

North/South Inter-Parliamentary Association



Inaugural meeting

The Ulster Canal

Background briefing jointly prepared by the Research and Information Service (RaISe) of the Northern Ireland Assembly and by the Library & Research Service (L&RS) of the Houses of the Oireachtas (*Tithe an Oireachtais*).

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Key Points

- The re-opening of the Ulster Canal is seen as a major cross-border infrastructural project with broad political, Government and community support on both sides of the border.
- The Ulster Canal has been characterised as the ‘missing link’ in Ireland’s canal systems, allowing passage between Coleraine, Limerick, Dublin and Waterford.
- The original route of the Ulster Canal ran for 93km linking the Erne system and the Lough Neagh basin through the counties of Fermanagh, Monaghan and Armagh. However, the decision was taken at a North South Ministerial Council meeting in 2007 that only a single south-western section of the Ulster Canal would be reopened, running from Clones to Upper Lough Erne. This section is 13km long, with 75% of the route in Northern Ireland and 25% in Ireland.
- A restoration plan for this section of the route was published in 2010, and a strategic environmental assessment (SEA) was published in 2011.
- The estimated capital costs of the project are €35m/£23.8m, with additional annual maintenance costs of around €300,000/£201,000. However, it is not clear to what extent this estimate remains up-to-date, nor from where the €35m/£28m will come.
- The SEA highlights a number of potential concerns, including compliance with the European Union Habitats Directive and the Floods Directive, the conservation of built heritage features, and the biological risk of spreading invasive species.
- A socio-economic appraisal by PricewaterhouseCoopers concluded that provided all stakeholders are committed and that planning is clear and detailed, a wide range of potential benefits exist in terms of regeneration, sport and recreation, heritage and culture, and establishing a waterborne and towpath transport corridor.
- Case studies elsewhere suggest that it is typical for a wide range of funding sources to be used for such projects, that canal restoration can involve significant technical challenges, and that a range of different strategies can be employed to ensure that the post-launch waterway is a success for tourists, local residents and businesses.
- The current situation is that planning applications were lodged with Monaghan County Council, Clones Town Council, Cavan County Council and the Department of the Environment Planning Service Northern Ireland in October 2011. An inter-agency group has been established to explore ways of advancing the project.
- The next stage will be the land acquisition process and the establishment of a contract with a ‘single entity consortium’ for the design and construction of the canal.
- Issues of potential interest for discussion may include topics such as financing, natural heritage and biodiversity, drainage and flood risk, water quality, and conservation of the built heritage features along the route.

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Annex 1: Timeline indicating some of the key developments in proposals for a reopening of the Ulster Canal

1. Introduction: origins and location

The Ulster Canal is one of the last major waterway projects awaiting restoration on the island of Ireland. Most major waterway routes have been restored (as listed on p.5) or are undergoing restoration (the Lagan and Newry canals being exceptions).

In that context, the Ulster Canal has been characterised as the ‘missing link’ to Ireland’s canal systems which would allow passage from Coleraine in the North to Limerick in the West, Dublin in the East and Waterford in the South.

Historically, the Ulster Canal linked the Erne system and the Lough Neagh basin, running through the counties of Fermanagh, Monaghan and Armagh¹. It originally passed through, or close to, Clones, Smithborough, Monaghan, Middletown, Tynan, Caledon, Milltown, Benburb, Blackwatertown, Moy and Charlemont.

In total, the canal ran for around 93km with 26 locks in total. Seven locks enable the canal to rise to its summit just west of Monaghan, and a further 19 locks descend the remainder of the route down towards Charlemont. The route comprises 13km of navigation via the River Blackwater, 74km via the original route of the Ulster Canal and 5km via the River Finn.

Planning work began for the Ulster Canal in 1815². It became operational for commercial traffic in 1842³ and was formally closed in 1931. Progress on the construction of the canal and the establishment of the Ulster Canal Company (and subsequently the Lagan Navigation Company) was slow due to insufficient funds.

The peak of use on the canal came in the 1890s with between 15,000 and 20,000 tons of traffic. However, throughout its operation there were difficulties with the viability of the canal, summarised by one industrial historian as follows:

Within the relatively short space of twenty years the new waterway had become derelict, a reflection of the folly of building narrow locks, the inadequacy of the water supply, accentuated by imperfect puddle and extensive limestone seepage, the growth of rail competition, the lowering of water levels in Lough Neagh and the Blackwater...and, lastly, of the continued absence of the connecting waterway to the south-west, without which the Ulster Canal lost much of its raison d'être⁴.

The narrowness of the locks at various points along the route, such as the example at Wattle Bridge at just 11ft 8in, seems to have caused real problems, particularly in admitting larger vessels from centres such as Belfast and Coalisland.

¹ The original route of the canal was confined to these three counties, but restoration proposals involve a new section of navigation in County Cavan.

² McCutcheon, WA. 1965. *The Canals of the North of Ireland*. Dawlish: David & Charles: p99.

³ McCutcheon, WA. 1980. *The Industrial Archaeology of Northern Ireland*. Her Majesty's Stationery Office: p70.

⁴ McCutcheon. 1965: p109.

Further specific problems include a lack of water supply for the head level and western reaches of the canal from the Quigalough reservoir, with the reservoir reported to be completely dry during the summer months⁵.

Though there have been analyses of the Ulster Canal using historical sources, there are no published studies on the current condition of the Ulster Canal and its associated features.

The following map (no.1) shows the approximate overall route of the canal in south-west Ulster and highlights two sections which can be described as the north-east and south-west sections – those adjoining Lough Neagh and Upper Lough Erne respectively.

⁵ *Report of the Committee Appointed to Inquire into the Board of Works, Ireland, 1878, XXIII: pp xxxix; cited in McCutcheon. 1965: p110; works were subsequently carried out in an attempt to correct this shortfall: Ulster Canal Restoration Plan: p6.*

