterway went into decline.

By 1876 the trustees had stopped operating. The lock keepers remained in their positions but their job predominantly consisted of controlling flood waters. Effort was predominantly put into maintaining the main channel and keeping it clear, rather than on the bridges and other works. In 1877 the majority of the lock keepers received their last pay and the last rents had been collected some years earlier. The final Trustees meeting was held in Dublin on the 26th April 1878 and a period of complete inactivity began.

¹⁶ Delany 1986, 160

¹⁷ Flanagan 1994

No repairs were made, no maintenance carried out, no rents collected, no wages paid and no meetings held as the canal continued to fall into disrepair. Despite this inactivity (the next meeting is not recorded to have occurred until 1893) some trustees appear to have taken a minimal interest. J.B. Pratt was replaced by John Joseph Benison shortly after the former died, although the post was fairly nominal and he did not make any attempt to collect the rents that were overdue. For unknown reasons the trustees were revived in 1893. This was likely due to the fact that without some form of maintenance on the increasingly silted canal, flooding would become increasingly regular and would soon become a major problem. The Trustees were all appointed and functional in 1895 when they sent out a levy demand to the counties and maintenance works were to follow. Due to Roscommon not paying their levy until forced to by a Grand Jury, works did not commence until 1899 in Ballyconnell where a weir sluice was replaced for £120. The counties continued to be slow in paying the levies but in 1899 the Local Government Act was passed which altered the way in which the counties were governed. The Grand Juries were no longer allowed, instead County Councils were elected. The County Councils reflected the interests of those affected by flooding much more than the Grand Juries had as they had been predominantly composed of landholders who were unaffected.

Benison contacted the Fermanagh Grand Jury in 1894 and later approached the Roscommon Jury requesting new trustees be appointed. No maintenance works were undertaken once the trust reformed, however a levy demand was sent out to the counties, three of which paid up promptly. The only hold-out, Roscommon, had to have grand jury proceedings taken against it and the situation continued until mid-1898 when a decision was made that the county should pay the maintenance levy.

In 1887 the Cavan and Leitrim Railway Company's line which ran from Dromod on the MGWR Dublin-Sligo line to Belturbet on the GNR Belfast line was opened. A tramway was constructed from Ballinamore to Arigna which opened in 1888 but the final extension to the local mines was not opened until 1920. This railway system served the same area as the waterway; however, it is clear that by the time the railway was being constructed the waterway was well and truly out of use, as indicated by the construction of very low bridges over the channel, indicating a level of confidence that there would not be a need to raise them.

The railway was not a particular success either and became a heavy burden on the local ratepayers. The Shuttleworth Commission was established to look into the question of the waterway in some detail in 1906. This Commission suggested that steps should be taken to repair the upper gates of the locks to prevent water from gushing through and damaging the masonry in case the waterway was ever restored in the future. However, the funds for this were not forthcoming and the navigation trustees did little with the exception of minor repairs to bridges in order to make landowners and local authorities happy. The navigation trustees ceased to function in 1948 and local authorities took over responsibility for the bridges. Throughout this period, flooding continued to be a problem and local farmers were of the opinion that repairing the waterway would worsen this.

A local Government Act of 1898 had replaced the grand juries that had demanded that the counties pay the levies with county councils in 1899. With this transition, all responsibility for the maintenance of the waterway and canals was handed to the councils to appoint their own trustees, which was quite a shift from the grand juries who were typically prominent land owners who were remote from the actual problems that the canal produced. Although some of the new trustees appointed were of the same land owner class, some of them were local, therefore the trustees were a mix of interests represented, yet the final effect was still that little was done with the canal. Despite its newfound activity level (the trustees began to meet at least three times a year, usually January, April and July), the trustees still focused mostly on drainage schemes and their meetings dealt predominantly with financial matters.

