

# Document Pack

**Democratic Services Section  
Chief Executive's Department  
Belfast City Council  
City Hall  
Belfast  
BT1 5GS**



30 August 2012

## **MEETING OF DEVELOPMENT COMMITTEE**

Dear Alderman/Councillor,

The above-named Committee will meet in the Lavery Room (Room G05), City Hall on Tuesday, 4th September, 2012 at 5.15 pm, for the transaction of the business noted below.

You are requested to attend.

Yours faithfully

PETER McNANEY

Chief Executive

### **AGENDA:**

1. Routine Matters
  - (a) Apologies
  - (b) Minutes
  - (c) Declarations of Interest
2. George Best Belfast City Airport - Economic Impact

(Presentation by Mr B Ambrose, Chief Executive of George Best Belfast City Airport.)
3. Belfast's Economy
  - (a) Consultation - Lagan Canal Trust (Pages 1 - 52)
  - (b) Procurement Update (Pages 53 - 56)
  - (c) Northern Ireland Parliamentary Group on the United States of America (Pages 57 - 66)

(d) Cities of the Isles, Glasgow, October 2012 (Pages 67 - 68)

(e) Global India Business Meeting 2013 Update (Pages 69 - 72)

4. Shaping Belfast

(a) Belfast Tourism Forum (Pages 73 - 86)

(b) Visual Arts Feasibility Study (Pages 87 - 90)

5. Marketing Belfast

(a) Belfast Visitor and Convention Bureau Monitoring Report (Pages 91 - 100)

(b) Tall Ships 2015 (Pages 101 - 106)

(c) World Chamber Federation Biennial Congress 2015 (Pages 107 - 110)

(d) Expo Real 2012 Event - Munich (Pages 111 - 112)



### Belfast City Council

<b>Report to:</b>	Development Committee
<b>Subject:</b>	<b>Consultation: Lagan Canal Trust - Draft Strategic Environmental Assessment, and Preliminary Engineering Report, from Belfast Harbour to Lough Neagh</b>
<b>Reporting Officer:</b>	John McGrillen, Director of Development, ext 3470
<b>Contact Officer:</b>	Shirley McCay, Head of Economic Initiatives, ext 3459

<b>1</b>	<b>Relevant Background Information</b>
1.1	As part of a Public Consultation exercise, Council has been asked to respond to the draft Strategic Environmental Assessment Report (SEA) and Preliminary Engineering Report. Following the completion of these reports, the Business Case will be developed and should be available to Committee for comment by March 2013.
1.2	<u>The Lagan Canal Restoration Trust</u> Members will be aware that the Lagan Canal Trust was formed in January 2009. Its Board members include representatives from Belfast, Castlereagh, Lisburn and Craigavon Councils, 4 Public Directors, Outdoor Recreation Northern Ireland (formerly CAAN), the Inland Waterway Association of Ireland (IWAI); Ulster Waterway Group, Department of Culture Arts and Leisure (DCAL) and the Northern Ireland Environment Agency (NIEA).
1.3	In November 2011 an All Party Group met with the Minister for Culture, Arts & Leisure regarding the potential support for a Lagan Canal Project. Members outlined the various benefits to the project, including the work undertaken to date by Council. Although the Minister pointed out that her Department had no spare budgetary capacity, she did not rule out future funding if the project was sufficiently developed. The meeting was positive and was a useful step in enhancing the overall advocacy of Council in making projects happen for Belfast.
1.4	At the March 2012 Development Committee it was reported that a number of key reports were currently being undertaken by the Trust, namely; a Business Case, a Strategic Environmental Assessment (SEA) and an Engineering Report of the canal and locks of the Lagan Corridor from Belfast to Lough Neagh. These reports are considered fundamental to the possible future capital development of the project and were to be completed in 2012.

1.5	In March 2012 Council agreed to fund the Lagan Canal Restoration Trust for a further two years, until March 2014, with a total cost to Council of £34,178, following which, a review of future funding for this organisation will be undertaken.
1.6	In May 2012 the Lord Mayor led a meeting of stakeholders to evaluate possible ways forward for the Lagan Canal Project.
1.7	Castlereagh Borough Council in conjunction with Belfast City Council submitted a funding application in June 2012 to the Department of Agriculture and Rural Development (DARD) AXIS 3, Rural Development Programme Measure 3.3, Encouragement of Tourism Activities for the Lagan Strategic Rural Project.
1.8	Members should note that as an emerging partnership project, the Lagan Canal corridor is included in the draft Belfast City Council's Investment Programme 2012-2015, furthermore it is recognised that the Council cannot realise the objectives on its own, and therefore an underlying principle is the need to work in partnership and develop productive relationships with the Northern Ireland Executive and other key partners from the public, private, voluntary and community sectors.
1.9	<p><u>Strategic Environmental Assessment: Environmental Report (SEA)</u>            The assessment has been prepared following previous work that determined that the plan to reopen the Lagan canal from Belfast to Lough Neagh is likely to:</p> <ul style="list-style-type: none"> <li>- have significant environmental effects, taking account of the relevant criteria in Annex II of the SEA Directive;</li> <li>- affect water management and land use which sets the framework for future development consent of projects listed in Annex II of Directive 85/337/EEC; and</li> <li>- have effects on sites that have been determined to require an assessment pursuant to Article 6 or 7 of Directive 92/43/EEC.</li> </ul>
1.10	The SEA document was distributed to officers across Council for comment.
1.11	<p><u>Re-opening the Lagan Navigation from Belfast Harbour to Lough Neagh (Preliminary Engineering Report)</u>            This assessment is a review of the existing documentation update drawings, surveys and cost planning to inform the potential to re-open the Lagan Navigation from Belfast Harbour to Lough Neagh</p>
1.12	The consultation documents were made available on 10 August and comments are required to be returned by the 21 September. The full proposal for the SEA is available to Members upon request and the preliminary Engineering Report is attached as Appendix 1.

<b>2</b>	<b>Key Issues</b>
2.1	<p><u>The Strategic Environmental Assessment</u>            Council are content that the SEA references a number of key City Plans and Strategies including; Belfast Metropolitan Area Plan 2015 (Draft); Belfast City Council: Corporate Plans; Belfast City Council: Local Economic Development Plan; Belfast City Council: Open Space Strategy – ‘Your City, Your Space’, Belfast City Council: Cultural Tourism Strategy, Developing Belfast’s Opportunity; Belfast City Council: Integrated Strategic Framework for Belfast Tourism 2010-2014; These</p>

	documents set the economic development and recreational framework for the area and there is consistent reference to the aims to improve the amenity of the canal and its corridor.
2.2	The environmental report is compatible with the Council's priorities, however it would benefit from reference to Belfast City Council Investment Programme 2012-2015 Draft and the development of a more comprehensive list of open spaces within the 1.5 mile economic corridor of Belfast; Page 56 Table 4.9 Parks Gardens and Demesnes.
2.3	Our Environmental Protection Unit of the Health and Environmental Services Department have stated that they are fully supportive of the intentions of the Lagan Canal Trust to achieve the restoration and revitalisation of the Lagan Canal and its corridor and would be particularly involved once the plan is live in terms of noise, air quality and contaminated land. Furthermore those areas detailed in Appendix 1 of the Strategic Environmental Assessment Directive that would potentially involve the Environmental Protection Unit are those relating to: <ol style="list-style-type: none"> <li>1. The risks to human health or the environment, and</li> <li>2. The exceeding of environmental quality standards or limit values.</li> </ol>
2.4	The Environmental Protection Unit would therefore request that they are consulted at each stage of the project where noise, air quality and contaminated land are potential issues.
2.5	<u>Re-opening the Lagan Navigation from Belfast Harbour to Lough Neagh (Preliminary Engineering Report)</u> The Preliminary Engineering Report accurately reflects the Lagan Canal Scoping Report that was conducted by Scott Wilson Consultants on behalf of Belfast City Council in 2008. This Engineering Report is therefore consistent with the Council's previous study.

<b>3</b>	<b>Equality and Good Relations Considerations</b>
3.1	There are no Equality and Good Relations implications attached to this report.

<b>4</b>	<b>Recommendations</b>
4.1	Members are asked to; <ol style="list-style-type: none"> <li>1. approve the draft BCC response to the consultation and</li> <li>2. raise any additional issues, relating to the consultation document, that they would like to be included.</li> </ol>

<b>6</b>	<b>Decision Tracking</b>
	There is no decision tracking attached to this report.

<b>7</b>	<b>Key to Abbreviations</b>
SEA - Strategic Environmental Assessment EEC - European Economic Commission formerly CAAN - Outdoor Recreation Northern Ireland DCAL - Department of Culture Arts and Leisure NIEA - Northern Ireland Environment Agency IWAI - Inland Waterway Association of Ireland	

<b>8</b>	<b>Documents Attached</b>
Appendix 1 - Re-opening the Lagan Navigation from Belfast Harbour to Lough Neagh (Preliminary Engineering Report)" August 2012.	



Re-opening the  
Lagan Navigation  
from Belfast Harbour  
to Lough Neagh

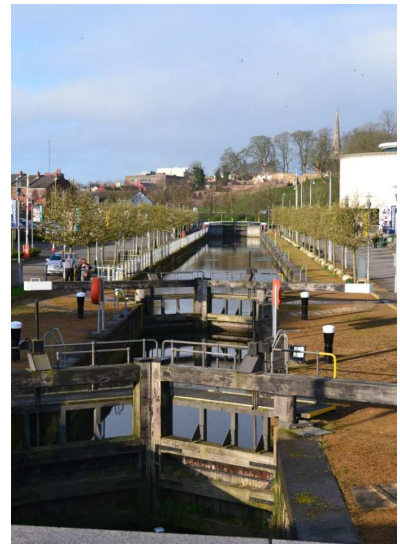
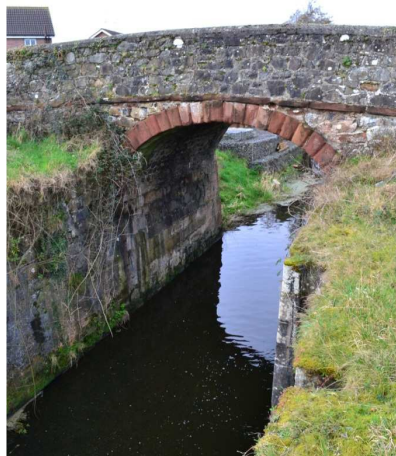
Preliminary Design Report

April 2012

47061149

Prepared for:  
Lagan Canal Trust

UNITED  
KINGDOM &  
IRELAND





REVISION SCHEDULE					
Rev	Date	Details	Prepared by	Reviewed by	Approved by
1	April 2012	Preliminary Design Report	Jonathan Bradshaw Assistant Civil Engineer	John Armstrong Associate	John Armstrong Associate
2	August 2012	Preliminary Design Report	Jonathan Bradshaw Assistant Civil Engineer	John Armstrong Associate	John Armstrong Associate

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PRELIMINARY DESIGN REPORT  
April 2012



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The conclusions and recommendations contained in this Report are based upon information provided by others and upon the assumption that all relevant information has been provided by those parties from whom it has been requested and that such information is accurate. Information obtained by URS has not been independently verified by URS, unless otherwise stated in the Report.

The methodology adopted and the sources of information used by URS in providing its services are outlined in this Report. The work described in this Report was undertaken between December 2011 and March 2012 and is based on the conditions encountered and the information available during the said period of time. The scope of this Report and the services are accordingly factually limited by these circumstances.

Where assessments of works or costs identified in this Report are made, such assessments are based upon the information available at the time and where appropriate are subject to further investigations or information which may become available.

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Unless otherwise stated in this Report, the assessments made assume that the sites and facilities will continue to be used for their current purpose without significant changes.

Where field investigations are carried out, these have been restricted to a level of detail required to meet the stated objectives of the services. The results of any measurements taken may vary spatially or with time and further confirmatory measurements should be made after any significant delay in issuing this Report.

Costs may vary outside the ranges quoted. Whilst cost estimates are provided for individual issues in this Report these are based upon information at the time which can be incomplete. Cost estimates for such issues may therefore vary from those provided. Where costs are supplied, these estimates should be considered in aggregate only. No reliance should be made in relation to any division of aggregate costs, including in relation to any issue, site or other subdivision.

No allowance has been made for changes in prices or exchange rates or changes in any other conditions which may result in price fluctuations in the future. Where assessments of works or costs necessary to achieve compliance have been made, these are based upon measures which, in URS' experience, could normally be negotiated with the relevant authorities under present legislation and enforcement practice, assuming a pro-active and reasonable approach by site management.

Forecast cost estimates do not include such costs associated with any negotiations, appeals or other non-technical actions associated with the agreement on measures to meet the requirements of the authorities, nor are potential business loss and interruption costs considered that may be incurred as part of any technical measures.

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**APPENDIX B – ESTIMATION OF CONSTRUCTION COST RATES**

**APPENDIX C – COSTS**

**APPENDIX D – PHOTOGRAPHIC SURVEY**

**APPENDIX E – OPTIMISM BIAS**

## 1 EXECUTIVE SUMMARY

### 1.1 Introduction

Craigavon Borough Council on behalf of the Lagan Canal Trust commissioned URS in December 2011 to undertake preliminary works to review existing documentation, update drawings, carry out topographical surveys and cost planning to assess the potential of restoring the Lagan Navigation from Belfast Harbour to Lough Neagh.

This report will form part of a larger study which includes:

- A Draft Business Case & Funding Strategy for the Reopening of the Lagan Navigation from Belfast Harbour to Ellis's Gut, Lough Neagh
- A Strategic Environmental Assessment from Belfast Harbour to Ellis's Gut, Lough Neagh

### 1.2 Works Following Closure

Following closure of the canal in the 1950s there were a number of development works and flood alleviation works carried out at various locations along the length of the navigation. Some of these works would significantly impact on a future re-opening of the navigation. Any reopening plan must address these constraints to achieve solutions which are aesthetically attractive and have low Whole Life Costs.

The development works following closure are:-

- Belfast Harbour to Sprucefield
  - Lagan Weir – The completion of the Lagan Weir in 1994 presents an obstruction to river navigation in Belfast at certain states of the tide.
  - Stranmillis – The construction of access roads and car parking facilities, adjacent to the Boat Club has resulted in the infilling of the original canal cut and Lock No.1. These works together with The Cutter's Wharf restaurant development prevent the canal from being re-opened along its original route.
  - Corbie Wood – The original penweir and side overflow weir across the River Lagan at Corbie Wood have been removed for the purposes of flood alleviation.
  - Shaw's Bridge – The original penweir across the River Lagan has been demolished and a new concrete weir and canoe slalom course constructed. In addition a short section of the original cut between Newforge and Shaw's Bridge has been infilled.
  - Drum Bridge – The original penweir across the River Lagan at Drum Bridge has been removed and a short section of canal under the bridge has been infilled to accommodate a pedestrian footpath.
  - M1 Motorway Bridge – The construction of the M1 motorway bridge across the River Lagan adjacent to Lady Dixon Park has led to the infilling of a section of canal cut and the realignment of the river channel.
  - Bridges – Two existing road bridges at Lambeg and Hilden were reconstructed at grade and now form obstructions to the navigation. There are also several accommodation bridges at various locations with insufficient headroom.
  - Hogg's Weir – The original weir has been lowered and the upstream canal cut has been partially infilled
- Union Locks to Moira

- Union Locks to M1 Road Bridge at Moira - Since abandonment of the waterway major infilling has occurred along this section of canal as a result of the construction of the M1 motorway in the 1960s. Furthermore the aqueduct which crossed the River Lagan at Zion Hill was demolished.
- M1 Road Bridge at Moira to Lady's Bridge, Moira - Approx 2 km of original waterway has been infilled, mainly due to the construction of the motorway. Road improvements schemes have resulted in the removal of the Hertford Bridge and Boyles Bridge. The realignment of the Glenavy Road has resulted in an embankment which effectively blocks the route of the waterway.
- Moira to Lough Neagh
  - This is the best preserved section of the navigation with original road bridges and locks remaining intact. The main issues to be addressed are the loss of the towpath for part of its length, and the provision of an adequate water supply for locks and land ownership

### 1.3 Stakeholder Consultations

Consultations were held with relevant government and non government organisations. In general, reaction to the idea of reopening the Lagan Navigation was very positive and there are no underlying issues which would prevent the reopening of the Lagan Navigation. The main issues to be addressed are:

- Land ownership
- Impact/control of flooding
- Built Heritage
- Environmental Mitigation

### 1.4 Current Condition (2012 Survey)

During this current study, URS re-inspected the route of the Lagan Navigation to identify any changes or new developments that have occurred along the route since the previous surveys. This inspection followed the original canal route and any alternative sections which were proposed in former reports.