Map 1 – Route of the Ulster Canal

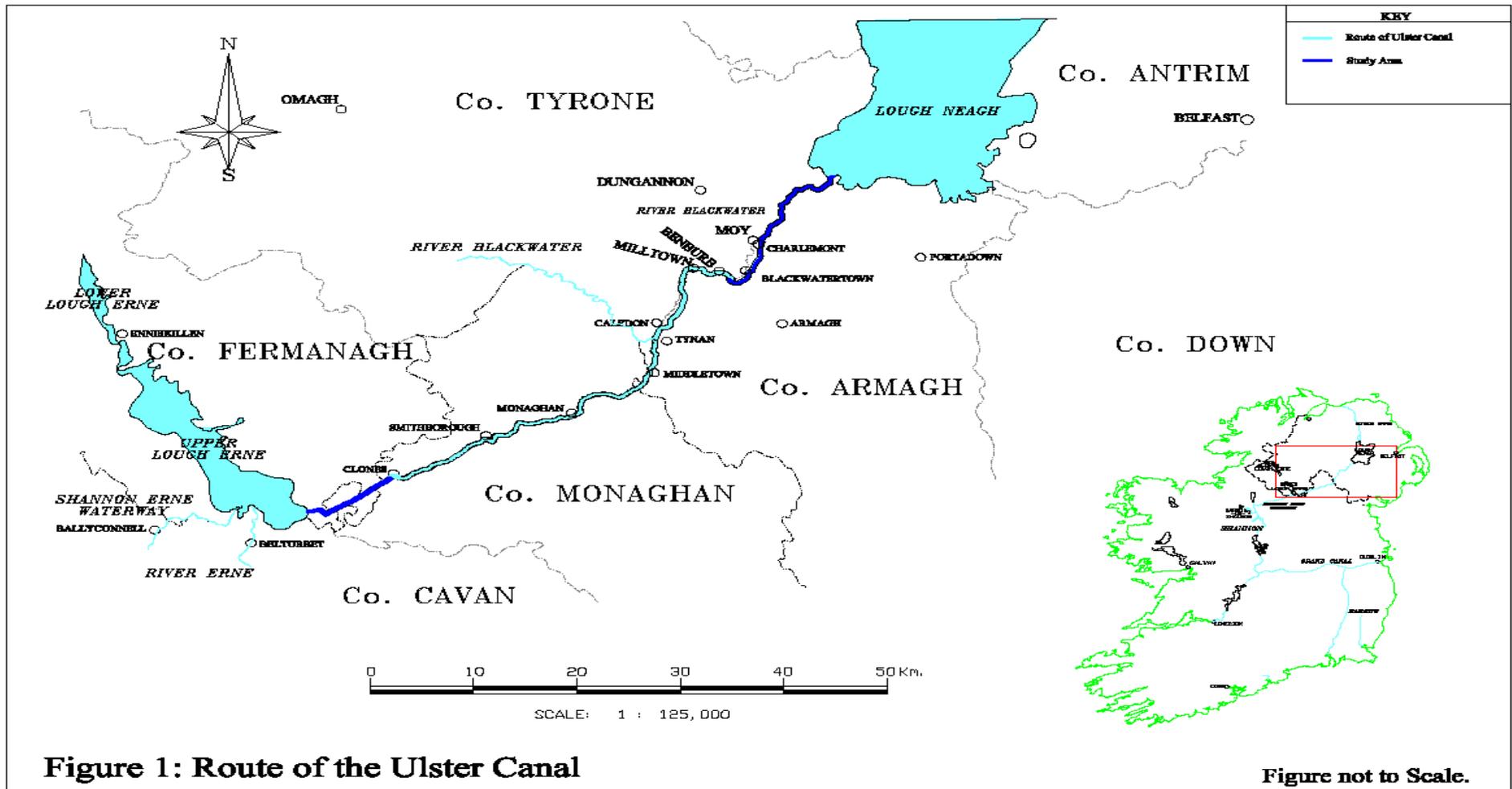


Figure not to Scale.

Source: Website of the Department of Arts, heritage and the Gaeltacht. Available online at: <http://www.ahg.gov.ie/en/NorthSouthCo-operation/WaterwaysIreland/d14503.image.2.0.en.pdf>

2. Restoration of the Ulster Canal – institutional framework

Waterways Ireland is the largest of the six North South Implementation Bodies. It was established by means of an international treaty made on 8 March 1999 between the Governments of the United Kingdom and of Ireland⁶.

Departmental responsibility rests with the Department of Culture, Arts and Leisure (DCAL) in Northern Ireland and the Department of Arts, Heritage and the Gaeltacht (DAHG) in Ireland. The fact that responsibility rests with those departments recognises that the waterway system is now an integral part of the island's heritage with a function for recreation and tourism.

Waterways Ireland operates under the policy direction of the North South Ministerial Council (NSMC)⁷ and the two Governments, and is accountable to the Northern Ireland Assembly/ UK Parliament and the Houses of the Oireachtas.

Its mission is to provide and promote high quality recreational environments centred on the inland waterways in their care, for the benefit of their customers. In doing this they aim to encourage visitors to their waterways by providing facilities which can accommodate a wide range of activities, are accessible to all, environmentally sensitive and take into account heritage values.

Specifically, Waterways Ireland is responsible for approximately 1,000 km of navigable waterways comprising:

- Barrow Navigation;
- Erne System;
- Grand Canal;
- Lower Bann Navigation;
- Royal Canal;
- Shannon-Erne Waterway; *and*
- Shannon Navigation.

The following map (no.2) illustrates Waterways Ireland's geographical responsibility.

The body has its headquarters in Enniskillen, Co.Fermanagh and regional offices in Scarriff, Co.Clare and Carrick on Shannon, Co.L Leitrim.

⁶ <http://www.waterwaysireland.org/IR/index.cfm/section/article/page/Legislation>

⁷ The North South Ministerial Council (NSMC) was established under the Belfast/Good Friday Agreement (1998), to develop consultation, co-operation and action within the island of Ireland - including through implementation on an all-island and cross-border basis - on matters of mutual interest and within the competence of the Administrations, North and South. The NSMC, therefore, comprises Ministers of the Northern Ireland Executive and the Irish Government, working together to take forward co-operation between both parts of the island to mutual benefit.

Map no.2 – Waterways Ireland



Source: *Final Ulster Canal Restoration Plan*. 2010 (p.5)

3. Current proposals

3.1 A brief historical note

Around 50% of the original route of the Ulster Canal lies in Northern Ireland and 50% in Ireland. Proposals for a reopening of the Ulster Canal have been discussed for at least fifteen years. A timeline indicating some of the main developments throughout this period, as reported in North South Ministerial Council joint communiqués, is provided in Annex 1.

3.2 The initial restoration proposal

It would seem that the first consultancy studies focusing on a reopening of the Ulster Canal were commissioned in 1997. At this stage, proposals related to the whole length of the canal. However, it was decided at the North South Ministerial Council (NSMC) Plenary on the 17th of July 2007 that the restoration and reopening of a single section only of the Ulster Canal, running from Clones to Upper Lough Erne, would proceed⁸.