The engineers of the trustees recommended works to be undertaken based on information received from farmers and other observations. The engineers also drew up plans and estimates for work that would then be contracted out. This seems to have been a fairly successful method of dealing with the canal, although there were occasional complaints; there is no record of longstanding legal complaints. The periodic flooding of the canal drew some resentment as the weir sluice at Ballyconnell was maliciously damaged. Corraquill lock also frequently blocked and flooded, causing some complaints in 1924 and legal action began to be considered as an option. The trustees agreed to pay for the repairs, but not until Fermanagh paid the levies they owed. This led to a new policy by the trustees of charging the counties in which the works were to take place and that would benefit from the works undertaken to pay for the repairs as it was felt that it was unfair to have other counties pay for each other's works. This worked well in most cases and led to the creation of jobs within the counties. The maintenance of the canal during this period is particularly significant as the average of the 26 half-yearly total levy demands made from 1913-35 was just under £125. Work regularly undertaken included cleaning out of drains and the occasional replacement of accommodation bridges.

In mid-1931 flooding became the major issue with the canal as the rain was so heavy that large numbers of people lost their entire hay crop and boats had to be used to rescue cattle. This led to sluices being erected near Ballyconnell. This was the last major work done on the Ballyconnell end and work turned to focus on the Ballinamore end. Cleaning of the basin was undertaken in 1933 and several other times, with the last contract being given in 1935. This was also the last contract awarded by the navigation district as after 1935 the trustees' appointments were withdrawn or the trustees resigned. Fermanagh appointed three new trustees in 1940, making them the only people in charge of the navigation district, with a large part of it lying outside of Northern Ireland.

The next major development in the life of the canal came in May 1947 when Leitrim and Cavan county councils each appointed three new trustees. There were no funds to enable these new appointees to do any work on the canal and in 1948, when the board met in February, the trustees decided that there was little point in their activities, which had consisted of irregular meetings, and ceased to meet altogether. The administration of the canal went into a state of suspended animation and the waterway continued to decay.

The canal became a nuisance and continued to occasionally cause damage during the next twenty years. Although there was talk of increased drainage, nothing was done and flooding continued. The only attention paid to the canal was to replace the accommodation bridges as they failed.

In the early 1960s tourist boating income provided very little income on the Shannon, however, by 1964 approximately £100,000 (almost double the 1963 figure) was being generated by pleasure boating in the area. A cross-border restoration scheme was proposed and the Bord of Works carried out a detailed survey for this project. They estimated the cost of restoration according to the report by the Regional and Development Section of the Economic and Social Committee of the EEC was approximately IR£3.5 million. The committee recommended the use of community funds to restore the waterway as a "priority project". They also saw no conflict between the waterway project and the arterial drainage plans for the Erne catchment area. It was suggested that the work should be carried out independently of drainage plans but fit in with subsequent drainage proposals.

Leitrim County Council had been one of the first to suggest that the waterway could be used by pleasure boaters as they had noticed an increase in the number of people using the Shannon for that purpose over the years. Given the sudden increase in river traffic, Bord Failte justified spending £140,000 to provide amenities and facilities for boaters, as well as improving the waterway and publicity. However, none of this funding was given to the Ballinamore and Ballyconnell sections.

In 1969, the Inland Waterways Association of Ireland called for a proper survey of the canal to be done, supported by the county councils. In the 1970s, there was again a call for a proper survey to be done by the OPW, despite the Erne catchment being tenth on the list of priorities for arterial drainage programs. Additional issues included, again, the combination drainage and waterways schemes and the problem of the border now dividing the waterway, although visits from the Northern Ireland Tourist Board indicated that this would not be much of a problem.