A photographic record was taken of the condition of the navigation.

Generally the condition of the navigation is unchanged from the previous surveys in 1997 and 2000, but it would appear to be more overgrown particularly at the lock structures with significant bushes and trees growing through the stonework. The following are the main changes from the previous surveys:

- Lock No.3 – The existing Lock Keeper's Cottage and Lock No.3 have recently been restored. In addition a new café and visitor centre has been constructed adjacent to the Lock.
- Shaw's Bridge – A new canoe boat house has been constructed upstream of Shaw's Bridge
- Edenderry – The original mill buildings have been demolished and replaced with a new housing development.
- Lock No.4 – The lock gates which were visible in previous surveys have been removed from the lock and placed in the verge adjacent to the lock.
- Horse Bridge – A new footbridge has been constructed which connects the towpath to Union Locks and Blaris Road.

- Union Locks - A Premier Inn Hotel has been developed adjacent to Union Locks.
- The Former Maze Site – The existing buildings within the Former Maze Site are in the process of being demolished.
- Moira – An agricultural building has been constructed between the existing canal and the proposed new route at the Moira roundabout. Although the location of the building would not require the proposed route to be altered, the access road to the buildings must be accommodated within any reopening proposal.
- Broadwater – The Broadwater has remained relatively unchanged. However a large detached dwelling is currently under development, however this new dwelling does not impact directly on the navigation.
- Lock No.18 – There are a number of new housing developments within the village of Aghalee. Upstream of Lock No.18 a gabion retaining wall associated with a housing development now extends into the Navigation.
- Lock No.19 – The towpath now appears to be under private ownership.
- Lock No.20 – The condition of the lock remains unchanged. However the existing towpath appears to be under private ownership.
- Lock No.21, No.22 and No.23 –These locks were unable to be accessed due to the significant amounts of overgrowth.
- Lock No.26 – There are newly constructed foundations for 2 No. dwellings on the north side of the lock

## 1.5 Proposed Navigation Route

The original line of the summit level of the still water canal between Union Locks at Sprucefield and Lady's Bridge at Moira was significantly demolished during the construction of the M1 Motorway. The cost of reconstruction of the canal along a completely new line either alongside the M1 or parallel to the river would be prohibitively expensive. The most viable means of re-establishing a through navigation is to upgrade the channel of the River Lagan to a navigable condition, together with accommodation works at existing bridges. However a relatively short section of new canal cut and new locks would have to be constructed between Zion Hill and Lady's Bridge.

A survey of the River Lagan from Sprucefield to Zion Hill was previously carried out to determine the feasibility of utilising the river as part of the restored navigation. Two new weirs would be required to provide an adequate navigation depth. The preferred choice would be for new fixed weirs rather than adjustable weirs to minimise operational and maintenance requirements. The weir dimensions and crest levels should allow discharge of flood waters along the watercourse without surcharge above the levels pertaining to the existing system.

## 1.6 Navigation Study

As part of the structural and engineering assessment of the Lagan Navigation, navigational standards were examined in respect of such issues as depth and width of channel and locks, lock dimensions and navigation headroom at bridges etc.

This section presents the results of previous river craft surveys and makes recommendations regarding suitable navigation standards for the Lagan Navigation that will be consistent with existing and proposed adjacent waterways.

## 1.7 Water Management

Water availability along the navigation must be sufficient to provide for predicted traffic requirements by supplying lockages, and for losses due to evaporation, leakage and seepage. The amount of water required to supply lockages is a function of traffic on the navigation. Predictions of boat traffic were based on comparisons with other inland waterways in Ireland. Estimates of evaporation loss were made based on meteorological studies. Losses due to leakage and seepage are often specific to a particular navigation system but estimates were made based on experience from other waterways. Estimated water losses for the Lagan Navigation can be broken down as follows:-

A simplified water resource model was developed to provide estimates of the total water requirement to enable the reopening of the Lagan Navigation.

Shortage of water supply during dry spells was always an issue for the Lagan Navigation. Historically, the water supply to the summit level of the Navigation came from the Broadwater Lake, which was enlarged by the provision of a low dam to increase its capacity.

The reinstatement of the Broadwater would not on its own provide a total solution to the Lagan Navigation water requirement. There will be times during periods of high water usage of locks when the draft available in the summit level may be insufficient for navigation.

It is envisaged therefore that during these dry periods the water supply from the Broadwater could be supplemented by backpumping from Lough Neagh or the River Lagan. The main problem with back pumping is the possible transfer of invasive species e.g. zebra mussels between two water catchment areas.

## 1.8 Hydraulic Study

After the closure of the Navigation a number of the original penweirs were removed to alleviate flooding. If the Navigation is to be re-opened it would be necessary to reconstruct several of these weirs. New weirs would be constructed at Corbie Wood, Shaw's Bridge, Drum Bridge, Becky Hogg's, Young's Bridge and Down Royal.

URS obtained hydrometric data from Rivers Agency Hydrometric Unit for the River Lagan between Belfast Harbour and Zion Hill. This information was used to determine flood and low flow conditions for the River Lagan and to assess the impacts of the proposed works on flooding and land drainage.

Other than the sites described above, levels on the waterway would be controlled by the existing weir system. It is therefore concluded that whilst on some stretches the low-flow water levels would be slightly raised, for all significant flood flows river levels will be either reduced or remain unchanged.

To enable a detailed design to be prepared for the navigation a hydraulic model of the River Lagan and the Navigation would be required to model the flow characteristics of the navigation and identify areas where the Navigation may impact upon properties. This hydraulic model would be required to provide data necessary for obtaining statutory approvals.

## 1.9 Description of Works

This section summarises the proposed works to be carried out along the route of the Lagan Navigation. To best detail the works and facilitate phasing of the construction of the navigation has been subdivided into seven specific reaches as follows:

- CH-4500 to CH0000 - Belfast Harbour to Stranmillis (Drawing 1001)
- CH0000 to CH7500 - Stranmillis to Edenderry (Drawings 1002 and 1008)

- CH7500 to CH15100 - Edenderry to Lisburn (Drawings 1003 and 1009)
- CH15100 to CH22650 - Lisburn to Maze (Drawings 1004 and 1010)
- CH22650 to CH29450 - Maze to Zion Hill (Drawings 1005 and 1011)
- CH29450 to CH35350 - Zion Hill to Broadwater (Drawings 1006, 1012 and 1013)
- CH35350 to CH42950 - Broadwater to Ellis's Gut (Drawings 1007 and 1014)

The seven reaches have been determined based on a feasible package of works which would maximise the length of navigable channel for each element of construction works. Each reach is then subdivided to provide a breakdown of the element of work.

### 1.10 Capital costs

A detailed breakdown of the estimated quantities and capital costs for each section was carried out. The capital costs include

- Capital Construction Costs,
- Environmental Impact Assessment
- Site Investigation
- Land Acquisition and Associated Fees
- Professional Fees including Project Management, Resident Engineering Costs and expenses
- Marketing and Public relations

In addition an optimism bias adjustment factor has been calculated to determine risk components of the project. An optimism bias factor of 30% is recommended.

The Table below shows the estimated total costs for reopening the Navigation from Belfast Harbour to Lough Neagh including the provision of an optimism bias.

**Table 1.0 – Summary of Costs**

Description	Cost
Capital Costs	£53,962,094
Land Acquisition and Additional Costs	£9,150,000
<b>Sub Total</b>	<b><u>£63,112,094</u></b>
Optimism Bias (30%)	<u>£18,933,628</u>
<b>Total</b>	<b><u>£82,045,722</u></b>



## 2 INTRODUCTION

The Lagan Navigation as it stands is a valuable asset of immense cultural and historical significance. It forms an important link within extensive navigation network which was constructed in Ireland in the 18th and 19th centuries. On reaching the 21st century, it is still possible to experience directly the canal era by travelling on many parts of this system.

The most important sections in use today in Ireland are the Shannon and the Erne Navigations, including the connecting link called the Shannon-Erne Waterway. Other navigable sections include the Lower Bann Navigation, the Grand Canal, the Barrow Navigation, and part of the Royal Canal. Many lakes are also navigable, most notably Lough Neagh, Lough Erne, and Lough Derg.

### 2.1 History

#### Construction and Use

When coal was discovered in Co Tyrone in the 1690's the idea of creating a navigable link with Belfast became very attractive. The construction of the Newry Canal in the 1730's added a new urgency to the situation if Belfast was to develop as a competing port.

Work commenced on the Lagan Navigation in 1756 under the direction of Thomas Omer. In September 1763 amid scenes of great enthusiasm the first boat made the passage from Belfast to Lisburn. Although work progressed to Sprucefield during the following four years, by 1768 all work had ceased due to lack of funding. Severe winter flooding and shortage of water in summer also caused continual difficulties along the completed section of the waterway.

In 1779 a private company was incorporated in which the Marquis of Donegal held the controlling interest. An English Engineer, Richard Owen was employed to oversee the works and the navigation was carried up through four locks (Union Lock) to a summit level which extended for eleven miles to Aghalee. The canal followed a route to the south of the River Lagan and ultimately crossed the river via an aqueduct near Spencer's Bridge. From the summit the canal dropped down approximately 70ft (21m) over a distance of 3.2miles through the locks, each 70ft x 16ft and in December 1793 the canal was driven through to the Lough Neagh shore at Ellis's Gut.

Frequent delays however on the river navigation were common. Regular flooding on the River Lagan sections caused damage to the banks and silting of the channel bed, and there was a constant shortage of water in the summit level during the summer months.

In 1810 control of the company passed from the Donegal family to a number of Belfast businessmen and merchants. Various plans to separate the navigation from the river were proposed but the provision of a water supply conflicted with the vested interests of the Lagan linen manufacturers and the works were never carried out. However a number of improvements were made which included the building of several sections of towpath, cleaning and deepening of sections of river channel and repairing of locks and weirs. As a result of these works traffic increased, particularly between Belfast and Lisburn.

In 1842 legislation was passed creating a new private Lagan Navigation Company and the steady improvement in trade continued allowing it to compete successfully with both the Ulster Railway network and the new roads of the Lagan Valley.

During the latter part of the nineteenth century the Lagan Navigation flourished. Coal, grain, and general merchandise were transported upstream from Belfast whilst sand, native timber, fire clay goods and bricks were the main downstream cargoes.

The tonnage carried on the Lagan Navigation remained fairly constant at about 160,000 tons at the turn of the century and although this figure was reduced during World War 1 the decade following the War proved to be the last really successful period.

By the mid-1930's competition from road and rail brought a decline in tonnage and revenue. Despite Government subsidies the post-war years saw only a negligible traffic. Eventually as a result of the Inland Navigation Act (NI) in 1954 the Lagan Navigation Co was dissolved and the canal between Union Locks and Lough Neagh was officially abandoned, and its responsibility passed to the Ministry of Commerce. In 1958 the Ministry announced its intention to abandon the remaining sections between Stranmillis and the Union Locks at Sprucefield.

### Works Following Closure

Following closure of the canal in the 1950s there were a number of development works and flood alleviation works carried out at various locations along the length of the navigation. These works would significantly impact on a future re-opening of the navigation. Any reopening plan must address these constraints to achieve solutions which are aesthetically attractive and have low Whole Life Costs.

The development works following closure are:-

- Belfast Harbour to Sprucefield
  - Lagan Weir – The completion of the Lagan Weir in 1994 presents an obstruction to river navigation in Belfast at certain states of the tide.
  - Stranmillis – The construction of access roads and car parking facilities, adjacent to the Boat Club has resulted in the infilling of the original canal cut and Lock No.1. These works together with The Cutter's Wharf restaurant development prevent the canal from being re-opened along its original route.
  - Corbie Wood – The original penweir and side overflow weir across the River Lagan at Corbie Wood have been removed for the purposes of flood alleviation.
  - Shaw's Bridge – The original penweir across the River Lagan has been demolished and a new concrete weir and canoe slalom course constructed. Also a section of the original cut between Newforge and Shaw's Bridge has been infilled.
  - Drum Bridge – The original penweir across the River Lagan at Drum Bridge has been removed and a short section of canal under the bridge has been infilled to accommodate a pedestrian footpath.
  - M1 Motorway Bridge – The construction of the M1 motorway bridge across the River Lagan adjacent to Lady Dixon Park led to the infilling of a section of canal cut and the realignment of the river channel.
  - Bridges – Two existing road bridges at Lambeg and Hilden have been reconstructed and now form obstructions to the navigation. There are also several accommodation bridges at various locations with insufficient headroom.
  - Hogg's Weir – The original weir has been lowered and the upstream canal cut has been partially infilled
- Union Locks to Moira
  - Union Locks to M1 Road Bridge at Moira - Since abandonment of the waterway major infilling has occurred along this section of canal as a result of the construction of the M1 motorway in the 1960s. Also the aqueduct which crossed the River Lagan near Spencer's Bridge was demolished.

- M1 Road Bridge at Moira to Lady's Bridge, Moira - Approx 2 km of original waterway has been infilled, mainly due to the construction of the motorway. Road improvements schemes have resulted in the removal of the Hertford Bridge and Boyles Bridge. The realignment of the Glenavy Road has resulted in an embankment which effectively blocks the route of the waterway.
- Moira to Lough Neagh
  - This is the best preserved section of the navigation with original road bridges and locks remaining intact. The main issues to be addressed are the loss of the towpath for part of its length, the provision of water supply for locks and land ownership

## **2.2 Origins of Brief**

Craigavon Borough Council on behalf of the Lagan Canal Trust commissioned URS in December 2011 to undertake preliminary works to review existing documentation, update drawings, carryout topographical surveys and cost planning to assess the potential of restoring the Lagan Navigation from Belfast Harbour to Lough Neagh.

## **2.3 Objectives of the Study**

This technical report will form part of a larger study which includes:

- Draft Business Case & Funding Strategy for the Reopening of the Lagan Navigation from Belfast Harbour to Ellis's Gut, Lough Neagh
- Strategic Environmental Assessment from Belfast Harbour to Ellis's Gut, Lough Neagh

### 3 CONSULTATIONS

#### 3.1 Policies and Regulations

##### **The Water Environment (Floods Directive) Regulations (Northern Ireland) 2009**

The EU Floods Directive came into force in November 2008. It followed major flooding across Europe in recent years. Member States were required to transpose the requirements of the Directive into UK law by November 2009.

The Directive requires member states to develop and update a series of tools for managing all sources of flood risk, in particular:

- preliminary flood risk assessments (PFRAs);
- flood risk and flood hazard maps;
- flood risk management plans;
- co-ordination of flood risk management at a strategic level;
- improved public participation in flood risk management; and
- co-ordination of flood risk management with the Water Framework Directive.