3.3 The current restoration proposal

An *Ulster Canal Restoration Plan – Upper Lough Erne to Clones* was formally published by Waterways Ireland on 16 December 2010⁹, and a Strategic Environmental Assessment (SEA) was published in 2011¹⁰. The intention of this project has been described by Waterways Ireland as follows:

In line with the organisation's corporate goals the plan will allow the development of the economic and social contribution of this waterway to sustainable tourism, both as an attraction in its own right and as a link to related local businesses. It will also facilitate the identification, marketing and promotion of a wide range of waterway recreational, leisure and tourism activities in conjunction with other stakeholders¹¹.

The implementation of this plan will lead to increased investment in the region, leading to increased tourism levels with a corresponding increase in employment opportunities. Waterways Ireland's strategy for developing sustainable recreational activity in this waterway is to promote and protect the waterways as natural and cultural areas of uncompromised quality, while encouraging access for all to a range of activities and experiences sympathetic to the heritage value of the resource, thus contributing to the stability and prosperity of the adjacent communities¹².

⁸ NSMC Plenary Communiqué 17 July 2007

⁹ Waterways Ireland. 2010. *Ulster Canal Restoration Plan – Upper Lough Erne to Clones*: <http://nia1.me/zy>

¹⁰ RPS. 2011. *Strategic Environmental Assessment of the Ulster Canal (Upper Lough Erne to Clones) Restoration Plan: SEA Statement*. Waterways Ireland: <http://nia1.me/100>

¹¹ *Ulster Canal Restoration Plan*: p7.

¹² *Ulster Canal Restoration Plan*: p12.

Detailed designs, comprehensive route plans and full environmental impact assessments do not appear to have been published. Therefore, information regarding the full anticipated impact of the reopening of this stretch of canal is not yet in the public domain¹³.

The restoration plan contains five different route alternatives. These routes are broadly similar for much of the route between Clones and Gortnacarrow, but with variations in the route taken between Gortnacarrow west towards Upper Lough Erne.

Some of the alternatives (routes 1 and 2) largely make use of the original canal for this stretch, whereas others would necessitate the cutting of new navigations. Furthermore, there are variations in the degree of bridge and lock infrastructure required for each route.

Table 1: Ulster Canal (western section): summary of route options

	Route	Infrastructure and cost
1	Largely follows original Ulster Canal route, though with a new section of navigation connecting the Upper Lough Erne Navigation at Quivvy Lough with the Finn River.	Construction of two main road bridges and an agricultural access road; two separate lock structures close to their original locations; structures and 2.6km of canal estimated at €15m.
2	A new section of navigation would begin at Quivvy Lough but would make use of the River Finn, passing Derrykerrib Bridge, the Castle Saunderson Estate, Wattle Bridge and up to Gortnacarrow Bridge, crossing the A3 Cavan Road.	Raising of the bridge at Derrykerrib and construction of a new road crossing on the A3 Clones Road incorporating a double lock structure; underpinning and arch widening at Wattlebridge; dredging work on the River Finn and 0.6km of new canal; estimated at €8.5m
3	Similar to route 2 this option would involve a new section of navigation from Quivvy Lough and utilise the River Finn, passing Derrykerrib Bridge and the Castle Saunderson Estate. However, it would enter Lough Sarah across a new section of canal to Drumully Lough, and up a new section through Clogher to the north-east of Gortnacarrow.	Raising the existing bridge at Derrykerrib and construction of two new minor road crossings and three new lock structures; dredging along the River Finn and provision of 2.5km of new canal; estimated at €14.3m.
4	Also similar to route 2 this option would involve a new section of navigation from Quivvy Lough and utilise the River Finn, passing Derrykerrib Bridge and the Castle Saunderson Estate. However, it would enter Drumully Lough with a new section of canal from Drumully Lough to the north-east of Gortnacarrow.	Raising the existing bridge at Derrykerrib and construction of two new minor road crossings and two new lock structures; underpinning and arch widening at Wattlebridge and Gortnacarrow; dredging work on the River Finn and 0.8km of new canal; estimated at €9.8m.

¹³ *Ulster Canal Restoration Plan: p13.*

5	This option would appear to be the closest to the original route of the Ulster Canal. Similar to route 1, it would run from Quivvy Lough, up the River Finn and on to the mouth of the original Ulster Canal near Edergool.	Construction of two main road bridges on the B533 Newtownbutler Road and the A3 Clones road, along with an agricultural access road; two separate lock structures close to original locks; raising of the existing bridge at Derrykerrib; estimated at €15.9m.
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In addition to the construction options set out above, the restoration plan states that water to supply the canal (for all of the different route options) will be pumped from Lough Erne and returned via gravity, so “there should be no net change to flows in the Erne system”¹⁴.

The route eventually selected as the preferred option is route 2 (highlighted above), following an assessment by Waterways Ireland on the basis of such factors as safety, environment and heritage, sustainable development, and regeneration potential¹⁵. This section is 13km long, with around 75% of the route in Northern Ireland and 25% in Ireland.

Some of the specifications of this route have subsequently been described as follows:

- The ‘top water width’ of the canal will be 13m;
- Lock and bridge widths are to be 6m, and the locks 26m long;
- A surfaced towpath will be constructed with a grassed access path on the opposite bank;
- There will be approximately 4km of re-excavation of in-filled canal, 4km of ‘resizing’ of existing canal;
- Two new locks or a double lock will be constructed;
- Four new road bridges will be required, along with ‘alterations’ to four original canal masonry bridges, and five small access bridges; and
- A new marina will be constructed in Clones, as well as moorings at Castlesaunderson and Gortnacarrow.

¹⁴ *Ulster Canal Restoration Plan: p22.*

¹⁵ *Ulster Canal Restoration Plan: p29.*

4. Socio-economic impact

The current proposal is for a restoration of a 13km stretch of the south-west part of the canal. However, it is worth setting this proposed partial restoration in the context of assessments made of the socio-economic impact of reopening the canal in its entirety.

4.1 The Ulster Canal ‘corridor area’ – background

As set out in a 2007 report prepared by Fitzpatrick Associates¹⁶ the Ulster Canal ‘corridor area’, may be defined as the six mile corridor either side of the Canal which encompasses a population of just over 100,000 persons on both sides of the border. The ‘corridor area’ includes the city of Armagh and the town of Dungannon, as well as the towns of Monaghan and Clones and the smaller settlements of Charlemont, Moy, Blackwater, Benburb, Milltown, Caledon, Tynan, Middletown and Smithborough.

The population of the area is younger than average and the area is predominantly rural with the exception of the larger settlements listed above. The economy of the Canal corridor area relies heavily on the traditional activities of agricultural and agri-related manufacturing business. These are sectors which have suffered from competitive pressures and are declining as sources of employment.