The OPW recommendation at the time, prior to any work being done on the canal, was that since traffic would likely continue to increase, the waterway should be added to and improved. They proposed that reconstruction from the Leitrim to the summit level would be quite simple with these eight locks needing only restoration; replacement of the missing lock gates and clearing the vegetation would likely be sufficient to bring this branch of the canal up to a usable standard. However the eight locks rising from Upper Lough Erne would need to be completely rebuilt, widened and refaced with old stone. The summit was in need of reduction, with a lowering of the cill of the ninth lock. This cill had previously been damaged by flood waters, so replacement was necessary. The channel to Lough Scur also needed some excavation. The eighth and ninth locks would then need refitting to be in line with the reduced water levels; however, as the Yellow River is quite steep, old levels could be restored without causing flooding. The Lough Garadice level also needed to be kept at the pre-reconstruction work levels, however, below that the Ballyconnell lock is at its original level as it is used for power development. The total proposed reconstruction work included restoring five locks, lowering the cill of another, deepening about six miles of canal and river, replacement of the gates and paddles of sixteen locks. In 1972, after a considerable amount of publicity and support, the initial surveys were carried out that led to the reconstruction of the waterway which opened in 1994.

The Erne-Ballinamore-Ballyconnell Rally Committee has suggested that the locks had undergone a ten fold increase of use in the five years previous to their 1994 report¹⁸.

Counties Leitrim and Cavan had suffered from severe depopulation prior to the canal restoration and it was hoped that this project would help to arrest some of this movement. Studies conducted at the time indicated that three-quarters of the increased revenue from tourism from the project would benefit the immediate catchment area and help to revitalize the area. Favourable conditions on the project meant that it was completed ahead of schedule by about a year and by mid-1993 was essentially complete. The canal was officially reopened on the 23rd May 1994 and today contributes to the economic and social life of the Shannon-Erne waterway.

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 waterway.

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. It also included some RMP site located along the direct line of the waterway.

¹⁸ Denham 1994

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 1 (Plates), Appendix 2 (Figures 1-6) and Appendix 3 (gazetteer).

The assessment has been divided into 2 areas:

Area 1 - Leitrim Village to Lough Scur

Area 2 - Lough Scur to Upper Lough Erne

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)
- Register of Historic Monuments
- National Inventory of Architectural Heritage (NIAH)
- County Development Plans
- Urban Archaeological Surveys
- Town Development Plans
- Irish Antiquities Division, National Museum of Ireland Topographical Files
- Ordnance Survey first and subsequent editions
- Published County Archaeological Inventories and Surveys
- Excavations Bulletin (www.excavations.ie)
- Relevant published archaeological corpora
- Local archaeological societies
- All relevant published sources
- The Waterways Ireland Bridge Survey

A full list of sources consulted is listed in the Reference section (below).

Field Survey

A walkover survey of the assessment area was undertaken by G. Geddes and A. Golden of Headland Archaeology Ltd between the 8/11/2007 and 21/11/2007. The walkover visited those sites identified during the desk-based assessment (36 sites) and those unrecorded features not previously identified (123 sites). The walkover survey was assisted by jeep and boat where appropriate. Logistical support as provided by John McCarthy of Headland Archaeology Ltd and, where necessary, further assistance was provided by Waterways Ireland staff.

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.

| SIGNIFICANCE | DEFINITION |
|--------------|---|
| High | Any sites that make a large contribution to the architectural, engineering or industrial heritage of the waterway. 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. |
| Medium | 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 being altered to an extent in modern times that its heritage value is reduced. |
| Low | Any sites that make a low contribution to the architectural, engineering or industrial heritage of the waterway 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 heritage 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.

| HERITAGE CONDITION RATING | HERITAGE CONDITION |
|---------------------------|--------------------|
| 0 | Ruin or Absent |
| 1 | Derelict |
| 2 | Poor |
| 3 | Fair |
| 4 | Good |
| 5 | Excellent |

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.

| ACTION RATING | ACTION |
|---------------|------------------------------|
| 1 | Needs immediate intervention |
| 2 | Significant repairs |
| 3 | Minor repairs |
| 4 | Minimal aesthetic work |
| 5 | Stable |

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 Record of Monuments and Places (RMP)/ Sites and Monuments Record (SMR)*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 159 sites and features recorded in this assessment six were found to have RMP numbers. These are represented in **Table 7.1** below.