The Northern Ireland legislation to enable the Directive was introduced in 2009 and is called The Water Environment (Floods Directive) Regulations (Northern Ireland) 2009. The Department of Agriculture and Rural Development (DARD), through the Rivers Agency, is the leading authority in Northern Ireland for the delivery of the Floods Directive. The Floods Directive aims to manage the adverse consequences that flooding has on human health, the environment, cultural heritage and economic activity. The Directive focuses on:

- Prevention: of flood damage by avoiding construction of houses and industries in present and future flood-prone areas; by adapting future developments to the risk of flooding; and by promoting appropriate land-use, agricultural and forestry practices.
- Protection: taking measures, both structural and non-structural, to reduce the likelihood and impact of floods.
- Preparedness: informing the public about flood risk and what to do in the event of a flood.

The legislation requires the completion of the preliminary flood risk assessment by December 2011, flood risk and flood hazard maps for significant risk areas by December 2013 and flood risk management plans by 2015.

##### **Planning Policy Statement 15 (PPS 15)**

The primary aim of PPS 15 is to prevent future development that may be at risk from flooding or that may increase the risk of flooding elsewhere.

The Rivers Agency advises on the extent of riverine and coastal flood plains in Northern Ireland.

Under PPS15 within flood plains Planning Service will not permit development unless it falls within one of the following exceptions or it is demonstrated that the proposal is of overriding regional importance.

- (a) development of previously developed land which is protected by the appropriate minimum standard of flood defence or where such a defence is under construction or where public funding for planned flood defence works has been committed. This does not include

proposals involving essential civil infrastructure or accommodation / facilities for vulnerable groups;

- (b) the replacement of a building in the countryside where this will not materially increase flood risk;
- (c) development where location within a flood plain is essential for operational reasons for example, navigation and water based recreation uses or transport and utilities infrastructure which has to be there;
- (d) the use of land for sport and outdoor recreation use, amenity open space or for nature conservation purposes where this will not materially increase flood risk;
- (e) the extraction of mineral deposits and the ancillary development necessary to facilitate such extraction where this will not materially increase flood risk; or
- (f) the use of land for seasonal occupation by touring caravans and/or camp sites where this will not materially increase flood risk.

To inform the consideration of proposals that fall within the exceptions specified above, such applications will need to be accompanied by an assessment of the flood risk that may affect the development, or result elsewhere because of it. Where appropriate, this assessment shall include details of measures to mitigate any increase in flood risk.

As part of the precautionary approach to dealing with flood risk, measures such as flood compensation storage works or new hard-engineered flood defences will not be acceptable as justification for development in a flood plain.

### **Environmental**

The EU Sustainable Development Strategy was adopted in 2006. It included an objective on “Halting the loss of biodiversity by 2010 – and beyond”. The UK is also a Party to the Convention on Biological Diversity (CBD), a principal objective of which is the conservation of biodiversity. Commitment to the CBD led to the preparation of the 1994 UK Biodiversity Action Plan (UK BAP), the overall goal of which is to conserve and enhance biodiversity within the UK and to contribute to efforts to conserve global biodiversity. The UK BAP identifies our most threatened biodiversity assets and includes action plans for the recovery of priority species and habitats.

The Northern Ireland Biodiversity Strategy was signed off by the Environment Minister in 2002 and provides the foundation and basis for biodiversity conservation in Northern Ireland. Part of the strategy committed Government to recognise biodiversity within its policies and establish suitable delivery mechanisms. The Government have since made a commitment to significantly reduce the loss of biodiversity by 2010 and halt the loss entirely by 2016<sup>1</sup> in line with the aims of other European Countries. A number of species and habitat action plans have been produced outlining biodiversity targets and actions to meet them. In addition, six biodiversity delivery groups have been constituted. The remit of these groups includes the co-ordination of arrangements for monitoring and reporting on habitats in the context of the BAPs, co-ordinating activity on the habitats, identifying and supporting research needs, considering cross-border management issues and providing biodiversity advice to government.

Protection for biodiversity is provided under European Directives, national and local legislation. The primary European legislation is the EC Habitats Directive 92/43/EEC and EC Birds Directive 2009/147/EC. The Water Framework Directive (WFD) 2000/60/EC is also highly relevant in this situation. Other national and local legislation includes the Conservation

<sup>1</sup> Programme for Government 2008-2011. Northern Ireland Executive 2008

(Natural Habitats, etc) Regulations (Northern Ireland) 1995 as amended, the Environment (Northern Ireland) Order 2002 as amended, the Nature Conservation and Amenity Lands (Northern Ireland) Order 1995 as amended and the Wildlife (Northern Ireland) Order 1985 as amended. The legislation outlined above has created a network of statutory designated sites which protect a range of habitats and species.

The newly published Wildlife and Natural Environment Act (Northern Ireland) 2011 has also put a legal duty on Government and Public Bodies, including local councils, to further the conservation of biodiversity when undertaking any of their functions. The Department of Environment must provide guidance containing recommendations, advice and information for the assistance of public bodies in complying with the duty.

Planning Policy Statement 2 Planning and Nature Conservation (under review) contains planning policy for statutory designated sites and Sites of Local Nature Conservation Importance (SLNCIs). It ensures that biodiversity and the natural environment must be fully taken into account when considering any sort of development. In addition a range of other policies and legislation detailed in other sections particularly air and climate, water and land management and landscape directly benefit biodiversity.

The Lagan Navigation passes through four council areas, Belfast, Castlereagh, Lisburn and Craigavon. Belfast and Craigavon both have Local Biodiversity Action Plans (LBAPs). Both highlight the importance of species and habitats that are found along the Lagan Navigation system.

### 3.2 Stakeholder Consultations

URS has consulted with the following stakeholders as part of the Preliminary Design report. These include:

- Rivers Agency
- Department of Culture, Arts and Leisure (DCAL)
- Roads Service
- Councils
- Agri –Food and BioSciences Institute (AFBI)

#### Rivers Agency

URS met with Rivers Agency in March 2012. The meeting was to discuss any possible issues in relation to reopening the Lagan Navigation. Rivers Agency highlighted the following:

- Frequent out of bank flooding occurs along the River Lagan with properties affected in Lisburn Area, Maze Area and New Bridge Area.
- Reopening the Lagan Navigation should not increase the risk of flooding to properties and landowners.
- Finish floor level of any buildings i.e. toilet blocks, services building must be a minimum 600mm above the 1 in 100 year flood level.
- The raising of water levels within the navigation may impact upon the drainage of low lying farmland.
- A hydraulic model of the Lagan Navigation would be required to assess the impact of flooding.

#### **Agri –Food and BioSciences Institute (AFBI)**

URS met with a Robert Rosell from AFBI in April 2012. The meeting was to discuss the impact of reopening the navigation on fish. The following points were highlighted:

- The fish pass in the new weir at the Civic Centre in Lisburn operates satisfactorily. Fishpasses incorporated within the proposed weirs should follow a similar design.
- Between Stranmillis and Sprucefield there are a number of existing weirs along the reaches of the river which are bypassed by the navigation. These weirs are a legacy of the Lagan Mills but are no longer required for mill race supply. Removal of weirs with associated channel enhancement works could significantly improve the quality of these river reaches and could mitigate against the impact of the proposed new navigation weirs.

#### **Roads Service (TBC)**

URS met with a representative from Roads Service in April 2012. The meeting was to discuss any issues in relation to bridge replacement and road alignment. Roads Service highlighted the following:

- The proposed new canal bridges at Moira along the main Trunk Roads must comply with the standard outlined within the Design Manual for Roads and Bridges (DMRB). A departure from this standard will not be acceptable.
- A departure from this standard on lower grade roads may be accepted providing the works can be demonstrated to provide an improvement to the existing status quo.
- Roads Service technical approval would be required for all works to roads and bridges
- A structural assessment of the existing bridges would be required and a structural analysis undertaken to identify the effect on the bridge for a watercraft collision.

## 4 ENGINEERING ASSESSMENT

The Lagan Navigation passes through a variety of landscapes. These include tidal reach, meadowlands, forest, wooded estate, parkland, farmland and urban areas, each having its distinct topography and ground conditions.

This diversity of landscape was reflected in the engineering solutions and route chosen for the waterway, which in turn presents the opportunity of sub-dividing the navigation into seven sections for descriptive purposes. They are as follows:

- Belfast Harbour to Stranmillis (Drawing 1001)
- Stranmillis to Edenderry (Drawings 1002)
- Edenderry to Lisburn (Drawings 1003)
- Lisburn to Maze (Drawing 1004)
- Maze to Zion Hill (Drawing 1005)
- Zion Hill to Broadwater (Drawing 1006)
- Broadwater to Ellis's Gut (Drawing 1007)

### 4.1 Surveys

#### Previous Topographical Survey

The project encompasses the restoration of the Lagan Navigation from Belfast Harbour to Ellis's Gut, Lough Neagh, a total length of approximately 49km. The original navigation comprised approximately 15km of river navigation and 12 km of stillwater canal between Belfast Harbour and Sprucefield. The remaining section between Sprucefield and Lough Neagh comprised 22 km of stillwater canal which incorporated the summit level section between Sprucefield and Aghalee and the feeder reservoir at Broadwater. The entire navigation had 27 locks and 20 road bridges and crossed the River Lagan between Lisburn and Moira by aqueduct. The majority of these original structures still remain today. The lock chambers have suffered from natural deterioration and are largely overgrown by tree and plant growth and partly filled with silt, debris and water.

Since closure of the navigation in the 1950s there have been a number of developments and flood alleviation works which affect the reopening of the navigation. The most significant of these was the demolition of the greater part of the summit level section of canal between Sprucefield and Moira during the construction of the M1 Motorway in the early 1960s.

Previous feasibility studies undertaken have identified a preferred alternative route to the lost section which needs to be confirmed based upon engineering, water management, environmental, archaeological, and cost considerations.

During the previous studies topographical surveys were carried out using traditional surveying methods to relate channel bed levels to ordnance datum Belfast and also to confirm levels of existing lock structures, bridges, towpaths etc. Particular attention was paid to the areas where new works would be required. The existing lock structures were generally part-flooded which prevented a detailed survey of the floor and gate sills.

In addition to the ground surveys along the route of the canal, hydrographic surveys were conducted along the route of the navigation to determine navigational depths. The hydrographic surveys covered the length of the River Lagan from Stranmillis to the M1 Road Bridge at Moira. Hydrographic surveys were also carried out on sections of the stillwater canal.



A topographic survey of open farmland was carried out to determine the optimum route to connect the River Lagan in the vicinity of the M1 Road Bridge to the existing canal at Lady's Bridge, Moira.

#### **Current Topographical Survey**

This report is essentially based on the topographical survey information used in the 1997 and 2000 reports. An additional topographical survey was undertaken in February 2012 between the former Maze Site and the River Lagan to determine a suitable route to connect the former Maze site with the Lagan Navigation.

#### **Condition Survey (1997 and 2000 Survey)**

The canal channel and all structures were visually assessed in 1997 and a further survey undertaken in 2001 to determine their condition.

Previous studies revealed that the original structures, particularly bridges and locks are generic in construction. The remaining arched bridges along the stillwater sections have been constructed with standard canal sizings for arches, spans, towpaths, etc. Locks too have similar widths, lengths etc.

#### **Channel**

The navigation channels were mapped to determine the extent to which the original navigation was still intact. The survey confirmed that the majority of the canal channels between Stranmillis and Sprucefield are intact. Except where levels have been lowered by the removal of weirs, both the river and canal generally contain a reasonable depth of water. There appears to have been little deterioration of the banks by either normal erosion or excavations by anglers, although some outside bends of the river sections have been protected by rock armour or timber piles. The Department of Agriculture and Rural Development – Rivers Agency carries out channel maintenance work on a regular basis.

Between Sprucefield and Lady's Bridge at Moira approximately 12.5km of summit level channel was significantly infilled to accommodate the construction of the M1 Motorway in the early 1960s.

The section of canal channel between Lady's Bridge and Ellis's Gut is the best preserved section of the original navigation between Belfast and Lough Neagh. The main fabric has suffered little during the period of abandonment and is capable of full and speedy restoration.

The channel lies mainly within cutting although there are some limited sections of embankment. Since closure of the navigation the channel has continued to collect local land drainage together with flows from the original canal feeders. The original profile of the canal is heavily silted and overgrown along most of its length.

Water levels along the channel are now controlled by mass concrete infill weirs within the lock structures. This work was carried out following abandonment of the navigation in the 1950s. Existing water levels are generally lower than the original navigation levels with a maximum difference of up to 1 metre.

#### **Locks**

There were 27 locks along the Lagan Navigation, 17 rising from Stranmillis to the summit level at Sprucefield and 10 locks between the Broadwater and Ellis's Gut at Lough Neagh. Apart from the staircase locks at Sprucefield (set of 4 locks) all the locks exist as single structures (23 No).

Each lock was mapped and inspected to assess the condition of all visible masonry copings, walls, cills, etc. Where locks are demolished or infilled, levels of sills have been determined from records.

Generally locks between Belfast and Sprucefield measure approximately 18.9m x 4.4m and are constructed in sandstone. Most of these are overgrown by tree and plant growth, and are partly filled with debris, water and concrete infill weirs which were installed after abandonment. Inspections were therefore largely confined to the walls. Normally these are built of soft sandstone which has suffered varying degrees of decay, particularly in the approach walls and along the copings and much patching has taken place. There is little evidence of settlement or serious misalignment. It was not possible to inspect the chamber floors and gate sills. However, as a result of the detailed findings during the lock restoration at Locks nos. 3 and 12 it is highly probable that all the floors are timber-planked and that the sills comprise elm clapping sills spiked to oak main sills. The original gates were of simple timber construction with timber balance beams with single boxed rack and pinion, vertically operating paddle gear, with walkways fixed to the gates. The gates have been removed although there are remains of the lower gates at Lock No.4. The gate hanging was of the simple cup and pintle and horseshoe collar type.

The locks between Broadwater and Lough Neagh were constructed in limestone and sandstone and measure approximately 21.3m x 4.9m. Although partly overgrown the locks generally appear in a reasonably sound structural condition. Concrete infill weirs were installed at the majority of locks following abandonment and as a result inspection was largely confined to the walls. Some patching has taken place but generally there is little evidence of movement and deterioration. It was not possible to inspect the chamber floors and gate sills.

### Bridges

Between Belfast and Sprucefield there are 22 road bridges and more than 12 main accommodation footbridges along the length of the navigation. Some of these road and footbridges have been reconstructed or built since the abandonment of the navigation. Table 4.0 below summarises the suitability of these bridges for navigational purposes in terms of providing headroom of 3.5m above normal operating level and 5m width.

**Table 4.0 – Navigation Clearance to Road Bridge and Accommodation/Footbridges**

Road Bridges	Navigational Clearances
Shaw's Bridge (New)	Satisfactory
Shaw's Bridge (Old)	Satisfactory
Drum Bridge	Satisfactory
M1 Motorway Bridge	Satisfactory
Ballyskeagh Bridge	Satisfactory
Lambeg Bridge	Insufficient headroom
Hilden Bridge	Insufficient headroom and width
Lock 12 Canal Bridge	Satisfactory
Union Bridge	Satisfactory
Moore's Bridge	Satisfactory

Young's Bridge	Insufficient headroom
Maze Bridge	Insufficient headroom and width
The New Bridge	Insufficient headroom and width
Spencer's Bridge	Insufficient headroom and width
Lady's Bridge	Satisfactory
Railway Bridge	Satisfactory
Soldierstown Bridge	Satisfactory
Aghalee Bridge	Satisfactory
Aghagallon Bridge	Satisfactory
Goudy Bridge	Satisfactory
Cranagh Bridge	Satisfactory
Annaghdroghal Bridge	Satisfactory

Accommodation/Footbridges	Navigational Clearances
Corbie Wood (2No)	Insufficient headroom and width
Newforge Bridge	Satisfactory
Gilchrist Bridge	Satisfactory
Chimney Bridge	Satisfactory
McVickers Bridge	Satisfactory
Seymour Hill Footbridge	Satisfactory
Lambeg Footbridge	Satisfactory
Hilden Footbridge (Co Down side)	Satisfactory
Horse Bridge	Satisfactory
Wood Lock Bridge	Satisfactory

### Weirs

The original navigation levels were controlled by a series of weirs, 7 of which were adjustable timber penweirs and the remainder fixed masonry weirs. All the former penweirs which provided a head of water for both navigation and mill use have been removed. Four of these original structures were replaced with controllable steel penweirs whilst the original timber penweir at Shaw's Bridge has been replaced by a broad-crested concrete weir. Both the steel penweir and the fixed masonry weir at Lisburn have been replaced with a new crescent shaped stepped concrete weir. Where weirs have been removed and not replaced i.e. at Corbie Wood and Drum Bridge, upstream water levels are now lower.