Private services are relatively undeveloped compared with other parts of both jurisdictions and the public sector is relatively small in employment terms. The tourism sector is also relatively undeveloped compared with other areas. As a result of these factors, the area lags behind the national average performances in terms of employment creation and levels of economic activity.

4.2 Potential impact of re-opening the whole course of the Ulster Canal

As stated in the Executive Summary of the *Socio economic report for the NE and SW sections of the Ulster Canal (Final report, February 2006)* which was prepared for Waterways Ireland by PricewaterhouseCoopers¹⁷ a review of the available literature revealed that there is a wide range of potential benefits associated with canal restoration and that these go beyond the benefits associated with the waterway itself.

The benefits listed in the report include:

In terms of regeneration:

- Act as catalyst for economic and social renewal;
- Increase development value and the opportunity for investment;
- Focus and link regeneration opportunities;
- Generate long-term economic activity and opportunities for employment; and

¹⁶ Restoration of the Ulster Canal Updated Economic Appraisal – Final Report, June 2007: pp10-11.

¹⁷ Available online at: <http://www.ahg.gov.ie/en/NorthSouthCo-operation/WaterwaysIreland/d14510.image.3.0.en.pdf>

- Promote inclusion and quality of life.

In terms of sport and recreation:

- Provide an important sport and recreation resource; and
- Contribute to the health and well-being of society.

In terms of tourism, waterways:

- Act as a tourism asset in their own right;
- Provide a link between existing / new attractions;
- Support the holiday industry through water-based activities; and
- Enhance the environment and attract increased visitor activity.

In terms of heritage, culture and the natural environment:

- Form a unique heritage, cultural, educational landscape and environmental resource; and
- Host a wide array of important historic buildings and structures.

In terms of transport:

- Act as a waterborne transport corridor for people and freight; and
- Form important cycling, walking and public access corridors.

However, the report continues by stressing that case studies show that in order to realise the benefits, that it is important that all stakeholders are committed and encouraged to be involved at all levels, while clear and detailed planning is required from the start. In addition, it is important that there is an emphasis on developing land-based activities / facilities as well as water-based.

These points are underscored by an academic review of the socio-economic potential of the restoration of the canal which was published in by Shiels (2008).¹⁸

¹⁸ Sheils, Marion, Vol. 22, 2008, *The Ulster Canal: A Cost-Benefit Analysis*. Available online at: <http://www.tcd.ie/Economics/SER/pasti.php?y=08>

In relation to employment Shiels points out that (p.94):

The areas surrounding the canal are heavily reliant on agricultural and rural industries. With the considerable decline of these industries in other parts of the country, communities in the border regions are experiencing severe economic pressure. The development of the canal offers extensive employment opportunities through a wide variety of industries, including the construction of the canal itself. In a survey undertaken by the IAWI¹⁹, which questioned 101 businesses along the canal, 40% of employers felt that the reopening of the canal would lead them to hiring new staff. The general consensus that emerged was that considerable support for the reopening exists, with many feeling that the benefits attributed to it outweigh any economic costs. In terms of the Clones harbour, there are ample possibilities to fully exploit the opportunities available. It has been considered that an investment in a marine area would be of great economic significance as there are no such amenities in close proximity along the Erne and Shannon-Erne Canals. Thus there is a potential market opportunity for the provision of amenities and services for the people utilising the marina. Other prospects for economic development includes development of accommodation and hospitality facilities, increased provision for leisure activities, housing development, and business opportunities in the form of land and water based activities.

The assessment is similarly positive with regard to tourism related economic benefits (p.95):

Indeed, in an audit of tourism undertaken for the Monaghan region, it was found that there are considerable economic benefits to be availed of in relation to tourism. It was proposed that the development of wetland in the surround areas, water tourism and the establishment of walking and cycling routes would all boost tourism. The Monaghan region has long been considered a leader in fishing activities, and the reopening of the canal provides the opportunity to advance this industry further. In a study undertaken by the IAWI, it was found that the potential direct expenditure by tourists is estimated to lie between £2.6m-£3.2m per annum. If one allows for the multiplier affect, this rise to £3.1m-£4m per annum.

Revenue From Boating: The fleets along the Shannon and Erne have been expanding steadily in recent years. Both the hire and private boating sectors have become increasingly popular. Hence, the revenue that could be expected from these fleets is enormous due to the expenditure in local areas, and the potential revenue that could be extracted from locks and harbo[u]r usage.

¹⁹ The Inland Waterways Association of Ireland (IWA) is a voluntary body of inland waterways enthusiasts. It advocates the use, maintenance, protection, restoration and improvement of the inland waterways of Ireland. The association was founded in 1954 to campaign for the conservation and development of the waterways and in particular their preservation as working navigations. It has approximately 3,500 members mainly organised in branches associated with the major navigations across the island. The association is a company limited by guarantee and a registered charity.

While there do not seem to be any estimates of the economic gains that should accrue from the current proposed re-opening of the 13km stretch of the Ulster Canal, text box 1 sets out the potential economic benefits of re-opening the whole canal.²⁰

Text box 1 – Potential economic benefits of restoring the Ulster Canal

Summary of potential economic benefits arising from restoration of the Ulster Canal

- Expenditure by visitors as a result of a fully restored Ulster Canal has been estimated at between £2.6million and £3.2million per annum;
- After including multiplier effects this rises to between £3.1 million and £4 million per annum;
- The creation of at least 12 indicative development sites along the Canal corridor with a total area of 23.3 hectares;
- Increased demand for accommodation and hospitality, ancillary businesses and new housing provision;
- This increased economic activity in the Canal corridor area is estimated to create between £5 million and £10 million per annum of additional value added in the local economy;
- This increased activity could give rise to an additional 300-400 jobs in the area;
- Jobs created in construction of Canal are estimated to amount to around 300 jobs per annum or in total 2,300-2,600 person years of employment; and
- Additional receipts to the public exchequer, in relation to income tax from additional employment, VAT payments on goods and services and increased rates revenues for local Councils.

Finally, with regard to the social benefits Sheils notes that the areas surrounding the canal have suffered from significantly higher levels of unemployment in comparison to other regions in Ireland. She proposes that the reopening of the canal provides a window of opportunity in which cross-border investments may be exploited and a sense of “entrepreneurial hunger” can become instilled in the region.