Table 7.1: Known RMP sites along the Shannon-Erne Waterway.

| WIIAH | RMP | Name |
|------------|----------------------------------|---------------------|
| WIIAH 1154 | RMP LE 24053 | Castlefore Farm |
| WIIAH 1155 | RMP LE 25026 | Court Tomb |
| WIIAH 1156 | RMP LE 2600101 RMP LE 2600102 | Woodford Demesne |
| WIIAH 1157 | RMP LE 27026 | Leitrim Castle site |
| WIIAH 1158 | RMP LE 27031 | Ringfort |
| WIIAH 1159 | RMP LE 27135 | Kilclare Ringfort |

It is also important to note 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; however, there is no town or village along the Shannon-Erne Waterway with a zone of protection.

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. 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. Below is a list of identified protected structures along the Shannon-Erne Waterway.

Table 7.2: List of known protected structures on the Shannon-Erne Waterway

| WIIAH | Name | Reference | Ref. No. |
|-------|-------------------------|---|----------|
| 1008 | Killarcan Lock 16 Group | Leitrim County Development Plan 2003-2009 | 30902709 |

| | | | |
|------|---------------------------|---|----------|
| 1067 | Castle John | Leitrim County Development Plan 2003-2009 | 30902417 |
| 1156 | Woodford Demesne | Leitrim County Development Plan 2003-2009 | 30902604 |
| 1122 | Skellan Lock 3 Group | Cavan County Development Plan 2003-2009 | CV13004 |
| 1139 | Ballyconnell Lock 2 Group | Cavan County Development Plan 2003-2009 | CV14006 |

8. BASELINE DESCRIPTION

The study has identified a total of 178 sites/features through fieldwork. Of these 123 had not been identified during the desk-based study. The 36 sites identified during the desk-based assessment became apparent through a variety of means such as the NIAH, The Waterways Ireland Bridge Survey, RMP's, cartographic sources and literary sources.

Area 1 – Leitrim Village – Lough Scur (Figure 2)

Leitrim village is located where the River Shannon meets the outflow of Lough Allen in County Leitrim. The canal begins here and stretches northeast into and beyond the village, after which it continues east for some time. At present one of Leitrim's main functions is that of a tourist amenity for users of the Shannon-Erne Waterway. Within the village, there are a number of features directly related to the waterway. These include Leitrim Bridge (WIAH 1001) (obscured on its west side by the ongoing construction of a footbridge), a mooring and slipway (WIAH 1002, 1003), a barracks (WIAH 1004) and a number of modern basins and quays (WIAH 1005, 1006, 1007). These features include modern structures built specifically for the development of the waterway as a tourist attraction. Another site in this area, a castle site (WIAH 1157), was already in existence prior to the construction of the waterway but was included in the survey due to its socio-historical importance. The footing of Leitrim Bridge (WIAH 1001) effectively marks the beginning of the towpath which is present for the most part on the south bank of the canal, northeast to Lough Scur.

As it stretches eastwards, the canal becomes an embankment and encounters many features which are directly associated with the canal navigation. Within Killarcan, the only original canal associated feature is Killarcan Lock (WIAH 1008), now modernized, while other modern navigational features include a footbridge and weir (WIAH 1011), and two private moorings (WIAH 1009, 1010). Another recorded feature of socio-historical significance in the area is a late eighteenth or early nineteenth hillside cottage (WIAH1012) to the north of the lock. There are no structural remains here or at any other lock on the waterway for a Lock-keeper's Cottage.

Heading east from Killarcan to Tirmactiernan, a towpath is carried as a wide grass covered embankment on the south bank of the waterway. Tirmactiernan contains two further canal related

features including a lock (WIAH 1014) comparable with Killarcan Lock, and Tirmactiernan Bridge (WIAH 1013). To the east of this bridge, the towpath continues along the south bank with the embankment as it rises up to road level at the Crosseycarwill Bridge (WWI 1017). To the east of this bridge, the waterway comprises a rock cut and tree-lined channel with the towpath being less evident further east.