### Aqueducts

The original navigation crossed the Lagan in an aqueduct at the location of the existing motorway bridge at Zion Hill approximately 1 km upstream of Spencer's Bridge. The aqueduct was demolished during the construction of the M1 Motorway and no trace of it is visible today.

### Dry Dock

In 1837 a dry dock was built in the canal basin just downstream of Union Bridge at Lisburn. The dry dock is no longer visible as it was infilled when Queen's Road was built. However it is understood that the structure of the dry dock is buried under the verge area of the road.

### Current Condition (2012 Survey)

During this current study, URS re-inspected the route of the Lagan Navigation to identify any changes or new developments that have occurred along the route since the previous surveys. This inspection followed the original canal route and any alternative sections.

The inspection took the form of a walk-through along the less accessible stretches of the canal and visual assessment from road verges and bridges where the canal is adjacent to the road.

A photographic record was taken of the condition of the canal.

Generally the condition of the navigation is unchanged from the previous surveys in 1997 and 2000, but it would appear to be more overgrown particularly at the lock structures with significant bushes and trees growing through the stonework. The following are the main changes from the previous surveys:

- Lock No.3 – The existing Lock Keeper's Cottage and Lock No.3 have recently been restored. In addition a new café and visitor centre has been constructed adjacent to the Lock.
- Shaw's Bridge – New canoe boat house has been constructed upstream of Shaw's Bridge
- Edenderry – The original mill buildings have been demolished and replaced with a new housing development.
- Lock No.4 – The existing gates which were visible in previous surveys have been removed from the Lock and placed in the verge adjacent to the lock.
- Horse Bridge – A new footbridge has been constructed. The footbridge connects the towpath to Blaris Road.
- Union Locks - The Premier Inn Hotel has been developed adjacent to Union Locks.
- The Former Maze Site – The existing buildings within the Former Maze Site are in the process of being demolished.
- Moira – An agricultural building has been constructed between the existing canal and the proposed new route at the Moira roundabout. Although the location of the building would not require the proposed route to be altered the access road to the buildings must be accommodated within any reopening proposal.
- Broadwater – The Broadwater has remained relatively unchanged. However a large detached dwelling is currently under development. This new dwelling does not impact directly on the navigation.
- Lock No.18 – There are a number of new housing developments within the village of Aghalee. Upstream of Lock No.18 a gabion retaining wall associated with a housing development now extends into the Navigation.

- Lock No.19 – Tow path appears to be under private ownership.
- Lock No.20 – The condition of the lock remains unchanged. However the existing towpath appears to be under private ownership.
- Lock No.21, No.22 and No.23 –These locks were unable to be accessed due to the significant amount of vegetation.
- Lock No.26 – Newly constructed foundations for 2 No. dwellings on the north side of the lock

### **Photographic Record**

The brief required that the canal, significant features and all problem areas be photographed. This was carried out where access and visibility permitted, and the photographic record is to be found in supporting Photographic Survey Condition Reports Part 1 and Part 2 in Appendix D.

## **4.2 Geology**

### **Solid Geology**

For much of its route the Lagan Navigation between Belfast and Moira the Lagan Navigation is underlain by rocks of the Mercia Mudstone and Sherwood Sandstone Groups, both of Triassic Age. Rocks from both groups are generally friable and porous. West of Moira faulted outcrops of the Ulster White Limestone form the boundary between the Mercia Mudstones and more extensive areas of the Tertiary Lower Basalt formations, comprising fine grained igneous rocks.

### **Drift Geology**

The route of the Lagan Navigation closely follows the valley of the River Lagan. The drift geology of the river valley from Belfast to Flatfield to the east of Moira comprises mainly river alluvium extending either side of the river, flanked by glacial sands and gravels. From Flatfield west onwards to Lough Neagh the overburden is predominantly glacial boulder clay, though peat may be encountered in close proximity to the shoreline.

## **4.3 Navigation Study**

### **Introduction**

As part of the structural and engineering assessment of the Lagan Navigation, navigational standards were examined in respect of such issues as depth and width of channel and locks, lock dimensions and navigation headroom at bridges etc.

A 1997 survey of river craft was undertaken to facilitate the development of suitable navigational standards. This survey complements the data gathered for a similar survey which was carried out in 1989 as part of the Shannon-Erne Waterway Project.

This section presents the results of the survey and makes recommendations regarding suitable navigation standards for the Lagan Navigation that will be consistent with proposed adjacent waterways.

### **Survey**

The Lagan Navigation, if reopened along its full extent, will enter Lough Neagh at Ellis's Gut north of Lurgan. The long term aspiration of DCAL and Waterways Ireland is to connect Belfast via Lough Neagh and a reopened Ulster Canal to the Erne-Shannon system and serve the existing cruiser type market. The craft types in use on the Erne Shannon System are likely to be representative of the craft which would use the Lagan Navigation.

The independent hire cruiser companies on Lough Erne are represented on a voluntary basis in the Erne Charter Boat Association.

In the Republic of Ireland the Inland Waterways Association of Ireland is the representative body for private boat owners and the Irish Boat Rental Association represents many of the independent rental companies.

In a previous study in 1997 to ascertain the type of craft which would be likely to use a reopened Lagan Navigation a questionnaire was prepared and sent out with an explanatory cover letter to the organisations listed below. The questionnaire requested details of craft length, beam, draught, height above water level and superstructure width. The associations consulted were:

- Inland Waterways Association of Ireland
- Irish Boat Rental Association
- Erne Charter Boat Association

The results of the survey covered more than 1,000 craft which represented approximately 25% of the overall fleet on the Shannon and Erne Systems.

### **Analysis of Survey Results**

The overall findings of the combined 1989/92 and 1997 surveys are summarised as follows:

- Height
  - 90% of boats have a height above water level less than 3.5m.
- Draft
  - 90% of boats require drafts of 1.2m or less. In general river cruisers produce a squat of 0.15m at 4-5 knots.
- Beam
  - Approximately 90% of the boats have beam dimensions less than 3.8m.
- Length
  - Approximately 90% of the vessels surveyed were less than 12m in length.

### **Navigational Standards**

The recommended standard for the Lagan Navigation which takes these survey results into account is similar to that adopted on the Shannon-Erne Waterway and for the future Ulster Canal restoration. The standards have been selected to allow users of the Lagan Navigation the flexibility to use the adjacent waterways viz. Bann Navigation, and ultimately the Ulster Canal and the Erne-Shannon system.

It is proposed to provide a minimum water depth of 1.55m in the canal which allows a depth of 0.35m for squat, deposit of sediment and weed growth. A beam width of 3.5m has been adopted as representing the majority of boats. Based on this figure and allowing for manoeuvring clearances between boats it is recommended that the canal be designed, where possible, with an 8m base width and a 13m surface water width.

It is recommended that all bridges should provide for a minimum navigation clearance of 3.5m over a 3m width.

The proposed size of any new lock chamber is not less than 20m long by 5m wide.

It is envisaged that the waterway will be re-opened solely as a recreational facility and therefore navigational requirements for heavy commercial craft have not been considered.

### **Proposed Navigation Route**

The original line of the summit level of the still water canal between Union Locks at Sprucefield and Lady's Bridge at Moira was significantly overlain by the M1 Motorway. The cost of reconstruction of the canal along a completely new line would be extremely expensive and prohibitive. The most viable means of re-establishing a through navigation is to upgrade the channel of the River Lagan to a navigable condition, together with accommodation works at existing bridges. A relatively short section of new canal cut would however have to be constructed between Zion Hill and Lady's Bridge.

A survey of the River Lagan from Sprucefield to Zion Hill was previously carried out to determine the feasibility of utilising the river as part of the restored navigation. Two new weirs would be required to provide adequate navigation depth. The preferred choice would be for fixed weirs rather than adjustable weirs to minimise operational and maintenance requirements. The weir dimensions and crest levels should if possible be designed to allow discharge of flood waters along the watercourse without surcharge above the levels pertaining to the existing system.

## **4.4 Water Management**

### **4.4.1 *Hydrological Study***

#### **Catchment**

The navigation lies within the catchment area of the River Lagan. The total catchment area upstream of the gauging station at Newforge just downstream of Shaw's Bridge comprises approximately 490km<sup>2</sup> and extends to Slieve Croob at an elevation of 532m.O.D.Belfast. The lower valley consists mainly of medium quality agricultural land and parkland together with the urban developments of south Belfast, Lisburn and Hillsborough. The upper reaches consist mainly of medium to poor quality farmland and moorland but also include the towns of Dromore and Dromara.

#### **Flow Records**

The Hydrometric Unit had previously provided flow duration curves for two River Lagan gauging stations located at Newforge and Drumiller. Daily flow records were also available for Newforge. This information was used to assess the potential of using the river for navigation and in particular to consider the extent and frequency of the two main problems which at times restricted the use of the original navigation i.e. flooding and low flows.

It is considered that for safe boating conditions the average velocity of flow in the river should not exceed 1m/s. This corresponds to a maximum operational flow of approximately 25m<sup>3</sup>/s at Newforge and corresponding flows of 16m<sup>3</sup>/s and 12m<sup>3</sup>/s at Becky Hogg's Weir, Lisburn and Moore's Bridge, Lisburn respectively. The hydrometric records for Newforge show that this flow is exceeded on average approximately 25 days per year but mainly during the winter months when navigation for recreational purposes would normally be at its lowest usage level.

### **4.4.2 *Water Supply and Demands***

#### **Navigation Demands**

An accurate estimate of the potential water demand of the canal is needed to enable quantification of the necessary supplies.

In addition to meeting predicted traffic requirements by supplying lockages, water availability along the canal must be sufficient to provide for losses due to evaporation, leakage and seepage. The amount of water required to supply lockages would be a function of traffic on the navigation. Predictions of boat traffic are based on comparisons with other inland waterways in Ireland. Good estimates of evaporation loss can be made based on meteorological studies. Losses due to leakage and seepage are often specific to a particular navigation system. Seepage is the continuous loss through the pervious bed and banks, reduction of which can only be brought about by lining the canal with impervious material.

Estimated water losses for the Lagan Navigation can be broken down as follows:-

### **Lockage**

Passage of a boat up or down through a lock chamber requires a specified volume of water which is determined by the lock dimensions. The original lock size on the Lagan Navigation was generally 18.9m x 4.4m or 21.3m x 4.9m and lockage throughput volumes range between 200m<sup>3</sup> and 300m<sup>3</sup>, depending on the rise in level at the lock. The proposed lock size is approximately 20.0m x 5.0 and lockage throughput volumes would therefore be similar

As a boat moves up or down through the canal system the largest lock through which it passes defines the lockage requirement during that trip.

### **Evaporation**

Losses from a water surface due to evaporation can be estimated with reasonable accuracy. While the rate would obviously vary with meteorological conditions the yearly loss would be of the order of 500mm. During summer months the evaporation rate would on average be between 2 and 2.5mm/day with peak daily values possibly of the order of 4mm/day. Evaporation is not regarded as a problem for the sections of canal cut below Moira due to the continual 'topping up' effect of the river.

Between Moira and Lough Neagh it is estimated that approximately 600m<sup>3</sup>/day would be required during the summer months to counteract the evaporation loss.

### **Leakage**

Leakage represents localised losses of water which can be repaired. These include losses due to minor bank failures, losses through lock gates and losses due to vandalism. The provision of watertight locks and regular supervision of the canal system can help keep this figure low. Experience on other navigation systems has shown that significant losses occur due to tampering with lock gates, particularly along urbanised stretches of the system.

There is no recommended figure for losses due to leakage. It is likely that losses would vary substantially during the year. It is assumed, however, that losses due to leakage would be related to the level of traffic using the system. For the purposes of this assessment an allowance for leakage equivalent to between 30% and 50% of lockage volume is assumed.

### **Seepage**

Seepage is the loss through the beds and banks of the canal due to the pervious nature of the material. It is difficult to compare seepage losses between different systems as seepage rates would be specific to a particular navigation and indeed to particular stretches. The loss due to seepage would be greater along embanked reaches. Studies of losses due to seepage on British canals indicate that this can be as high as 20mm per day. This would represent a loss of approximately 6,000 m<sup>3</sup>/day on the still-water sections of the Lagan Navigation.



The length of the canal sections represent less than 50% of the navigation and as very little of the channel is formed by embankments, seepage should not be significant. However, without the undertaking of water loss tests it is not possible to quantify this leakage. Therefore, for the purposes of this study an allowance for seepage of 10mm per day along the canal length is taken as a conservative estimate equivalent to a loss of 3000 m<sup>3</sup>/day.

The undertaking of water loss tests would be required to provide a more accurate estimate of losses due to seepage. This would require sections of canal to be stanked off and water drop tests carried out to provide an accurate estimate of losses due to seepage.

### **Water Resource Model**

A simplified water resource model was developed to provide estimates of the total water requirement to enable the reopening of the Lagan Navigation. For the purposes of this water resource model the Navigation was divided into four reaches which are briefly described below.

#### **Belfast Harbour to Stranmillis**

This section is approximately approx 4.5 km long and is entirely within the tidal river section of the Lagan. Water supply is therefore not an issue.

#### **Stranmillis Lock 1 to Sprucefield**

This reach, which is approximately 17.4 km long, includes 12 locks. Traffic along this reach would be travelling from Belfast Lough towards Sprucefield and vice versa. The significant number of locks along the reach would influence the traffic volumes likely to operate between Lock 1 and Lock 12. An allowance for 10 lockages per day is considered sufficient.

The estimate of the peak demand for this section is 4200 m<sup>3</sup>/day. The source of supply for this section is the River Lagan and water supply is not considered to be an issue.

#### **Sprucefield to Zion Hill**

This section is approximately 12.0 km long and, apart from two proposed new locks and associated navigation cuts, it is essentially river navigation. Traffic along this reach would be travelling from Sprucefield towards Moira and vice versa. An allowance for 10 lockages per day is considered sufficient.

Estimates of the peak demand for this section is 4200 m<sup>3</sup>/day.

#### **Zion Hill to Ellis's Gut**

This section is approximately 13.5 km and includes the summit reach from Zion Hill to Ellis's Gut. The main Navigation supply is the Broadwater at Soldierstown. The Broadwater has a catchment of approx. 8.4km<sup>2</sup> and a lake surface area of 18 hectares. The yield of the Broadwater has been assessed as approx 2400 m<sup>3</sup>/day notwithstanding this, pumping from the River Lagan and/or Lough Neagh would be a possible additional source of supply to Broadwater. An allowance of 10 lockages in both directions has been made.

Estimates of the peak demand for this section is 6000 m<sup>3</sup>/day.

The principal usage of the Lagan Navigation would occur in the months of July and August as on other waterways. The total boating season is assumed to extend from April to October with a typical monthly usage profile as given in Table 4.1 below.