²⁰ Blackwater Regional Partnership Socio Economic Study of the Ulster Canal Final Report, p.vi

4.3 The implications of not re-opening the canal

The basic socio-economic reality of the Ulster Canal corridor was highlighted by a Waterways Ireland report published in 2006:²¹

In the absence of restoring the Canal, the current gap in economic performance between that of the Ulster Canal corridor area and the Northern Ireland and Ireland economies could widen:

- *The two main sources of employment and business activity in the canal corridor are vulnerable from the threat of globalisation and increased competition;*
- *Foreign direct investment is unlikely to offer many jobs in the area;*
- *With lower levels of wages, and employment opportunities some of the rural areas in the corridor may experience further depopulation; and*
- *In addition, economic hardship can often exacerbate social problems/tensions.*

4.4 The implications of a partial re-opening of the Canal (as proposed)

Finally, concerns have been raised that while re-opening the Ulster Canal in stages is understandable (from a funding view point), a partial re-opening of the canal could fail to capitalise on the benefits that might otherwise accrue. Some of these concerns were that:²²

2.23 Respondents were of the opinion that by limiting restoration to one portion of the canal it would dilute the potential benefits to the area. Many respondents feared that this approach would be detrimental to fully restoring the Ulster Canal corridor.

2.24 Respondents were concerned that if these two sections are reopened in isolation it would result in little additional boating being attracted to these areas.

²¹ Waterways Ireland Socio economic Summary Report for the NE and SW Sections of the Ulster Canal Final Report February 2006, pp39-40.

²² Waterways Ireland Socio economic Summary Report for the NE and SW Sections of the Ulster Canal Final Report February 2006, pp.8-12.

5. Environmental impact and potential mitigation strategies

A strategic environmental assessment (SEA) of the stretch of the Ulster Canal running from Upper Lough Erne to Clones was published by RPS Group²³ in conjunction with Waterways Ireland in 2011. Such an assessment is a requirement under EU Directive 2001/42/EC, transposed in Northern Ireland through SR no.280 and in Ireland through SI 435 and SI 436.

In terms of its impact on natural heritage, the proposed route has the potential to impact on two Special Areas of Conservation and one Special Protection Area. These areas are designated by the Habitats Directive (92/43/EEC) and the Birds Directive (EC/79/409), and thus an Appropriate Assessment (AA) is required, the final output of which is a Natura Impact Report (NIR).

In terms of its impact on built and cultural heritage, the restoration plan states that there are 40 sites and monuments and over 25 protected structures²⁴. Of the 17 bridges potentially affected by the restoration of this section of the Ulster Canal, four of these are original. The two original locks, it is stated, will be replaced 'with a new fully automated modern lock system'²⁵, and the four original masonry bridges will be subject to 'alterations'²⁶.

A number of revisions were made to the restoration plan on the basis of the recommendations made by the SEA. Ten 'environmental objectives' are now included within the plan, as follows:

1. Prevent damage to terrestrial, aquatic and soil biodiversity, particularly EU designated sites and protected species. Restore old navigation and canal aquatic habitat and provide vehicle for development of new waterway wildlife corridor for the region.
2. Provide an economic boost for the region and contribute to sustainable development.
3. Provide a peaceful recreational environment for public use with access for all and with no risk to human health.
4. Avoid damage to the function and quality of the soil resource in the study area.
5. Navigation to achieve Good Ecological Potential and not to cause deterioration in water status of any waterbodies.
6. Minimise emissions to air as a result of restoration and operation of the canal.

²³ This consultancy company's website is available at: <http://www.rpsgroup.com/getdoc/383bbe87-cd30-457b-a178-d4cc5d41d76f/Ireland.aspx>

²⁴ *Ulster Canal Restoration Plan*: p14.

²⁵ *Ulster Canal Restoration Plan*: p22.

²⁶ Department of Arts, Heritage and the Gaeltacht, released through the North-South Ministerial Council. 16.8.12. *Note on Ulster Canal for the North South Inter Parliamentary Association*: p2.

7. Minimise contribution to climate change by emission of greenhouse gases associated with restoration and operation of the canal, and take account of the predicted changes in future climate.
8. Restore old navigation and associated infrastructure, and provide vehicle for development of new infrastructure for the region.
9. Restore navigation related cultural heritage features. Avoid damage to cultural heritage features not associated to canal.
10. Avoid damage to local landscape and vistas.

These objectives are not inconsistent with the environmental objectives set out for other canal restoration projects. For example, the SEA for a reopening plan of the Lagan Canal sets out similar objectives, with proposed mitigations in each case²⁷.

It may be noted that any major infrastructural works may involve unintended environmental consequences and that inland waterways are no exception (text box 2).

Text box 2 - The Zebra Mussel

Zebra mussels are an invasive species in Ireland, originating in the lakes of south-east Russia. The species was probably introduced to the island in ballast water to the Shannon Estuary in the 1990s, and it has since colonized many rivers and lakes throughout the island of Ireland including both Lough Erne and Lough Neagh.

They can attach in large numbers to any hard surface, causing problems for boat engines, water intakes, pumps, jetties and buoys.

Zebra mussels are environmentally detrimental as their presence can lead to an increase in water clarity, the rapid growth of plants and algae, and then the choking of waterways. Other effects include the colonisation of native mussel populations and impacts on various species of fish.

The blocking of waterways and alterations to fish populations could potentially lead to negative impacts on tourism.

The mussels are spread through natural water currents, on boat hulls, on keep nets and other fishing equipment, and through the transfer of bilge water.

Various control initiatives are in place in both Ireland and Northern Ireland, but zebra mussels are virtually impossible to remove once they become established.

The risk of the spread of invasive species was identified as a risk in the Strategic Environmental Assessment of the Ulster Canal.

²⁷ URS. 2012. *SEA of Lagan Navigation Reopening Plan: Summary of proposed mitigation.*

In terms of built heritage, the restoration plan states that an objective is to “restore navigation related cultural heritage features” and to “avoid damage to cultural heritage features not associated to canal”.

The SEA presents a number of potential impacts and also identifies the risk of damage to heritage features. A mitigation measure is stated for this risk as follows:²⁸

Construction supervision by qualified archaeologists, combined with sensitive construction methods and restoration would mean this damage or destruction could be kept to a minimum...

However, it is *not* stated that a survey of heritage features or recording of those to be altered, destroyed or restored is to be carried out. The Council of Europe Convention on the Protection of the Archaeological Heritage 1992 (the Valetta Convention)²⁹, to which both Ireland and the UK are signatories, states that parties undertake “the allocation of sufficient time and resources for an appropriate scientific study to be made of the site and for its findings to be published”.

Indeed, both section 34 of the *Local Government (Planning and Development) Act 2000*³⁰ in Ireland, and policy BH4 of Planning Policy Statement 6³¹ in Northern Ireland, state that such mitigation should take place in advance of development work.