The stretch of canal between Crossycarwill and Kilclare for the most part runs northeast with most features being directly associated with the waterway including, bridges (WIAH 1018, 1020, 1025) and locks (WIAH 1019, 1021, 1026). The towpath here continues to the south as a grassy bank often obscured by ivy and other vegetation growth, also the canal bank at the west of Drumduff Lock is constructed with the same dry stone walling as the locks. In this area there is an outflow river channel to the south of the lock feeding the canal from the east. All the locks in this stretch are, in general, very similar featuring brick paving, working mechanisms, pump house, outflow, inspection chambers, modern moorings and earthworks on the north bank resulting from restoration works.

The region around Kilclare features many sites directly related to the canal. Approaching the area from the southwest, the waterway encounters a bridge (WIAH 1032), footbridge (WIAH 1038), three locks (WIAH 1029, 1034, 1037) and modern moorings (WIAH 1030, 1035, 1039). The region contains other structures relating to the canal infrastructure including a metal wheel hub of a 'mill ruin' (WIAH 1031) and a school house (WIAH 1033). This building is of socio-historical importance and is the only notable building in the Kilclare group. The canal and towpath navigate through the Kilclare area from southwest to northeast, with the locks built up on high banks. The area to the east of the group has canal banks which have been modernized and are now revetted with concrete. Modern restoration work is evident on all structures throughout the Kilclare region, with a large amount of landscaping also evident.

The area from Kilclare to Lough Scur features sites which have a direct association with the canal and its operation. Particular features of note include four bridges (WIAH 1041, 1040, 1047, 1049) and two single storey buildings (WIAH 1044, WIAH 1045), which are recorded for their socio-historical importance, as they are likely to be contemporary with the canal but not directly associated with it. Leading east to Lough Scur, the towpath continues to follow the waterway but it is not completely visible in certain areas. It is unclear to both the east and west of Lough Conway Bridge (WIAH 1041) but is clearly carried under the south side of the bridge. Leading up to Scrabbagh Bridge (WIAH 1040), the towpath is heavily overgrown. It later alters to become clearly visible on the steep south bank close to Letterfine Bridge (WIAH 1047), with some large quantities of material from the channel excavations thrown up and spread out on the south bank. Also in this area, the waterway channel widens slightly to accommodate a temporary stop or turning area on the north bank. Close to Lough Scur Bridge (WIAH 1049) the waterway is seen as a widened rock-cut channel with the towpath carried on the east bank. The channel then alters to an artificial random rubble north bank entrance to Lough Scur. In this region the north bank is relatively flat and could have accommodated the towpath, however, it is more likely that the south bank was predominantly used.

The Aghacashtau River diversion (WIAH 1177) joins the waterway at Lough Scur, but most features within the Lough are not directly associated with the original construction or operation of the canal. Features recorded for their socio-historical significance include Castle John (WIAH 1067), three Crannogs (WIAH 1160, 1161, 1162) and the causeway into Rusheen Island (WIAH 1070). Modern features within the lough include quays and moorings with associated modern structures (WIAH 1069, 1071, 1068, 1056, 1066, 1055).

Area 2 – Lough Scur – Upper Lough Erne (Figures 3, 4, 5 and 6)

To the east of Lough Scur the waterway meanders eastwards to Muckros Lough before continuing northwards through St. John's Lough and into Kiltybardan Lough. The location of a public jetty (WIIAH 1175), the Yellow River diversion (WIIAH 1178) and two Crannogs (WIIAH 1163, 1164). This stretch of the waterway sees much alteration to the canal banks and towpath. From Lough Scur, the distinct towpath is cut into the south bank with random rubble walling in places. In certain places the canal is obstructed by tree growth on the north bank. The rubble canal banks are likely to have been altered during the canal restoration works of the 1990s. An area of the towpath to the east of Kilmacsherwell Bridge (WIIAH 1057) has been destroyed due to the insertion of a modern road. There are significant banks of material to the east of Drumany Bridge (WIIAH 1072), likely to be a result of landscaping and canal re-cutting during restoration works. Throughout this stretch, there are large sections of the towpath which have been obscured by vegetation (WIIAH 1074). The towpath continues to Muckros Lough, from which point it is no longer visible as far north as St. John's Lough.