**Table 4.1 – Typical Navigation Usage**

Month	Percentage of Annual Traffic
March / April	5%
May / June	20%
July / August	65%
September / October	10%

### Assumed Traffic Profile on Lagan Navigation

The July/August period would clearly be the period of maximum demand. In addition to peak traffic, losses due to leakage are likely to be at their highest. The peak loss due to evaporation would be during the months May to August. Losses due to seepage are assumed to be constant throughout the season.

### Estimated Total Water Demand – Lagan Navigation

The total navigation demand is less than the sum of the four sections as lockages through one section would supply the next. Also as flows in each Navigation section between Belfast Harbour and Zion Hill discharge back into the river there is no flow reduction in the river navigation sections. The maximum abstraction from the river is 4200m<sup>3</sup>/day. The navigation section between Zion Hill and Lough Neagh has an estimated peak demand of 6000m<sup>3</sup>/day. These figures are summarised on Table 4.2 below.

**Table 4.2 – The Estimated Peak Demand**

Total Water Demand (m <sup>3</sup> / day)			
Belfast Harbour to Stranmillis	Stranmillis Lock 1 to Sprucefield	Sprucefield to Zion Hill	Zion Hill to Ellis's Gut
0	4200	4200	6000

### Broadwater

Shortage of water supply during dry spells was always an issue for the Lagan Navigation. Historically, the water supply to the summit level of the Navigation came from Broadwater, which was enlarged by the provision of a low dam to increase its capacity.

The reinstatement of the Broadwater would not on its own provide a total solution to the Lagan Navigation water requirement. There will be times during periods of high water usage of locks when the draft available in the summit level may be insufficient for navigation.

### Pumping

Pumping from a reliable source and backpumping at locks is the solution often used nowadays to meet navigation demands during critical periods. For example on the Shannon-Erne Waterway two pumps, both of 80l/s capacity, were installed at each lock on the still water section.

Pumping had previously been used on the Lagan Navigation. In the 1880s a small pump was installed at Ellis's Gut to raise water from Lough Neagh into the reach above Lock 27. An American-made Worthington pump at Lock 26 then conveyed the water along the towpath in cast-iron pipes to the summit level. Pumping began in 1885 and continued during the summer months over the next 30 years.

It is envisaged that during dry periods the water supply from the Broadwater could be supplemented by backpumping from Lough Neagh or the River Lagan. Pumping from Lough Neagh would ensure that sufficient supply would always be available. Pumping capacity of 200l/s should also be installed at each of the locks on the east side to enable the summit level to be supplied. The main problem with back pumping is the possible transfer of invasive species e.g. zebra mussels between two water catchment areas.

#### 4.4.3 *Hydraulic Study*

After the closure of the Navigation a number of the original penweirs were removed to alleviate flooding. If the Navigation is to be re-opened it would be necessary to reconstruct several of these weirs. The effects of these works on flooding and land drainage are discussed hereunder.

##### **Corbie Wood Weir**

The existing water level between Lock No.2 and Lock No.3 is presently controlled by the penweir at Stranmillis, at a minimum level of approximately 2.0m.O.D.Belfast. On this stretch, the works necessary for re-opening include the construction of a new river weir at Corbie Wood at a level of 2.8m.O.D. Belfast. This weir would control water levels up to Newforge and would affect the Newforge Gauging Station maintained by the Hydrometric Unit.

##### **Shaw's Bridge Weir**

The proposals at Shaw's Bridge include for the demolition of the existing weir, which has a crest level of 5.3m.O.D.Belfast, and for its replacement a short distance downstream by a weir with a crest level of 5.5m.O.D.Belfast. This level increase of 0.2m will effectively restore the original navigation depth of 1.5m upstream to Edenderry. An additional side overflow weir is also proposed. Although the normal upstream water level will be increased there will be no increase in the backwater levels with 1-in-1 year flows or higher because of the increased combined lengths of the 2 new weirs and the corresponding reduction in discharge head.

##### **Drum Bridge Weir**

As at Corbie Wood the original penweir upstream of Drum Bridge was removed after abandonment. The water level between Lock No.6 and the Motorway Bridge is now controlled by a concrete weir located downstream of Drum Bridge at a crest level of 9.0m.O.D.Belfast.

In order to increase the navigational depth between Lock No.6 and the proposed Lock No.7 it is recommended that a new crescent shaped weir be constructed at Drum Bridge at a crest level of 10.0m.O.D.Belfast. As at Shaw's Bridge the longer weir would result in lower discharge heads for 1-in-1 year flows and higher, and therefore the flood levels for higher return levels would be reduced.

Upstream of Drum Bridge the adjoining fields are lower than the level of the flood banks and towpath. We understand however that the existing land drainage system discharges to a point downstream of the proposed weir and would therefore be unaffected by the works.

### Becky Hogg's Weir

The proposals at Becky Hogg's Weir include for the demolition of the existing weir which has a crest level of 26.4m.O.D.Belfast and for its replacement with a new longer weir with a crest level of approximately 26.8m.O.D.Belfast. A previous study has shown that water levels for the 1 in 1 year flood and greater would decrease thereby reducing the risk of flooding.

### River Lagan between Sprucefield and M1 Road Bridge at Moira

URS requested hydrometric data from Rivers Agency Hydrometric Unit for the River Lagan between Belfast Harbour and Zion Hill. Rivers Agency provided the mean daily flows for the following gauging stations along the River Lagan:

**Table 4.3 – Gauging Stations**

Station Name	Station No.	Period of Records
Feney	205209	1994 to 2010
Newforge	205004	1977 to 2010

This information was used to determine flood and low flow conditions for the River Lagan and determine average periods per year where the Navigation could be closed.

Previous studies used the information for a Drumillar Gauging Station upstream of Dromore. However the records from Feney Gauging Station would be more effective as they provide historical records for the River Lagan close to Zion Hill.

### Flooding

From historical records and observations made by our survey team it is clear that the River Lagan downstream of the M1 Road Bridge at Zion Hill is susceptible to flooding on a regular basis particularly during the winter months. This section of the river is essentially a floodplain with low velocities and it is not unusual for the flood levels to remain high for three or four days.

Because of low channel gradient, the river velocities are reduced and the high water level which results in bank overtopping and reduced headroom at bridges then becomes the operational restriction. The gauging station information showed that the maximum operational flow of 25m<sup>3</sup>/s at Newforge is equivalent to a flow of 8m<sup>3</sup>/s at Feney upstream of Zion Hill. The flow duration curves for Feney would suggest that a flow of 8m<sup>3</sup>/s would be exceeded on average about 7% of the time i.e. about twenty five days per year. Again most of these high flows would occur during the winter months when the navigation would be closed.

### Low Flow Conditions

During the summer months low flows are a greater concern than flooding. The flow records show flows less than 0.25m<sup>3</sup>/s at Newforge are not uncommon during dry summers.

We have estimated that proposed fish passes at weirs and 10 lock workings per day would require operational flows of 0.2 m<sup>3</sup>/s and 0.05m<sup>3</sup>/s respectively. Based on the flow duration curves we estimate that a low flow of 1 m<sup>3</sup>/s at Newforge equates approximately to a flow of a 0.3 m<sup>3</sup>/s at the Maze Bridge. It is therefore possible that during prolonged periods of drought, flows less than the normally desirable operational requirements could occur resulting in a reduction in fish pass flow. This should not present a problem since fish movement will not be an issue during low flows in any case.

#### 4.4.4 *Summary*

Other than the sites described above, levels on the waterway would be controlled by the existing weir system. It is therefore concluded that whilst on some stretches the low-flow water levels would be slightly raised, for all significant flood flows the river levels would be either reduced or remain unchanged.

The existing navigation connects into Lough Neagh at Lock 27 at Ellis's Gut. The water level on the downstream side of Lock 27 is determined by the Lough Neagh control levels which are generally maintained between 12.45m O.D.Belfast and 12.60m O.D.Belfast. However in rare drought and flood events, Lough Neagh levels have been as low as 12.2m O.D.Belfast and as high as 13.25m O.D.Belfast respectively.

As part of the detailed design of the Navigation a hydraulic model of the River Lagan and the Navigation would be required to model the effects of the Navigation and identify areas where the Navigation could impact upon properties. The hydraulic model would be required prior to obtaining any necessary statutory approvals for the Navigation. We understand that Rivers Agency are developing a model for the Lagan and it is possible that this could be used to determine the impact of a reopened navigation on the river flows.

#### 4.5 **Lock Operating Systems**

An assessment of the lock operating requirements of the Lagan Navigation has been undertaken. The assessment examines the traditional swing beam method and a fully automatic lock operating system incorporating navigation management features to meet the requirements of the Lagan Navigation.

##### **Traditional Swing Beam Method**

The normal arrangement on canals and rivers is a pair of mitre gates at both ends of the lock, those at the head being much shorter than those at the tail and closing against a wooden, stone or concrete cill.

Originally all gates were operated manually, a factor that played a part in determining the depth of the lock. Gates are fitted with long projecting balance beams whose length provides adequate leverage for the gates to be operated by a man walking backwards against the beam. A curved path following the travelling course of the beam and set at intervals with brick or stone projections gives a grip for the feet and prevents this part of the lockside becoming a muddy and slippery hazard. In order to close an open gate an iron or steel handhold is frequently attached to the end of the beam.

The traditional gates are mostly built from wood. Oak greenheart or ekki are the usual woods used, but nowadays steel/timber composite gates are becoming more common. The advantages of composite gates in a non-automated lock are:-

- Long life expectancy.
- Box section creates buoyancy chambers making the gate lighter in the water, and easier for the user to open and close.
- No leaks through planking i.e. no timber shrinkage or swelling.
- Not affected by marine borers.
- Can be easily repaired if damaged.

##### **Fully Automatic Lock Operating System**

Based on an assessment of current technologies, an outline fully automatic lock operating system was prepared for the Lagan Navigation. A summary of the system is presented below:

The components of the fully automatic lock system are as follows:

- Lock Automation System
- The system requires that each boat user be provided with a proximity card for operation of locks.
- Proximity card readers located upstream and downstream on each lock serve to enable the lock automation system, while simultaneously determining the boat direction i.e. going upstream or downstream. These card readers could typically be embedded in solid canal-side features resembling mooring posts which would be vandal-proof and not be visually intrusive. Manual push buttons are not required with the exception of an emergency stop button, as this is imperative to satisfy the relevant EU safety directives.
- In the unlikely event of failure of the lock card reader, a message terminal located internally in the control panels can operate the lock gates and sluice gates.
- All cards have a unique identification number, which can be used to track the progress of a boat through the navigation and to view the number of boats travelling in the navigation and their interlock location.

#### **Electro Hydraulic system**

This is an outline of the hydraulic system for each navigation lock of which there are understood to be 26 locks. It is assumed that all the locks will be fairly standard with no special requirements (e.g. reverse flows).

The hydraulic system for each lock consists of 8 cylinders, one power unit, 4 valve manifold assemblies, and associated pipe work and sensors.

#### **4.6 River Enhancement Works**

Between Stranmillis and Sprucefield there are a number of existing weirs along reaches of the river which are bypassed by the navigation. These weirs are a legacy of the industrial era but are no longer required due to closure of the mills. The weirs are located at Edenderry, New Grove, Seymour Hill, Lambeg, and Hilden

Large weirs on a river normally create long, deep, impounded sections which are unproductive for both invertebrates and fish. Removal of weirs together with associated channel enhancement works can result in restoration of the natural free-flowing channel with a renewed level of productivity. A good example of this is River Boyne where 11 weirs were removed over a 32km reach between Trim and Navan. Ten years after removal of the weirs quantitative electrofishing indicated that the overall section of river was producing in the region of 30,000 smolts a year.

Agri –Food and BioSciences Institute (AFBI) are of the opinion that the removal of some or all of the existing five industrial weirs together with localised channel enhancement works could significantly improve the quality of these river reaches, particularly for fish, and could mitigate against the impact of the proposed new canal weirs. The river enhancement work would include removal of silt deposits, enhancement of river bed through placement of rubble mats, gravels, and boulder deflectors, bank stabilisation and associated planting,

## 5 DESCRIPTION OF WORKS

This section summarises the works to be carried out along the Lagan Navigation. To best detail the works and facilitate phasing of the construction of the navigation has been subdivided into seven specified reaches as follows:

- CH-4500 to CH0000 - Belfast Harbour to Stranmillis (Drawings 1001)
- CH0000 to CH7500 - Stranmillis to Edenderry (Drawings 1002 and 1008)
- CH7500 to CH15100 - Edenderry to Lisburn (Drawings 1003 and 1009)
- CH15100 to CH22650 - Lisburn to Maze (Drawings 1004 and 1010)
- CH22650 to CH29450 - Maze to Zion Hill (Drawings 1005 and 1011)
- CH29450 to CH35350 - Zion Hill to Broadwater (Drawings 1006, 1012 and 1013)
- CH35350 to CH42950 - Broadwater to Ellis's Gut (Drawings 1007 and 1014)

The above 7 reaches have been determined based on a feasible package of works which would maximise the length of navigable channel for each element of construction works. The reaches have been subdivided further below to provide a breakdown of each element of work within a reach. See Appendix A for drawings.

The typical elements of work to be undertaken together with associated cost rates are described in Appendix B. Typical drawings for an existing lock restoration, a new lock, lock gates, and a new weir are also included in Appendix A.

### 5.1 CH-4500 to CH0000 - Belfast Harbour to Stranmillis (Drawing 1001)

The navigation along the tidal section of the River Lagan from Belfast Harbour to Stranmillis Weir is 4.5km long. Boat passage at the Lagan Weir is currently possible during high tides when the gates are in the lowered position. To improve navigation at this location a new Lock would be constructed on the east bank of the Lagan Weir to allow navigation through the weir during all states of the tide.

### 5.2 CH0000 to CH7500 - Stranmillis to Edenderry (Drawings 1002 and 1008)

#### CH0000 to CH1300 - Stranmillis Gateway Lock No.1 (Drawings 1008, Plan 1)

The existing Stranmillis Weir consists of 3No. adjustable steel penweirs and is the upstream limit of the tidal reach of the River Lagan.

The original navigation cut and Molly Wards Lock (Lock No.1) were infilled and are now under the car park which runs parallel to Lockview Road. Recent developments at Cutters Wharf prevent this section from being re-opened.

However there is sufficient space for a new lock development in parkland on the opposite side of the weir. The land is part of a previous landfill site and is owned by Belfast City Council Parks Department.

The development of this site involves major new works which are as follows:-

- Construct a new stepped concrete weir with fish pass.
- Construct a new lock chamber, using reinforced concrete or steel sheet piles;
- Construct a new section of navigation channel approximately 90m long;

- Dredge the river at the upstream and downstream end of the new channel;
- Construct footbridge downstream of lock, together with pedestrian paths etc;
- Construct new moorings upstream and downstream of the new lock;
- Provide access and service road and parking area;
- Provide ancillary works comprising soft landscaping, signage and service facilities.

#### **CH1300 to CH2900 - Corbie Wood Lock No.2 (Drawings 1008, Plan 2)**

The original sluice gates at Corbie Wood have been removed and the lock chamber (No.2) is heavily overgrown and partially infilled with a concrete weir.

The works required to re-open this section of the navigation are as follows:

- Construct a new broad crested weir with fish pass
- Restore the lock and provide upstream and downstream moorings (Type A restoration. See Appendix B).
- Clear navigation channel from overhanging trees and growths and dredge bed to provide adequate depth.
- Dredge River Lagan upstream of new weir to provide adequate depth for navigation.

#### **CH2900 to CH6000 - Shaw's Bridge Lock No.3 (Drawings 1008, Plan 3)**

Lock No.3 and surrounding area has undergone recent refurbishment work which included refurbishment of the existing Lock, restoration of the Lock Keeper's Cottage and construction of the Lock Keeper's Café and Visitor centre.