A draft document has been created by the Northern Ireland Environment Agency (NIEA) entitled *Guidance for Protection of the Built Heritage of the Canals and Inland Navigations of Northern Ireland*³², and this highlights a number of specific risks associated with development work along stretches of historic canal.

Among these, the potential for damage to original fabric such as lock chambers, copings, lock floors, landscaping, canal beds, reaches and banks, tow paths and bridges are described.

The document cites the international recognised principles of the Burra Charter³³ which state that development should be carried out with minimal intervention, maximum retention of historic fabric, reversibility, and clarity.

The NIEA draft guidance document cites Lock 12 on the Lagan Navigation as an example of a restored, functional canal feature which is now protected as a scheduled monument.

²⁸ RPS. 2011. *Strategic Environmental Assessment of the Ulster Canal (Upper Lough Erne to Clones) Restoration Plan: SEA Statement*. Waterways Ireland: <http://nia1.me/100>: p32.

²⁹ Convention on the Protection of the Archaeological Heritage 1992: <http://nia1.me/103>

³⁰ Local Government (Planning and Development) Act 2000: Part III, Section 34: <http://nia1.me/k8>

³¹ Planning Service of Northern Ireland. 1999. *PPS6: Planning, Archaeology and the Built Heritage*. Department of the Environment: <http://nia1.me/m0>

³² Northern Ireland Environment Agency. *Guidance for Protection of the Built Heritage of the Canals and Inland Navigations of Northern Ireland: A draft paper*. HM 456.

³³ International Council on Monuments and Sites. 1999. *Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance*: <http://australia.icomos.org/publications/charters>

6. Issues raised by similar projects elsewhere

The comparability of canal restoration projects is problematic as variables such as geology, condition, length of the route, degree of urbanism or rurality, and presence of pre-existing leisure infrastructure would suggest that no two projects are ever truly alike.

However, the following are examples of canal restoration projects which have occurred in recent years and which may be of interest within the context of the Ulster Canal.

6.1 Shannon-Erne Waterway, Ireland/Northern Ireland

- This navigation, known previously as the Ballinamore and Ballyconnell Navigation, was reopened in 1994, following a four year restoration project with a budget of IR£30m/€38m³⁴ provided by the British and Irish Governments, the European Regional Development Fund, the International Fund for Ireland, and the Electricity Supply Board³⁵. It runs from Leitrim to Upper Lough Erne and is 63km in length.
- By 1999, it was estimated that 3,500 boats per annum were using the waterway, bringing an average of 14,700 visitors³⁶, with more than half of these from outside Ireland³⁷.
- Similar to the Ulster Canal, the Ballinamore and Ballyconnell Navigation faced significant challenges during its original phase of use in the nineteenth century, including leaking locks, shallow water, and badly built bridges and towpath³⁸, with a comparatively short period of active use.
- It is proposed of the Ulster Canal that an adequate water supply will be ensured through the pumping of water into relevant sections of the waterway. Similarly, the restored Shannon-Erne Waterway uses two large pumps to extract water from the Shannon at Leitrim Village, where there is a relatively large catchment, up to the summit level³⁹.
- Following the opening of the navigation, the invasive zebra mussel progressed from the River Shannon to Lough Erne, probably on the hulls of vessels travelling up the Shannon-Erne Waterway⁴⁰.
- Of the 16 locks, the eight from Lough Scur to Lough Erne were newly constructed (though using stone from the original locks as facing), while the eight locks down to the Shannon were repaired but are largely original.

³⁴ Department of Arts, Heritage and the Gaeltacht, released through the North South Ministerial Council. 16.8.12. *Note on Ulster Canal for the North South Inter Parliamentary Association*: p3.

³⁵ The Irish Times, May 23, 1994: 'Shannon-Erne Waterway a cross Border cruising zone'.

³⁶ Belfast Telegraph, March 2, 1999: 'Opening up the Lough'.

³⁷ The Irish Times, June 30, 1999: 'Shannon-Erne route a huge success'.

³⁸ Flanagan, P. 1994. *The Shannon-Erne Waterway*. Dublin: Wolfhound Press Ltd: p46.

³⁹ *The Shannon-Erne Waterway*: p84.

⁴⁰ Maguire, C, Rosell, R & Roberts, D. 2005. *Management of the Impacts of Zebra Mussels in Northern Ireland and Determination of Effects on Fish Populations in Lough Erne through Alterations of the Food Web*. Report commissioned by Northern Ireland Environment and Heritage Service: p2.

- Although some Brown Trout spawning beds were disturbed through dredging work, a number of stretches of gravel were deposited in an attempt to reinstate such beds⁴¹.

6.2 Lowland Canals, Scotland

- The Lowlands Canals consist of the Forth and Clyde Canal (around 65km in length) and the Union Canal (53km in length). The reopening project took place from 1998, and was completed in 2002, at an estimate cost of £84.5m.
- A mix of funding was employed to complete the project, involving £32m from the Millennium Commission, £5m from British Waterways, £17m from Scottish Enterprise, £9m from the European Union (via ERDF funding), and almost £6m from seven different local authorities.
- The project was implemented with six associated strategies, covering operation, development, tourism, SMEs, regeneration, and training and employment.
- A highly structured approach was taken to the layout of the reopened navigation, with support facilities (such as moorings, effluent disposal, pubs and restaurants) at one-hour intervals, and tourism and leisure facilities (such as a play area, overnight accommodation, and a visitor centre related to canal/industrial heritage) at 24 sites⁴².
- Specific targets were set out for Year 5 after the canal had been opened, including 650 permanent moorings in 6–8 locations, and ‘a large number’ of temporary moorings.

6.3 Droitwich Canals, England

- The Droitwich Canals consist of the Barge and Junction Canals, and both underwent a restoration project from 2007 at a cost of £11m. The whole canal project was completed in 2011.
- Like the Ulster Canal, the Droitwich Canals represent an important link in the wider canal system connecting the River Severn with the Worcester and Birmingham Canal.
- The project was planned and conducted by the Droitwich Canals Partnership, consisting of Worcester County Council, Wychavon District Council, the Droitwich Canals Trust, the Waterways Trust and British Waterways.
- Funding was provided by a mixture of funders, including the Heritage Lottery Fund, Sport England, two local councils, and the local regional development agency.
- A portfolio of reports accompanied the reopening plan, including a Training and Volunteer Plan, a Conservation Plan, and an Interpretation, Arts and Education Plan.
- The project was conceived as a ‘linear park’, involving recreational use by both local people and incoming visitors and seeking to ‘conserve and enhance the natural and

⁴¹ *The Shannon-Erne Waterway*: p96.