From Lough Scur to Muckros Lough the waterway passes several features of interest which directly relate to the canal and some that have been included due to their socio-historical importance. Features in this area include a bridge (WIIAH 1057), footbridges (WIIAH 1054, 1063, 1072, 1073, 1076), building remains (WIIAH1059), a weir and footbridge (WIIAH 1061, 1064), a lock (WIIAH 1062) and Castlefore Farm (WIIAH 1154). Castlefore Lock (WIIAH 1062) is a single lock which is the first on the downstream from Lough Scur to Upper Lough Erne. Castlefore farm is not directly associated with the canal but it is an estate of cultural, historical and social interest containing eighteenth century and later farm buildings. Modern features within this stretch include quays, moorings and a modern Waterways Ireland yard and quay.

As the waterway continues north and east towards Ballinamore it incorporates several features of interest including original masonry bridges (WIIAH 1077, 1083), a modern bridge (WIIAH 1084), one lock (WIIAH 1078), a footbridge (WIIAH 1079), a culvert (WIIAH 1086) and a weir and sluice (WIIAH 1080). These features are all directly associated with the canal construction and operation, while a court tomb (WIIAH 1085) located within a golf course was included in the survey due to its socio-historical importance. Close to the canal in this area is Castlerogy Road Bridge (WIIAH 1085) which is contemporary to the canal. The towpath is cut into the south bank in this area and is generally in poor condition, while a road is also carried along the north bank.

The waterway continues eastwards into Ballinamore, where it changes course to continue southwest and west through the town. Approaching the town, the waterway encounters features that are either contemporary with the canal construction or modern features, added in recent years to improve the canal appearance, and develop the economic and tourism potential of the town. The features include a modern car park (WIIAH 1089), weir (WIIAH 1088), weir footbridge (WIIAH1087), lock (WIIAH1090), canal bridge (WIIAH 1092), river bridge (WIIAH 1091), building group (WIIAH 1092) and modern marina (WIIAH 1094). The canal area within Ballinamore has under-gone large redevelopment, mainly dating to the 1990s restoration, undertaken to develop the tourist industry potential within the town. Along this stretch, the towpath follows the canal west and south and has generally been modernised, however, it is carried under the road bridge (WIIAH 1092). Close to Lock Group 6 (WIIAH 1090) a now disused light railway originally served the lock from the south. The building group within this town was noted due to its socio-historical significance as it retains the character of an early 20th century service station and a national school dating to 1889.

The town of Ballinamore reflects the progression of canal alterations including the modification of original bridges, the widening and modernization of the lock and the development of the modern marinas and associated private structures and moorings. The landscape of Ballinamore has relied on the canal both commercially and socially. It has impacted on the area's development as an amenity for both residents and visitors, as well as the limited infrastructural developments that have

accompanied the canal.

As the canal meanders south towards Garradice Lough, it passes features of interest at Ardrum including a lock (WIAH 1097) with a weir and sluice (WIAH 1096). At Aghoo there is a former railway bridge (WIAH 1101), original canal bridge (WIAH 1100), restoration period weir, sluice and footbridge (WIAH 1102, 1103), lock (WIAH 1104), wooden mooring (WIAH 1105) and marina with modern boatyard (WIAH 1110). At this point the canal has returned to a general east-west direction with the towpath being largely accessible on the south and west banks. After Aghoo, it is largely obscured, with drainage channels evident on both canal banks. Towards Garradice Lough from here the towpath does not pass under the two modern bridges at Lisnatullagh (WIAH 1106) and Carrickmakeegan (WIAH 1108).