However the original cut from Newforge (Lock No.3) to Shaw's Bridge is partially infilled and is heavily overgrown. A new weir just downstream of Shaw's Bridge now replaces the original weir and fixed side overflow weir which controlled the upstream water level. This weir is set lower than the original weir, and forms the upstream step of a canoe slalom.

In order to re-open the navigation at this location it would be necessary to demolish the existing weir and reconstruct a new weir approximately 50m downstream. The works required at this site are as follows:

- Demolish existing weir and reconstruct new stepped weir with fish pass downstream of the entrance to the navigation cut. The new weir crest level would be raised by 0.2m to 5.5mO.D.Belfast.
- Construct new canoe slalom downstream of new weir.
- Provide moorings upstream and downstream of Lock No.3.
- Clear trees and growths from the navigation channel and dredge it.
- Reconstruct a side overflow weir on the upstream end of channel.
- Dredge river between Shaw's Bridge new weir and Edenderry Village to provide adequate navigation depth.
- Ancillary works, soft landscaping etc.
- In addition Castlereagh Borough Council has commissioned URS to investigate the feasibility of mooring a barge/canal boat at Lock No.3 which would provide meeting /education facilities.

#### **CH6000 to CH7500 - Edenderry Locks No 4 and 5 (Drawing 1008)**



This section of Navigation extends from Edenderry village to Lock No.6 at Drum Bridge. Two locks, Nos. 4 and 5 are in close proximity to each other, and both are in poor condition with Lock No.5 heavily overgrown, and partially collapsed at its downstream wing walls.

The works required to open this length of navigation are as follows:

- Restore Locks No.4 and 5. (Type A restoration)
- Clear trees and growth from channel and dredge silt to provide adequate depth.
- Provide moorings upstream and downstream of both locks.
- Dredge river as necessary to provide adequate navigation depth.
- Provide river enhancement measures in the river upstream of Edenderry to improve fish habitat.

### 5.3 CH7500 to CH15100 - Edenderry to Lisburn (Drawings 1003 and 1009)

#### CH7500 to CH9500 – Drum Bridge Lock No.6 (Drawing 1009, Plan 4)

This section of Navigation is approximately 2.0 km in length of which 400m is navigation cut, the remainder being navigable river. The original navigational water depth upstream of Drum Bridge was controlled by timber penstock weirs. These have been removed thus reducing the upstream water levels considerably. The major works in this section would include the restoration of a navigation bridge at the existing underpass at Drum Bridge below Upper Malone Road. The works entail the following:

- Construct a new stepped weir and fish pass upstream of Drum Bridge.
- Restore Lock No 6 (Type A restoration).
- Provide moorings upstream and downstream of Lock No.6
- Excavate and restore the navigation channel including the short section under Drum Bridge.
- Restore the original navigation bridge.
- Construct a new pedestrian underpass through Drum Bridge adjacent to the navigation.
- Dredge and carry out realignment works to the river upstream of Lock No. 6.
- Provide a new footbridge and associated walkways.

#### CH9500 to CH10950 - M1 Motorway New Lock No.7 (Drawing 1009, Plan 5)

The M1 Motorway crosses both the River Lagan and the original navigation cut approximately 1 km south of Upper Dunmurry Lane. A section of the navigation cut was partially infilled during the construction of the motorway embankment and a subway built to accommodate the pedestrian route under the Motorway. The dimensions of this subway however are inadequate to accommodate the reopened navigation. At the same time the river was realigned under the M1 approximately 400m to the north of the subway.

The most cost-effective option at this location is not to follow the original route of the waterway but to utilise the river under the motorway bridge and construct a new short section of navigation cut and lock chamber on the upstream side to connect to the original cut.

The major works are as follows:

- Construct new lock No 7.
- Construct a new section of navigation channel.

- Provide moorings upstream and downstream of lock.
- Dredge navigation channel as necessary.
- Provide new maintenance access road/towpath to lock.

#### **CH10950 to CH12150 - Ballyskeagh Lock No.8 (Drawing 1009)**

This section of the navigation is approximately 1.20km in length, of which 550m is navigation cut. The major works in this section entail the restoration of Lock No.8. Other works include channel improvement works.

The significant items of work are as follows:

- Restore Lock No.8 (Type A restoration).
- Provide new moorings upstream and downstream of lock.
- Clear trees and growths from navigation channel and dredge bed to provide adequate depth.
- Provide river enhancement measures in the river upstream of Dunmurray to improve fish habitat.

#### **CH12150 to CH13100 - Lambeg Lock No.9 (Drawing 1009)**

This length of the navigation is entirely in navigation cut.

The lock at Lambeg is in poor condition with the downstream extent suffering from collapses. The original arch road bridge has been replaced with a flat deck road bridge with inadequate headroom. The major elements of work at this location are as follows:

- Restore Lock No 9 (Type A restoration).
- Provide new moorings upstream and downstream of the lock.
- Reconstruct new road bridge deck and regrade county road on each approach.
- Clear trees and growths from navigation channel and dredge bed to provide adequate depth
- Provide river enhancement measures in the river upstream of Lambeg to improve fish habitat.

#### **CH13100 to CH15100 - Hilden Lock No 10 and 11 (Drawing 1009)**

This length of the Navigation extends from the lock immediately downstream of Hilden Road to the new navigation cut at the Island Civic Centre at Lisburn. There are two locks within this reach, Hilden Lower and Upper (No's 10 and 11). The original arched bridge at Hilden Road has been replaced with a flat decked bridge which requires replacement with a new bridge to provide the requisite headroom and width. The major items of work along this section are as follows:

- Reconstruct Lock Nos 10 and 11 (Type A restoration).
- Provide new moorings at both locks.
- Reconstruct a new road bridge at Hilden Road and regrade the county road on each approach.
- Clear trees and growths from navigation channel and dredge bed to provide adequate depth
- Provide river enhancement measures in the river upstream of Lambeg to improve fish habitat.

#### 5.4 CH15100 to 22650 - Lisburn to Maze (Drawings 1004 and 1010)

##### CH15100 to CH16420 - Canal Basin (Drawing 1010)

The canal basin in Lisburn is located immediately upstream of the new crescent weir serving Lock No.12 at the Island Civic Centre and includes the length of river up to Hogg's Weir. The water level in this section was lowered to provide adequate headroom under Union Bridge and consequently some dredging works upstream is required. The proposals for this section include the provision of greater visitor access to the river.

The major work items in this section include the following:

- Provide new moorings and pontoons.
- Dredge the basin and river as required.
- Restore canal basin
- Provide new moorings and pontoons.
- Provide adequate vehicular access and car parking.
- Provide ancillary works and service facilities
- If possible restore infilled dry basin including the provision of new gates
- Remove existing pipeline across river upstream of Union Bridge and replace.

##### CH16520 to CH17450 - Hogg's Weir Lock No.13 (Drawing 1010, Plan 6)

Lock No 13, known as Becky Hogg's, is at the downstream end of this section, the upstream being the Union Locks near Sprucefield.

The works at this section entail the restoration of Lock No.13 together with the construction of a new weir. In addition environmental improvement works to the area e.g. the provision of picnic areas etc on the island are proposed. The main items of work are as follows:

- Construct a new crescent stepped weir and fish pass.
- Restore Lock 13 (Type A Restoration).
- Provide new moorings upstream and downstream of lock.
- Restore partially infilled navigation channel.
- Dredge the river as necessary and realign the channel adjacent to lock.
- Provide a new footbridge.
- Construct access road and car parking facilities.
- Provide new picnic and landscaped area.

##### CH17450 - Union Locks Lock No 14 (Drawing 1010, Plan 7)

The Union Locks are a flight of 4 locks which raised the navigation up to the original navigation summit level which extended from Sprucefield to Aghalee.

The summit level between Sprucefield and Moira was infilled during the construction of the M1 motorway and as a consequence the rewatering of the Union Locks would not contribute to a significant extension of the waterway. It is intended therefore that the locks are used as a focal heritage point on the restored navigation and also as a mooring point for those people

wishing to visit the Sprucefield complex. The major items of work at this location are as follows:

- Construct a new boat turning area.
- Construct new moorings.
- Construct access roads and car parking facilities.
- Restore the original stonework of the locks as a visitor attraction.

#### **CH17450 to CH21650 - Union Locks to Young's Bridge (Drawing 1010)**

The Lagan Navigation from Union Locks to Moira was infilled during the construction of the M1 Motorway. As a result a new navigation route is proposed utilising the River Lagan. A navigable channel would be provided for a distance of 4.2km between Union Locks and Young's Bridge. The major items of work are as follows:

- Dredging of River Lagan to provide adequate draft
- Construction of 3m wide towpath

#### **CH21650 to CH22650 - Young's Bridge to Former Maze Site (Drawing 1010, Plan 8)**

It is proposed to construct a new weir across the River Lagan upstream of Young's Bridge. The weir would be approximately 30m wide with a crest level of 28.0mO.D.Belfast and would control river water level for a distance of 3.2km upstream to Down Royal Race Course. A new navigation cut and lock (Lock No.14A) would be constructed.

- Construct new lock No.14A.
- Construct a new section of navigation channel.
- Provide moorings upstream and downstream of lock.
- Construct 30m stepped weir and fish pass
- Dredge river channel to provide adequate navigational depth.
- Construct 3m wide towpath.

### **5.5 CH22650 to CH29450 – Former Maze Site Maze to Zion Hill (Drawings 1005 and 1011)**

#### **Former Maze Site (Drawing 1011, Plan 9)**

A number of options were investigated to link the navigation with the proposals for the former Maze Site. An original study was carried out in 2006 which recommended linking the site using an undesignated watercourse. However the current masterplan for the Maze Site recommends recreational facilities further south of the previous location and the Navigation should link to these facilities.

To provide this link a number of further options were investigated. The first option investigated bringing the navigation directly into the Maze Site. This would require a series of locks to lift the navigation approximately 12m to enter the site. In addition the Navigation would cross under the Bog Road where there is insufficient clearance. This would result in significant road raising and realignment and would impact upon the adjacent properties. There would also be no summit water supply for the new canal link and back pumping from the River Lagan would be necessary as well as the provision of a summit storage reservoir. The estimated cost for this solution would be in excess of £3.5m.

The second solution for the linkage to the former Maze Site is to provide a new marina facility with boat trailer park, slip way and services building. Additional car parking would also be

provided along with a new footpath linking the marina and car park to the site. This would be a more achievable engineering solution. The major items of work at this location are:

- Construct fully serviced marina
- Construct new car park
- Construct new footpath
- Provide additional soft landscaping

#### **CH22650 to CH24850 - Former Maze Site to Down Royal Racecourse (Drawing 1011, Plan 9)**

The existing Maze Bridge comprises an old attractive five arch masonry structure. Although there would be sufficient navigational headroom the width of the arches and depth of water restrict the navigation. It is therefore proposed that the existing bridge remain undisturbed and a bypass channel cut around its southern side with a new thin deck bridge to carry Gravel Hill Road. It would be necessary to raise the road levels by approximately 1m locally to accommodate the new bridge.

The main items of work are as follows:-

- Construct new navigation bypass channel
- Construct new navigation bridge
- Construct 3m wide towpath.
- Dredging of River Lagan channel to provide adequate navigational depth.
- Raise and regrade Gravel Hill Road at new navigation bridge.

#### **CH24850 to CH26160 - Down Royal Racecourse to the New Bridge (Drawing 1011, Plan 10)**

It is proposed to construct a new weir across the River Lagan upstream of Down Royal Racecourse. The weir would be approximately 30m wide with a crest level of 29.0mO.D.Belfast and would control the river water level up to Zion Hill. A new navigation cut and lock (Lock No.14B) would be constructed. In addition parts of the River Lagan would be realigned to remove a number of meanders in the river in order to provide a more suitable navigable channel. The resulting oxbow lakes would be enhanced as wetland areas.

The main items of work are as follows:-

- Construct 30m crescent weir and fish pass
- Construct new lock No.14B.
- Construct a new section of navigation channel.
- Provide moorings upstream and downstream of lock.
- Dredge river channel to provide adequate navigational depth.
- Realignment of river channel as necessary
- Construct 3m wide towpath.

#### **CH26160 to CH28575 - The New Bridge to Spencer's Bridge (Drawing 1011, Plan 11)**

The New Bridge is also a very attractive structure of considerable age. If water levels are raised for navigational purposes there would be insufficient headroom through the bridge. The configuration of the River Lagan is such that the necessary bypass channel could be cut around its southern side and a new bridge constructed to carry Cockhill Road. This would result in the raising of road levels approximately 2m to accommodate the new bridge.

The main items of work are as follows:-

- Construct new navigation bridge
- Construct new navigation bypass channel
- Construct 3m wide tow path
- Dredge river channel to provide adequate navigational depth.
- Raise and regrade Cockhill Road at new navigation bridge

#### **CH28575 to CH29450 - Spencer's Bridge to Zion Hill (Drawing 1011, Plan 12)**

At Spencer's Bridge the proposed navigational water levels would result in unacceptable headroom restrictions under Spencer's Bridge which is a three arch masonry structure. A bypass channel around the eastern side of the bridge with a new navigation bridge is therefore proposed. This would result in raising Lany Road levels by approximately 1.2m.

The main items of work are as follows:-

- Construct new navigation bypass channel
- Construct new navigation bridge
- Construct 3m wide tow path
- Dredge river channel to provide adequate navigational depth
- Raise and regrade Lany Road at new navigation bridge

## **5.6**

#### **CH29450 to 35350 - Zion Hill to Broadwater (Drawings 1006, 1012 and 1013)**

#### **CH29650 to CH32136 - Zion Hill to Lady's Bridge New Lock Nos. 14C, 14D and 14E (Drawing 1012, Plan 13, Plan 14 and Plan 15)**

This section of navigation could not be reopened as a navigable channel without first reinstating the Broadwater as the water supply.

It is proposed to construct a new navigation cut and towpath and construct 3 new locks namely Locks 14C, 14D and 14E.

Near Zion Hill, a new navigation channel would be cut for a distance of 50m up to the first new lock (Lock No. 14C) which would provide a lift of 2.3m. The navigation would then follow the line of the County Drain (Plan 13).

A navigation cut would then follow the contours utilising the line of existing ponds and taking advantage of the screening effect of the original navigation embankments.

A new bridge would be constructed at the Hillsborough Road with minimum internal dimension of 6m wide by 5.5 m high (Plan 14).

A second lock (Lock No.14D) with a lift of 2.0m would be constructed approximately 200m upstream of Hillsborough Road (Plan 14). The proposed navigation cut would then follow the line of the County Drain which could either be diverted or incorporated within the new channel.

At the Lisburn Road embankment a new bridge would be constructed (Plan 15) similar to that proposed at Hillsborough Road. The navigation would then continue across the fields between Lisburn Road and Glenavy Road. A new navigation bridge would be constructed at the Glenavy Road to accommodate the proposed waterway.

The land between Glenavy Road and the original navigation would provide a convenient oblique approach for the third new lock (Lock No.14E) (Plan 15) which would lift the Navigation the remaining 1.9m to the original Broadwater summit level of the Lagan Navigation.

The main items of work are as follows:-

- Construct new Lock No.14C, No.14D and 14E
- Construct new moorings upstream and downstream of each lock
- Construct new navigation bridge at Hillsborough Road
- Construct new navigation bridge at Lisburn Road
- Construct new navigation bridge at Glenavy Road
- Construct new navigation cut
- Construct new 3m wide tow path

#### **5.7 CH32136 to CH35350 - Lady's Bridge to the Lock 17 including Broadwater (Drawing 1013, Plan 16)**

The original waterway between Lady's Bridge and Lock 17 remains intact along its full length and restoration works only are required. Refurbishment works would be required at Lock No. 17 and the flood gates at Broadwater. In addition it is proposed to construct a fully serviced marina with slipway, pumpout, fuelling station, boat yard and car park adjacent to Soldierstown Bridge at the south end of the Broadwater.