⁴² *Socio economic Summary Report*: pp23–25.

built environment and provide a range of informal recreational opportunities for local people and visitors, thereby generating economic benefit and contributing to the wellbeing of the people of Worcester⁴³.

- The project involved a number of significant technical challenges, such as the use of an existing culvert to run the canal underneath the M5 motorway, and the construction of a pipeline to minimise the mixing of river and canal water.

⁴³ *Socio economic Summary Report: p29.*

7. Funding

The restoration plan specifies that the full capital cost of the reopening programme is estimated to be €35m/£23.8m, with these costs being met in full by the Irish Exchequer⁴⁴.

It is not clear to what extent these estimates are still current. The figures were reported at a NSMC meeting on 17 October 2007. An outline business case completed by Fitzpatrick Associates⁴⁵ that same year provides slightly different figures:

Table 2: Potential costs (from a 2007 outline business case)

	£	£	£	£	£	£	£
	Option 1	Option 4a	Option 4b	Option 4c	Option 5a	Option 5b	Option 5c
	Do nothing	Restore full canal	Full restoration in two stages	Full restoration 10 year gap	Restore both ends	Restore western section	Restore eastern section
Land	0	7,247,314	7,247,314	7,247,314	2,230,059	1,268,280	961,779
Capital Restoration Costs	0	120,193,022	120,193,022	120,193,022	29,476,941	19,626,633	9,850,308
Non Capital Costs	0	14,112,524	14,112,524	14,112,524	5,295,069	3,508,908	1,786,161
Total	0	141,552,860	141,552,860	141,552,860	37,002,069	24,403,821	12,598,248

The business case states later on in the document that an optimism bias of 27% should be applied to non-land costs. Such a bias would increase costs estimates for the western section of the canal to £30,650,416. It is not clear how this figure relates to the figure of £23.8m.

Furthermore, the costs of the five different route options presented in the 2010 restoration plan vary from €8.5m (for the preferred option) up to €15.9m. It is also not clear which, if any, of these various different figures were included in the estimate of €35m.

Some doubts have been expressed about the viability of the capital funding in the current economic climate⁴⁶:

⁴⁴ *Ulster Canal Restoration Plan*: (2010, p3).

⁴⁵ Fitzpatrick Associates. 2007. *Restoring the Ulster Canal: Outline Business Case*: <http://nia1.me/109>

⁴⁶ BBC News. 11.1.12. 'Doubt over Ulster Canal funding from Republic of Ireland': <http://www.bbc.co.uk/news/magazine-19275450>

Indeed, a paper provided recently through the NSMC suggests that the full capital costs may not be met, at least in the short to medium term, by the Irish Exchequer:

...the NSMC Plenary meeting in July 2007 agreed to proceed with restoration of the section of the Ulster Canal between Clones and Upper Lough Erne in the light of the then Irish Government's offer to cover the full capital costs of the project (estimated at €35m). However, Government Accounting procedures do not provide, in that sense, for the 'ring-fencing' of funds for projects of this nature. It was always the intention that the Ulster Canal project would be funded from the Waterways Ireland annual allocations...It was a key consideration throughout the process that the Ulster Canal project would be supported by a significant level of projected income from the commercialisation of certain Waterways Ireland assets – a scenario that has been affected negatively by the economic downturn⁴⁷.

7.1 Long-term maintenance costs

In terms of long-term maintenance costs, it is stated in the restoration plan that Waterways Ireland 'will maintain and develop the navigation in line with its statutory remit and experience'⁴⁸. An estimate is provided for these costs in the restoration plan document of €300,000/£201,000, and these will be met by both the Northern Ireland Executive and the Irish Government.

However, similar to the capital costs indicated above, it is not clear to what extent this figure is an up-to-date one, or whether it is a generic estimate covering all of the different route options, or one tailored specifically to the preferred route.

⁴⁷ Department of Arts, Heritage and the Gaeltacht, released through the North South Ministerial Council. 16.8.12. *Note on Ulster Canal for the North South Inter Parliamentary Association.*

⁴⁸ *Ulster Canal Restoration Plan: 2010, p32.*

8. Recent developments

Following the latest North South Ministerial Council meeting relating to waterways which was held in July 2012, a joint communiqué was issued which stated the following regarding developments with the Ulster Canal project:

The Council received a progress report on the restoration of the Ulster Canal from Clones to Upper Lough Erne. Ministers noted that the project is progressing through the planning application process in both jurisdictions and that an inter-agency group that has been set up to examine all possible options to advance the project, will hold its first meeting in July. Ministers discussed options, prepared by Waterways Ireland, for progressing the Ulster Canal project. These will be explored taking account of fiscal constraints⁴⁹.

A paper subsequently released by the NSMC and which was prepared by the Department of Arts, Heritage and the Gaeltacht confirms that the planning and compulsory purchase order phases of the project could be completed in early 2014.

The latest update on the situation regarding the restoration plan for the Ulster Canal in Northern Ireland was provided by the Minister of Culture, Arts and Leisure in May 2012:

The Ulster Canal project is progressing through a number of incremental steps. The Planning applications were lodged by Waterways Ireland with Monaghan County Council, Clones Town Council and Cavan County Council on 25 October 2011 and with the Department of the Environment Planning Service NI on 28 October 2011. I have been informed that Cavan County Council has granted planning permission and that Monaghan County Council and Clones Town Council requested additional information which was provided on 25 April 2012.

I understand from the Minister for Arts, Heritage and the Gaeltacht that, towards the end of last year, he met with senior officials of Monaghan County Council, Fermanagh District Council and Waterways Ireland to discuss approaches to setting up an inter-agency group that could examine ways in helping to advance the Ulster Canal project. Officials of his Department are currently finalising the terms of reference for the inter-agency group. I look forward to that work continuing in the period ahead⁵⁰.

Discussion of the issue occurred in Northern Ireland during ministerial questions for the Culture, Arts and Leisure Minister in February 2012. During this session, indications were provided of the likely next steps in the process⁵¹:

⁴⁹ North-South Ministerial Council, Inland Waterways Joint Communiqué 9.7.12: <http://nia1.me/104>

⁵⁰ Response to Assembly question AQW 11318/11-15 by the Minister of Culture, Arts and Leisure, 14.5.12.

⁵¹ Oral Answers to Questions – Culture, Arts and Leisure: <http://nia1.me/105>

- Assuming planning approval is granted in all of the relevant areas, and once funding is committed, the land acquisition process will begin.
- Information indicates that nine months is the average time it takes for a compulsory purchase order.
- Waterways Ireland has in place a draft programme which includes the planning permission process, land acquisition and the letting of the contract.
- The contract for the construction phase of the project should be awarded in 2013.