On the shores of Garradice Lough five Crannogs were noted (WIAH 1165, 1166, 1167, 1168, 1169) However, there are many Record of Monuments and Places not recorded within the survey and they have the potential to be used in the promotion of the area as a tourist attraction due to their cultural and socio-historical associations. Recorded features within the lough included a number of modern moorings (WIAH 1113, 1114, 1116), a modern marina (WIAH 1115) and an amenity area (WIAH 1111). Despite their recent development, these features are of social and cultural importance to the continuing development of the tourist industry along the Shannon-Erne waterway. East of Garradice Lough the canal passes under Ballinacur Bridge (WIAH 1112) towards Woodford Demesne (WIAH 260001) in the northeast. This estate is generally obscured from the canal; however, it is by far the most accessible and interesting archaeological and historical focal point along the canal's length.

From Garradice Lough, the canal becomes part of the Woodford channel which allows navigation to Ballynmagauran Lough where there are two Crannogs (WIAH 1171, 1172) and then into Derrycassan Lough where there are two more Crannogs (WIAH 1172, 1174). This stretch does not contain any evidence for a towpath on either bank. The natural channel has been canalized and widened to accommodate canal traffic. This canalized section shows no evidence of artificial banks or a towpath, but there may have seen some re-cutting and dredging during the restoration process between Ballynagauran Lough and Coologoe Lough, the location of another Crannog (WIAH 1173). The canalization of the Woodford River would have assisted the canal authorities economically during the construction of the canal, whilst utilizing the natural topography of the area's landscape.

The meandering stretch between Ballynagauran Lough east as far as Skellan Lock (WIAH 1122) has a limited number of canal related features which include two bridges (WIAH 1118, 1124), a modern depth house (WIAH 1120) and a weir (WIAH 1123), as well as a modern wooden housing development (WIAH 1125) which is not directly canal associated but is a sign of the growth in tourist amenities which surround the waterway.

From Skellan to Ballyconnell the waterway continues as part of the canalised Woodford River and passes through many drainage ditches feeding the river, as well as material on both the south and east bank, possibly in place as a result of the widening and deepening of the river channel. Features encountered along this stretch include a west bank entrance to a river channel (WIAH 1126), a car park and hide (WIAH 1127), Bellaheady Bridge (WIAH 1128), and railway embankment (WIAH 1129). Bellaheady Bridge is of particular interest as it is one of the most significant, well detailed and well proportioned bridges along the route of the canal. The channel in this area east as far as Ballyconnell shows no evidence of a towpath or little alteration to the waterway. The channel is generally wide with flat low-lying land around the low river banks.

The waterway approaches Ballyconnell from the southwest, curves slightly and continues beyond the town to the northeast. Within the town, there are many sites closely linked with the canal including a

marina (WIIAH 1131), footbridges (WIIAH 1132, 1134), a masonry bridge (WIIAH 1133) and a modern quay side (WIIAH 1135). The east of the town features a lock (WIIAH 1139), masonry bridge (WIIAH 1140), weir and sluice (WIIAH 1138), and a modern footbridge (WIIAH 1137) with a river channel running to the south of the canal, rejoining it to the east of the lock. In relation to the canal, Ballyconnell is similar to Ballinamore village in that the area reflects the use of the canal as both a commercial and social amenity. Here, the canal is of great historical, cultural and social importance to the region.

The channel from Ballyconnell to Upper Lough Erne passes through Teemore Lough, Lough Amonee, Anoneen Lough and Drumard Lough and shows little sign of a towpath, with evidence of waterway alterations coming from the occasional earthworks placed on the banks as a result of the widening and deepening of the canal. Much of the bank is overgrown and the canal banks are revetted with stone. On route east from Ballyconnell to the mouth of Upper Lough Erne where the survey ends, the canal passes many associated features including bridges (WIIAH 1141, 1146, 1147), moorings (WIIAH 1150, 1151, 1148), agricultural features (WIIAH 1149), the final lock of the waterway (WIIAH 1143) and two marinas (WIIAH 1152).

The assessment has recorded a total of sixteen locks, eight to both the east and west of Lough Scur, with both areas showing differences in lock construction and modernisation. The locks are of considerable cultural, social and historical interest and demonstrate the initial stage of canal construction as well as highlighting the major changes and alterations which have taken place throughout the waterway from Leitrim Village to Upper Lough Erne.