The main items of work are as follows:-

- New moorings at Lady's Bridge
- Restore Lock 17 (Type B Restoration).
- Restore Flood Gates (Refurbishment Type B)
- Construct new fully serviced 50 berth marina at Soldierstown Bridge

#### **5.8 CH35350 to CH42750 - Broadwater to Ellis's Gut (Drawing 1007 and 1014)**

This section of waterway is reliant upon the water supply from Broadwater. It would not be possible to open this section of Navigation as a navigable waterway without first carrying out the reinstatement of the Broadwater for water supply.

#### **CH35350 to CH38850 - Lock No. 17 to Lock No. 24 (Drawing 1007 and 1014)**

The original waterway between Lock No. 17 and Lock No. 24 remains intact along its full length and restoration works only are required. The navigation channel although partly overgrown currently acts as a drainage channel for the local catchment and has therefore not been allowed to dry out. It is unlikely therefore that major works to reseal the bed and sides will be necessary and the restoration of the channel would essentially involve minor dredging and removal or cutting back of bank growth. The main issues along this navigation reach relate to land ownership. Land purchase and land agreements will be required to allow the re-opening of this section to proceed.

However since the closure of the Navigation a number of developments have been built adjacent to the Navigation. At Lock No. 18 a gabion retaining wall now extends into the navigation channel. In addition the property at Lock No.19 has been restored. The property owner may also have ownership of the tow path between Lock No.19 and Lock No. 20 (Drawing 1014, Plan 18) which would appear to limit the right of way for the reopening of the original tow path route at this location.

There are no remains of the existing towpath between Lock No. 20 and Lock No. 24. As part of the reopening of the Navigation a new 3m wide towpath along this length would be required. The works required on this section are:

- Restore Lock Nos. 18, 19, 20, 21, 22, 23 and 24 ( Refurbishment Type B)
- Construct upstream and downstream moorings at each lock location
- Construct new 3m wide tow path
- Carry out minor repairs to Aghalee Bridge, Aghagallon Bridge and Goudy Bridge
- Service diversions at Aghagallon Bridge

#### **CH38850 to CH42750 - Lock No. 24 to Lock No. 27 (Drawing 1007 and 1014)**

The original waterway between Lock No. 24 and Lock No. 27 remains intact along its full length and restoration works only are required. The greater part of the length of the towpath between Annaghdroghal Bridge and Lock No.24 has been reinstated and would not require any significant additional works. There is however a small section of tow path between Lock No. 25 and Lock No.26 which has not been reinstated.

In addition it is proposed to construct a fully serviced marina with slipway, pumpout, fuelling station, boat yard and car park at Ellis's Gut. To facilitate access to Ellis's Gut would a new access road would be required.

- Restore Lock No. 25 ( Refurbishment Type B)
- Restore Lock No. 26 ( Refurbishment Type B)
- Restore Lock No. 27 ( Refurbishment Type B)
- Construct new 3m wide tow path
- Construct new access road to Ellis's Gut
- Carry out minor repairs to Cranagh Bridge and Annaghdroghal Bridge
- Construct new fully serviced 25 berth marina at Ellis's Gut

### **5.9 Moorings/Marinas/Mooring Basins**

Twenty-five metre moorings long should be provided upstream and downstream of each of the locks. In addition mooring basins/marinas have been proposed at the following locations to facilitate overnight stays and visitation to local attractions and villages.

- Stranmillis Gateway – 25 Berth
- Canal Basin – 25 Berth
- Former Maze Site – 25 Berth
- Broadwater – 50 Berth
- Ellis's Gut – 25 Berth
- Aghalee – 5 Berth



- Down Royal Racecourse -5 Berth

Each mooring basin/marina should provide toilet/shower facilities, fresh water, sewage pumpout, and electricity supply. They may also facilitate cruiser hire, carparking, fishing, watersports and boat sales and maintenance.

#### **5.10 Slipways**

There will be slipways at the following locations:

- Ravenhill (existing)
- Maysfield (existing)
- Stranmillis
- Corbie Wood
- Lisburn Canal Basin(existing)
- Broadwater(new)
- Ellis's Gut(new)

#### **Fuelling Stations**

To facilitate refuelling of boats a number of refuelling stations would be required along the Lagan Navigation. These facilities would be provided as part of the basin developments. Suitable sites would include:-

- Stranmillis
- Lisburn Canal basin
- Former Maze Site
- Broadwater
- Ellis's Gut

## 6 CAPITAL COSTS

### 6.1 Construction Cost Estimates

Table 6.0 below shows a summary of the construction costs for each section of navigation based upon the rates outlined in Appendix B. A detailed breakdown of the estimated quantities and capital costs for each section is included in Appendix C.

**Table 6.0 - Summary of Construction Cost Estimates**

Location	Sub Total inc 15%
CH-4500 to CH0000 - Belfast Harbour to Stranmillis	£2,217,200
CH0000 to CH1300 - Stranmillis Gateway Lock No.1	£2,803,700
CH1300 to 2900 - Corbie Wood Lock No.2	£1,559,400
CH2900 to CH6000 - Shaw's Bridge Lock No.3	£1,915,900
CH6000 to CH7500 - Edenderry Lock No 4 and 5	£2,223,525
CH7500 to CH9500 - Drumbridge Lock No.6	£3,783,213
CH9500 to CH10950 - M1 Motorway New Lock No.7	£1,782,788
CH10950 to CH12150 - Ballyskeagh Lock No.8	£1,133,325
CH12150 to CH13100 - Lambeg Lock No.9	£1,368,500
CH13100 to CH15100 - Hilden Lock No 10 and 11	£2,534,025
CH15100 to CH16420 - Canal Basin	£1,200,600
CH16420 to CH17450 - Hogg's Weir Lock No.13	£2,093,575
CH17450 - Union Locks Lock No 14	£1,725,000
CH17450 to CH21650 - Union Locks to Young's Bridge	£1,117,800
CH21650 to CH22650 - Young's Bridge to Former Maze Site	£2,516,775
CH22650 to CH24850 - Former Maze Site to Down Royal Racecourse	£1,509,375
CH24850 to CH26160 - Down Royal Racecourse to the New Bridge	£1,782,615
CH26160 to CH28575 - The New Bridge to Spencer's Bridge	£644,000
CH28575 to CH29450 - Spencer's Bridge to Zion Hill	£834,613
CH29450 to CH32136 - Zion Hill to Lady's Bridge New Lock Nos. 14C, 14D and 14E	£5,554,454
CH32136 to CH35350 - Lady's Bridge to the Lock 17 including Broadwater	£2,780,700
CH35350 to CH38850 - Lock No. 17 to Lock No. 24	£6,212,300
CH38850 to CH42750 - Lock No. 24 to Lock No. 27	£5,214,100
<b>Total</b>	<b>£54,507,483</b>

## 6.2 Land Acquisition and Additional Costs

Large parts of the Navigation and tow path between Sprucefield and Ellis's Gut appear to be under private ownership. In order to reopen this section of Navigation this land would require to be purchased from the current land owners. In addition businesses and residences directly affected by the reopening of the Navigation may require to be compensated.

The level of compensation and costs of land acquisition are difficult to estimate accurately. An allowance of £3m has been provided. Other additional costs include professional fees, environmental monitoring, and marketing.

Table 6.1 below includes a schedule of likely non-capital costs associated with the project.

**Table 6.1 – Land Acquisition and Additional Costs**

Description	Cost
Environmental Impact Assessment	£200,000
Site Investigation	£350,000
Land Acquisition & Associated Fees	£3,000,000
Project Management	£500,000
Professional Fees	£2,000,000
Resident Engineer Costs	£1,500,000
Expenses	£500,000
Environmental Monitoring	£100,000
Marketing and Public Relations	<u>£1,000,000</u>
<b>Total</b>	<b>£9,150,000</b>

### Optimism Bias

The Optimism Bias adjustment factor, for the purpose of the appraisal, remains high as there is still a significant amount of survey and investigative work required and potential risk which cannot be ignored at this stage. The main issues outstanding at this point in the project include.

- Detailed ground and service investigation still required
- Land ownership
- Detailed design
- Environmental mitigation
- Availability of funding

These issues have been incorporated into risk components to determine the Optimism Bias adjustment factor. The optimism bias factor of 30% is recommended. The basis of this has been included in Appendix E.

### 6.3 Summary of Costs

Table 6.2 below shows the summary of costs for reopening the Lagan Navigation from Belfast Harbour to Lough Neagh including the provision of an optimism bias.

**Table 6.2 – Summary of Costs**

Description	Cost
Capital Costs	£54,507,483
Land Acquisition and Additional Costs	£9,150,000
<b>Sub Total</b>	<b><u>£63,657,483</u></b>
Optimism Bias (30%)	<u>£19,097,245</u>
<b>Total</b>	<b>£82,754,728</b>

## 7

**CONCLUSIONS**

The reopening of the Lagan Navigation between Belfast Harbour and Lough Neagh would constitute a large engineering project. The route is approximately 49km long and although there are a number of constraints the scheme is technically feasible and a practical proposition. In general the construction techniques would be similar to those used on the reopening of the canal channel, restoration of Lock 12, new weir and associated river works at the Civic Centre in Lisburn. Where additional measures would be necessary for example in relation to roadworks and bridge reinstatements, solutions to these issues have been identified and costed.

The major constraint to reopening the waterway is the loss of the original navigation between Sprucefield and Moira. This summit level section between Union Locks and Lady's Bridge was demolished during the construction of the M1 Motorway in the early 1960's. The cost of reconstruction of the canal as a "stillwater section" along a completely new line would be prohibitively expensive. The most viable means of re-establishing a through navigation is to upgrade the channel of the River Lagan to a navigable condition, together with accommodation works at existing bridges. A relatively short section of new canal cut would however have to be constructed between Zion Hill and Lady's Bridge.

The proposed works to reopen the Lagan Navigation have been subdivided into seven specified reaches as follows:

- CH-4500 to CH0000 - Belfast Harbour to Stranmillis (Drawing 1001)
- CH0000 to CH7500 - Stranmillis to Edenderry (Drawings 1002 and 1008)
- CH7500 to CH15100 - Edenderry to Lisburn (Drawings 1003 and 1009)
- CH15100 to CH22650 - Lisburn to Maze (Drawings 1004 and 1010)
- CH22650 to CH29450 - Maze to Zion Hill (Drawings 1005 and 1011)
- CH29450 to CH35350 - Zion Hill to Broadwater (Drawings 1006, 1012 and 1013)
- CH35350 to CH42950 - Broadwater to Ellis's Gut (Drawings 1007 and 1014)

The above seven reaches have been determined based on a feasible package of works which would maximise the length of navigable channel for each element of construction works. The reaches have been subdivided further to provide a breakdown of each element of work within a reach.

A detailed breakdown of the estimated quantities and construction costs for each section was carried out. Non-construction costs which include land costs, legal costs, and professional fees were also considered and estimated. In addition an optimism bias adjustment factor of 30% was calculated to determine risk components of the project.

The Table below shows the estimated total costs for reopening the Navigation from Belfast Harbour to Lough Neagh including the provision of an optimism bias.

**Table 7.0 Summary of Costs**

Description	Cost
Construction Costs	£54,507,483
Land Acquisition and Additional Costs	£9,150,000
<b>Sub Total</b>	<b><u>£63,657,483</u></b>
Optimism Bias (30%)	<u>£18,933,628</u>
<b>Total</b>	<b>£82,754,728</b>



### Belfast City Council

<b>Report to:</b>	Development Committee
<b>Subject:</b>	<b>Procurement Update</b>
<b>Date:</b>	4 September 2012
<b>Reporting Officer:</b>	John McGrillen, Director of Development, ext 3470
<b>Contact Officer:</b>	Shirley McCay, Head of Economic Initiatives, ext 3459

<b>1</b>	<b>Relevant Background Information</b>
1.1	On 22 June 2012, the Strategic Policy and Resources Committee approved project briefs aimed at delivering the local spend and social clause targets outlined within the Investment Programme. This is in recognition of the fact that Belfast is predominantly a micro-business economy with 96% of our businesses employing 50 people or less. Consequently through the Investment Programme, the Council has committed to increasing the amount that the Council procures locally from 50% to 60%.
1.2	In researching best practice approaches, the work of CLES (Centre for Local Economic Strategies) was identified. CLES have carried out a range of action research projects on behalf of a number of local authorities. One of their key clients has been Manchester City Council (MCC) and they have presented reports outlining the procurement approaches; how these changed over time and the outcomes of this development.
1.3	Following an overview of the process presented by CLES at a seminar in the Council offices in late May 2012, a follow-up visit to MCC was arranged for June 2012. Meetings took place with the Heads of Procurement and Economic Development and these presented an opportunity for exchange and discussion as to what worked well; what they would change; what drove them to undertake this work; what the achievements have been and what the next steps are likely to be.
1.4	As part of the £150 million capital investment within the Investment Programme, Members have also requested that consideration be given to introducing, where appropriate, social and community benefits clauses into council tenders. On 4 July, the Minister of Environment Alex Attwood MLA presented to the Assembly legislation to enable Councils to incorporate social clauses in their contracts. Consideration is currently being given to the outworking of this legislation and the Department of Environment (DoE) is working on accompanying guidance.

1.5	Work is currently under way to develop a range of actions to raise awareness of how the Council procures goods and to consider how we can maximise the local impact of procurement, while maintaining a focus on efficiencies and best value.
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<b>2</b>	<b>Key Issues</b>
2.1	<u>Increasing local spend – update on activities underway</u>
	The project brief identifies a series of actions to be taken which will deliver on the objectives around increased access to procurement opportunities for local companies.
2.2	The Economic Development Unit is currently operating a range of initiatives to improve the capacity of local companies to win business from public procurement – both with Belfast City Council and with other public bodies.
2.3	Fifty local construction companies are currently being supported through the Construction Sales Growth Programme (CSGP) to access sub contracting opportunities arising from regeneration initiatives across the city, including council capital build schemes. To date meetings have been held with contractors appointed for the Woodvale and Dunville Park development schemes to promote companies on the programme and to encourage the main contractors to involve them in supply chain opportunities
2.4	In addition to the Council projects, companies have been looking at a range of additional procurement opportunities. Some of the key programme achievements to date include:
	<ul style="list-style-type: none"> <li>– Companies being “matched” are being helped to tender for over £15million worth of contracts (outcomes of tenders pending)</li> <li>– 6 companies have had visits to potential clients in Scotland and England and are following up on potential leads</li> <li>– One company has won a contract for a new shop fitting job valued at £400,000</li> <li>– Three companies have become Invest NI client businesses</li> </ul>
2.5	33 local companies have been supported through the Smarter Procurement Programme to help them to identify procurement opportunities and equip them with the skills to tender effectively. The most recent wave of this programme has identified contracts wins to the value of approximately £1.1 million. This programme is scheduled to open for recruitment in October 2012 with ten places available for local companies.
2.6	Information sessions are to take place in the Ulster Hall on 11 and 12 September for companies interested in tendering for the upcoming work on the city-wide alleygating scheme. These will provide an opportunity for local construction and engineering companies to find out more about the opportunity and to build partnerships with other organisations. The tender is to be issued at the end of September.
2.7	<u>Feedback from Manchester study visit</u>
	As outlined above, in order to learn from best practice, a cross departmental group of council officers undertook a visit to MCC in June 2012. The purpose of this visit was to learn firsthand what the key drivers behind the Manchester experience were and how the council has maintained momentum in its efforts to improve its procurement practices.