A paper provided through the NSMC confirms that an Inter-Agency Group has now been established with agreed terms of reference⁵².

⁵² Department of Arts, Heritage and the Gaeltacht, released through the North South Ministerial Council. 16.8.12. *Note on Ulster Canal for the North South Inter Parliamentary Association*: p5.

9. Potential issues for consideration

The restoration of the Ulster Canal is an initiative which forms part of a long-running strategy which aims to restore waterways and by doing so to capitalise on potential cross-border heritage, environmental and socio-economic benefits. This is a project with broad support from a wide range of stakeholders including local communities.

However, in the context of the information contained in this paper, it may be that there are aspects of the following issues which may invite further debate. Some of these points were also raised by respondents during the consultation exercise⁵³.

9.1 Costs

- To what extent is the estimated investment of €35m/£23.8m, with additional annual maintenance costs of around €300,000/£201,000, balanced by the potential socio-economic benefits of the reopening of this section of the Ulster Canal?
- Are these estimated costs still up-to-date, and have they been revised following more detailed survey work and route plans in the previous 12 months?
- Several studies have described the socio-economic benefits of re-opening the whole canal but to what extent will those benefits be impacted by the NSMC decision to open only the south-west part of the canal?
- As set out on p.22 of this paper it is not currently clear where the capital funding for the re-opening of the south-west stretch of the canal will come from.

9.2 Natural heritage and biodiversity

- Are the scope and nature of environmental commitments stated in the restoration plan sufficient to ensure the correct balance between development of the Ulster Canal and local environmental conditions?
- Are mitigation plans sufficient to avoid damage to the two Special Areas of Conservation and one Special Protection Area potentially impacted by the proposed route of the canal? Will the requirements of the Habitats Directive and the Birds Directive be sufficiently met?
- With the opening of new sections of navigation, what is the potential for the spread of non-native species – some of which are potentially invasive – and what measures will be put in place to prevent this?
- What impact will there be on the migration of fish species, particularly salmon and eels, from developments such as the opening of new stretches of waterway and the dredging of sections of natural waterway?

⁵³ RPS. 2011. *Strategic Environmental Assessment of the Ulster Canal (Upper Lough Erne to Clones) Restoration Plan: SEA Statement*. Waterways Ireland: <http://nia1.me/100>: p22–3.

9.3 Drainage and flood risk

- Given the changes in the distribution and flow of water (particularly in and around the River Finn), does the restoration plan for the Ulster Canal take sufficient account of the potential for increased flood risk? Will the requirements of the Floods Directive be met? What risk assessment, mitigation and alleviation measures will be taken?
- Will the requirements of the Water Framework Directive, and particularly the River Basin Management Plans, restrict the potential development and operation of the Ulster Canal?

9.4 Water quality

- With the opening of new water courses, is there an increased risk of nutrient enrichment of existing natural water courses from agricultural land? How does this risk vary along the proposed route of the canal? What measures will be undertaken to ensure this does not take place, and how will compliance with the Nitrates Directive be maintained?

9.5 Built heritage

- What will be the impacts of the restoration plan on the cultural, architectural and archaeological features along the route of the canal? What measures will be put in place to mitigate against the potential loss of information?
- Were any built heritage and industrial archaeology groups consulted on the restoration plan, and, if so, what were their views on the nature of both the proposals and the mitigation measures?

Annex 1: Timeline indicating some of the key developments in proposals for a reopening of the Ulster Canal⁵⁴

1997	Consultancy study commissioned by the Rivers Agency of the Department of Agriculture in Northern Ireland and Dúchas, the then Heritage Service of the Department of Arts, Heritage, Gaeltacht and the Islands.
June 1998	Consultancy study submitted, including an engineering study, economic appraisal and an environmental scoping study.
2000	Waterways Ireland asked by consultants to update the original study to year 2000 cost terms and to produce a year-by-year cost profile for a restoration project.
29 Jan 2001	Consultancy study 'regarding the feasibility of re-opening the Ulster Canal' almost completed, and a 'draft final report' received by Waterways Ireland.
27 June 2001	Waterways Ireland presented NSMC with a report on the consultants' study and findings, which set out a number of options for the way forward.
23 Nov 2001	Feasibility Study on the reopening of the Ulster Canal still being considered by the Department of Arts, Heritage, Gaeltacht and the Islands, the Department of Culture, Arts and Leisure and both Finance Departments.
26 June 2002	NSMC received a briefing on a public meeting held in Monaghan organised by the Inland Waterways Association and the Ulster Waterways Group.
17 Oct 2007	NSMC Plenary in July 2007 had decided to proceed with the restoration of just the Clones to Upper Lough Erne stretch of the Ulster Canal. Ministers agreed that Waterways Ireland should appoint a 'single entity consortium' to design and construct the canal, and Ministers also noted that the full capital cost (estimated at €35m/£23.8m) would be met by the Irish Exchequer with annual maintenance costs of around €300,000/£201,000, to be met by the Northern Ireland Executive and the Irish Government. It was reported that Waterways Ireland would establish a project team for the day-to-day management of the project which will report monthly on progress to a Monitoring Committee chaired jointly by the Department of Community, Rural and Gaeltacht Affairs and the Department of Culture, Arts and Leisure.
4 July 2008	Consultations with the Clones Erne East Partnership and land owners were reported.
16 Jan 2009	It was reported that Waterways Ireland met with 'a wide' range of statutory agencies and with 'the majority' of the landholders potentially affected by the project.
9 July 2009	A survey of the Clones to Upper Lough Erne section of the canal was due to be completed 'by mid July', and a project programme was referred to.
2 Dec 2009	A Strategic Environmental Assessment had commenced and specific route options were being examined.
3 Nov 2010	SEA completed, and a preferred route identified.
7 July 2011	Meetings held with 'all relevant public authorities', and planning scheduled to be applied for in both jurisdictions (though these applications did not go in until October 2011).
12 Oct 2011	Reported that detailed drawings of the route and associated facilities had been completed. An Environmental Impact Assessment had been completed (but not published).
14 Feb 2012	It was reported that planning applications had been made to Cavan County Council, Monaghan County Council and Clones Town Council in October 2011, and that Cavan had granted permission.
9 July 2012	An inter-agency group had been set up 'to examine all possible options to advance the project'. It was also reported that 'Ministers discussed options, prepared by Waterways Ireland, for progressing the Ulster Canal project. These will be explored taking account of fiscal constraints.'

⁵⁴ This information is taken from North-South Ministerial Council inland waterways sectoral joint communiqués:
<http://nia1.me/10a>