9. SUMMARY

The nature of the Shannon-Erne Waterway and its hinterland, as defined within this assessment, has changed considerably since the waterway was completed in the nineteenth century. Despite this, the waterway is still navigable due largely to the mid-1990s restoration works as well as the continued management and upkeep of the canal and Woodford River by Waterways Ireland, principally for recreation purposes. As a result, much of the waterway's associated heritage has been afforded some protection. A great number of sites and features found along the waterway 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 waterway is developed alongside its role as a recreational asset.

Recommendations

Due to fact that the Shannon-Erne Waterway is maintained as a navigable waterway having undergone major restoration works, there is a certain amount of maintenance afforded to the **waterway** 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 incorporating modern pedestrian footbridges adjacent to masonry bridges (e.g. WIIAH 1134) and building materials used to for repairs (e.g. WIIAH 1112). Although some bridges may have been adapted with modern materials or widened to facilitate heavier loads (e.g. WIIAH 1025), others are still of the original construction, and clearly at risk from the effect of heavy traffic (e.g. WIIAH 1133). As with buildings, the growth, spread and effects of ivy needs to be monitored and managed in order to prevent structural damage (e.g. WIAH 1041, 1047).

Lock-keepers cottages are of heritage and aesthetic value to waterways but are absent from the Shannon-Erne Waterway. Only one possible Lock-keeper's Cottage (WIAH 1004) is present at Leitrim village at the west end of the waterway. Other structures such as **houses** and **farm buildings** not directly linked to the canal can be of architectural interest and contribute to the aesthetic nature of the canal (e.g. WIAH 1012, 1053, 1059). These structures add to the character of the canal but need to be maintained at 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. Where the original character of the building is still evident, it is recommended that such a renovation is in keeping with the original materials.

Partially derelict **quaysides**, such as that at Ballyconnell (e.g. WIAH 1135), 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. Modern quaysides and marinas assist in the usage of the canal, but care is needed in the design of such structures, so they do not have a negative impact on the waterway.

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 Leitrim, through the use of **marinas** and **green areas** (WIAH 1002, 1003, 1006, 1007). Also the **towpath** along the Shannon-Erne Waterway is of particular recreational importance for both locals and visitors. The upkeep of these stretches of canal bank is of vital importance to ensure the continued use of this leisure facility (e.g. WIAH 1015, 1028, 1042, 1074, 1099, 1109).

Weirs (e.g. WIAH 1123, 1138), **sluices** (e.g. WIAH 1080), and **culverts** (e.g. WIAH 1086), should be maintained to add visual interest and to illustrate the technology and engineering associated with the canal.

General Recommendations

- Management of the waterway 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 waterway.
- Use the waterway 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 waterway, 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 waterway environs.
- Inclusion of these recommendations in the relevant County Development Plans.
- Restoration, where feasible, of buildings including lock-keepers 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 waterway and its environs:
 - o Ensure that new additions or changes to existing structures are in keeping with the original character of the structure.
 - o Ensure new development is appropriately sited, complimenting and adding to the value of the waterway, whilst continuing public access.
- Repair work is recommended for many features which were built as part of the initial construction phase of the waterway. 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 as possible, particularly those that are at the early stages of collapse.
- Use the waterway and its associated structures as a recreational and commercial amenity:
 - o Repair and use original structures to enhance the waterway and house services such as toilets, showers etc. needed for canal users.
 - o 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.
 - o 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.
- Recommend that appropriate authority 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 Shannon-Erne Waterway and its associated architectural, industrial and engineering heritage are offered some level of protection by ongoing maintenance in the interest of recreation. However, if the full potential of the waterway 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.

10. REFERENCES

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Record of Monuments and Places map, Kildare Sheet no. 10, 11, 13 &14

Record of Monuments and Places map, Laois Sheet no. 24, 25, 26, 27 & 28

See also List of desk-based assessment, pp. 21