2.8	Critically for MCC a key driver was a research project undertaken on their behalf by CLES. The project tasked CLES to measure the economic impact of the council's spend and to recommend how MCC could move towards more progressive procurement practices.
2.9	The CLES research measured MCC's spend with local suppliers, the number of jobs supported locally through council spend and the re-spend in the local economy by suppliers. This data informed the development of MCC's procurement practices and allowed for a more targeted approach to improving local spend targets, resulting in an increase of supplier re-spend in the local economy from 23p to 43p in every £1 over a three year period.
2.10	Facilitating linkages between suppliers and the local Job Centre Plus offices was a key task as part of the MCC improvement project. One example of the practical applications of this linkage was that the security contractor appointed by the Council has committed to working with the Job Centre Plus and other local employment and training organisations in order to ensure that long-term unemployed people are given an opportunity to apply for these jobs. The Council has committed to providing additional pre-employment support for these individuals in order to ensure that they are prepared for the recruitment process.
2.11	Overall the visit reassured officers that the approach we are taking will lead to an increase in the local economic impact of council expenditure. Council already has in place many of the fundamentals evidenced in Manchester such as the electronic tender portal, and have been exploring other support initiatives such as targeted information events; business support programmes to improve tendering skills and changes to our communication with businesses e.g. improving our website; making information on tenders more accessible.
2.12	Further opportunity for learning exists through the Manchester experience. It is proposed to undertake a further visit to Manchester focusing upon the Manchester into Construction Scheme and the work undertaken to engage with existing suppliers such as G4S. It was proposed and agreed at the meeting of Strategic Policy and Resources Committee on 24 August 2012 that the Chairperson of the SP&R and Development Committees and all Party Group Leaders or their nominees should participate on a future visit to the city.
2.13	<u>Update on change to legislation</u> On 4 July 2012, the Northern Ireland Assembly passed the Local Government Best Value (Exclusion of Non –commercial Considerations) Order (NI) 2012. This legislation seeks to relax the restrictions on councils to consider certain non-commercial matters as part of its procurement processes.
2.14	Of the most direct relevance to the Council is the removal of the restriction on considering the terms of employment of individuals, as this restriction prevented the use of clauses providing opportunities for the long-term unemployed.
2.15	The legislation enables councils to consider the use of social clauses as contractual conditions, for instance, requiring contractors to provide employment opportunities to the unemployed. Such conditions must not infringe the general principles of EU law and must be introduced in such a way that they do not discriminate.
2.16	Furthermore, the Council can only use social clauses insofar as they relate to the functions of the Council. Given the Council's powers in relation to economic

	development, it may be possible to consider inclusion of social clauses which aim to provide job opportunities for the long-term unemployed.
2.17	This legislation comes at a time when the Council has been actively reviewing the measures which it can put in place by way of “social clauses” in its procurement contracts for the purpose of stimulating local employment and skills opportunities, and promoting better opportunities for local small businesses by way of better procurement support initiatives
2.18	Through the Local Government Procurement Officer group, Belfast Council Officers will continue to work with the DoE in order to develop guidance on how best to implement the opportunities created by the new legislation.

<b>3</b>	<b>Resource Implications</b>
3.1	<u>Financial</u> The costs associated with the study visits and the use of CLES can be met from within existing budgets.
3.2	<u>Human Resources</u> Resources to deliver the proposed actions will be made available from cross departmental units including Democratic Services, Economic Initiatives and Procurement Units.

<b>4</b>	<b>Equality and Good Relations Considerations</b>
4.1	There are no specific equality and good relations considerations attached to this report.

<b>5</b>	<b>Recommendations</b>
5.1	Members are asked to: 1. Note the contents of this report

<b>6</b>	<b>Decision Tracking</b>
Further updates will be provided as and when dates and itineraries are confirmed by the Director of Development.	

<b>7</b>	<b>Abbreviations</b>
MCC - Manchester City Council CLES - Centre for Local Economic Strategies CSGP - Construction Sales Growth Programme	



**Report to:** Development Committee

**Subject:** **Council's views on the newly established NI Parliamentary Group on the USA**

**Date:** 4 September 2012

**Reporting Officer:** John McGrillen, Director of Development, ext 3470

**Contact Officer:** Shirley McCay, Head of Economic Initiatives, ext 3459

1	Relevant Background Information
1.1	Belfast City Council received a request from the NI Assembly to give views on the newly established Parliamentary Group on the USA, their role and priorities. It is not a formal consultation as only a few organisations have been asked to input.
1.2	The Northern Ireland Assembly Commission has agreed that due to Northern Ireland's strong relationship with North America, there is merit in forming a Northern Ireland Assembly Parliamentary Group on the USA. This is a similar approach to that taken at Westminster where there is a British-American Parliamentary Group.
1.3	<p>The Northern Ireland Assembly Parliamentary Group on the USA will focus on producing a report to consider the role and value of the Group to justify its long term future including:</p> <ul style="list-style-type: none"> <li>– the level of interest amongst their Members and appointing an Executive Committee;</li> <li>– the aims and priorities of the Group;</li> <li>– potential activities to be undertaken by the Group; and</li> <li>– an assessment of the resources required for the Group's work and any external funding which may be available to the Group.</li> </ul>
1.4	<p>At this initial stage, the focus of the Group seems to be on engaging with USA delegations visiting the Assembly, developing links with USA legislators on common issues, and exploring economic and cultural opportunities to benefit Northern Ireland.</p> <p>The Group will not replicate or conflict with the role of the Executive or of any of the Assembly's Statutory Committees.</p>
1.5	<p>Below is a list of the current membership of the Group – although the Group is potentially open to every MLA in the Assembly:</p> <ul style="list-style-type: none"> <li>– Mr William Hay Speaker (Chairman)</li> <li>– Mr Leslie Cree MLA</li> </ul>

	<ul style="list-style-type: none"> <li>– Mr Stewart Dickson MLA</li> <li>– Mr Paul Girvan MLA</li> <li>– Mr Danny Kennedy MLA</li> <li>– Mr Chris Lyttle MLA</li> <li>– Mr David McClarty MLA</li> <li>– Mr Basil McCrea MLA</li> <li>– Dr Alasdair McDonnell MLA</li> <li>– Mr Cathal Boylan MLA</li> <li>– Ms Judith Cochrane MLA</li> <li>– Mr Edwin Poots MLA</li> </ul>
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<b>2</b>	<b>Key Issues</b>
2.1	Belfast City Council has been selected to be a respondent due to our historic relationships with USA dating back over 15 years. Much of the activity stemmed from the late 90's in the period immediately succeeding the peace process.
2.2	BCC presently is reviewing its international relationships in general including USA. This project comprises review of international relations activity of the Council and all the key stakeholders, agreeing on the key priority areas and Belfast narrative and building a collaborative approach to international relations and marketing across the city.
2.3	Some of the key Belfast/US relationships over the last 15 years have included:
2.4	<p><u>Friends of Belfast</u></p> <p>A social capital network of over 300 pre-eminent business people, professors and politicians across USA covering the cities of Washington, New York, Boston, Pittsburgh, Halifax, Nova Scotia, Denver, Austin, Portland in Maine and Portland in Oregon and Nashville was established in late 1990s.</p>
2.5	In the beginning direct economic benefits were realised with companies such as Allstate and Liberty Mutual investing in Belfast as a direct consequence of interventions by Friends of Belfast recommending Belfast to investment decision makers. From 2002 onwards the Friends of Belfast initiative became more focused on connecting business people, academics and politicians with updates on opportunities for investment in Belfast. Several external and internal trade missions took place supported by Friends of Belfast in New York, Boston and Washington. Due to a refocusing of Council priorities, in 2006 Council ceased actively managing the Friends of Belfast network although some activity continues in the USA without BCC direct intervention. The role of a refreshed Friends of Belfast going forward is being investigated under the International Marketing and Relations project.
2.6	<p><u>World Trade Centre</u></p> <p>Belfast has had the licence to operate a World Trade Centre (WTC) since 2002. This in effect connects Belfast to over 300 other World Trade Centres around the globe. WTCs have multiple purposes ranging from a minimal use of the WTC brand name to a fully integrated service facility for trade and business development, locally and internationally. Outward missions to Washington, New York and Qatar occurred with the support of the WTC network.</p>
2.7	BCC delivered a range of services to local businesses under the WTC banner for four years which culminated in Belfast receiving recognition from the WTC network as a

	<p>potential applicant for formal accredited status. Due to a loss of resources for this project the WTC activity has currently ceased although international investment opportunities continue as part of Council's mainstream economic development approach.</p>
2.8	<p><u>Nashville</u> An agreement between Belfast and Nashville, Tennessee, to become sister cities under the formal Sister City network was signed in 1995 and, after a dormant period in the late 1990s was resurrected. From 2006 onwards the Council has had a full work programme attached to it spanning tourism, creative industries and wider cultural potential. Nashville have a formal committee of the Sister City network dedicated to Belfast with support from the Mayor's office and efforts have been made in recent years to ensure that the wider economic development opportunities relating to healthcare are included as part of our exchange programme. A number of Belfast singer songwriters and the wider music industry have benefited from participation on BCC led missions to Nashville and have obtained business deals and contracts directly as a result. A full review of the potential of this relationship is underway.</p>
2.9	<p><u>New York, Boston and Washington</u> Over the years since the late 1990s there has been particular engagement with New York, Boston and Washington with economic development trade missions operating between Belfast and these cities, sometimes on a bi-annual basis. In the mid 2000's the missions were themed and concentrated on creative industries.</p>
2.10	<p>Relationships were built up with a wide range of economic development agencies and with the universities allowing for learning, transfer of ideas and sharing of knowledge. Current activity is centred on identifying the optimum form of relationship and specific objectives for each location.</p>
2.11	<p><u>Silicon Valley/Hollywood</u> In November 2011 Belfast was visited by a group of creative and hi tech leaders from the Silicon Valley and Hollywood in USA known as the Irish Technology Leadership Group seeking investment opportunities. They had previously included Belfast in visit programmes in earlier years as part of a joint programme with Dublin but this year they designed a bespoke programme for their mission to coincide with the MTV EMA music awards and focused their attention on Belfast only.</p>
2.12	<p>They announced a new internship programme for up to 4 companies to benefit from a placement with Silicon Valley companies in the coming year during their stay in Belfast and committed to signing a longer term MOU for cooperation between Belfast and the Irish Technology Leadership Group. Unfortunately the internship programme has not advanced as originally envisaged and a review of this activity is also underway.</p>
2.13	<p><u>Specific recommendations</u> The Council is currently developing an International Relations Framework and an International City Marketing plan. The focus is on internationalisation, connections, partnerships and investment and we think the establishment of this Assembly Group is timely for both sides.</p>
2.14	<p>As part of this process we have engaged with a number of key stakeholders in the City (who are also active on a regional level) to gather their views and find out about their international work. From our previous and current experiences, we think that the critical parts to the success of this group are:</p>

	<ul style="list-style-type: none"> <li>– Find out what is currently happening in the locality/region</li> <li>– Develop a set of priorities</li> <li>– Create an agreed local narrative</li> <li>– Develop criteria for success</li> </ul>
2.15	At first instance it is proposed that the Assembly Group conducts a NI audit on the existing relations with the USA. It seems from the Council's own audit that many Councils, Colleges, and Universities have formal and informal links with the USA.
2.16	<p>We believe it is important to set down criteria on where and why the group will engage with the USA on specific areas. We suggest that priority areas should include:</p> <ul style="list-style-type: none"> <li>– Investment and funding</li> <li>– Trade and new business opportunities</li> <li>– Partnerships</li> <li>– Cultural and social exchange</li> <li>– Political and diplomatic connections</li> </ul>
2.17	Consistent and coherent messages are very important in establishing new partnerships in the USA. There are many organisations in NI being involved in the USA, organising inward and outward visits many times in a year, often to the same locations but with different messages. This group could lead on establishing one NI narrative around economic, political and cultural issues.
2.18	Working together will be of major importance in this era of public sector cuts. We would be very keen that we establish relationship with the Assembly group early on, both through the political level and the officer level via the group secretariat. It would be very beneficial if the Council would have an ongoing input into the work of the group.
2.19	We believe that there are a number of organisations who could play an important role and asset to the group, besides the Council, Queen's University, University of Ulster, Belfast Metropolitan College, the Belfast Education and Library Board for example. Also, the group could exploit the existing lasting relationships such as International Fund for Ireland and Irish Institute of Pittsburgh.
2.20	Finally we would suggest a joint calendar of planned inward and outward visits to the USA from the NI Assembly to Invest NI, Local Councils, Chambers and Universities.
2.21	After speaking with the Secretariat of the Group it was obvious that the MLAs who are part of the USA Parliamentary Group are keen to work together with Belfast City Council in shaping and delivering their work. We would suggest an early meeting between the BCC and the Assembly group/secretariat with the BCC delegation being Chair and Deputy Chair of Development Committee and Director of Development.

<b>3</b>	<b>Equality and Good Relations Considerations</b>
3.1	There are no Equality and Good Relations considerations attached to this report.



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Background to forming the Northern Ireland Assembly Parliamentary Group on the USA.

1. The primary objective which led to the Speaker originally giving a commitment to explore this issue was establishing a NI Assembly counterpart to engage with the Friends of Ireland Group in the US Congress. The Speaker made a short visit to the United States in September 2011 during which the demand for such a group was reaffirmed by politicians and officials. With the political progress made since the return of devolution, the political mood and relationship with the US has shifted to a greater focus on common interests, particularly economically. In this context, it is arguable that there is an even greater opportunity for contact between legislators in the US and interested MLAs and the initiatives which might flow from it.
2. The Group would provide a platform for engagement between legislators of all parties in the Assembly and Congress and not just between the US Administration and the Executive. Such networking between politicians would not be restricted to Congress, but could arguably hold even greater value at State level. In this context, both the NI Bureau in Washington and the US Consulate in Belfast are supportive. Any grouping should not be there to substitute or duplicate the work of the Executive or committees but should complement it, with appropriate developments being passed to Departments.
3. The Assembly Secretariat already facilitates a large number of US delegations which visit the Assembly by arranging hospitality and sessions with Members. The proposed group would provide a platform for this existing work. Engagement with legislators is an issue for the Assembly and both the NI Bureau in Washington and the US Consulate refer delegations expressing an interest in visiting to the Assembly. Indeed, at least two delegations of US legislators are expected to visit to the Assembly in 2012 both focused on economic opportunities.
4. During his visit to the US in September 2011, the Speaker held a number of meetings to explore potential links and initiatives for the Assembly. These include Boston College focusing one of its annual programmes on legislative skills and the American Council of Young Political Leaders initiating an exchange programme with state legislators likely to be future key players in the US. These programmes would require minimal resource from the Assembly and be primarily supported by the State Department and the NI Assembly Legislative Strengthening Trust. The Group could provide a useful platform to identify and develop such initiatives in the future, including those which may offer funds and other benefits to the Assembly.

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## **Northern Ireland Assembly Parliamentary Group on the USA**

### **Rules**

1. These rules establish the Northern Ireland Assembly Parliamentary Group on an exploratory basis to allow it to produce a report on its potential aims and activities for consideration by the Assembly Commission in October 2012.
2. If the Assembly Commission approves the long term existence of the Group, these rules will be reviewed.

### **Membership**

3. Any Member of the Northern Ireland Assembly may register as a member of the group.

### **Officers**

4. The Speaker shall be the, ex-officio, the Chairperson of the Group.
5. The Secretary of the Group shall be an official of the Assembly nominated by the Speaker and elected by the members. The Secretary shall be the Chief Executive Officer of the Group and, subject to the general directions of the General Meetings. He or she shall manage the day to day affairs of the Group. .
6. Further officers, including an Executive Committee shall not be elected until the future of the Group is confirmed.
7. Decisions on the activities of the Group will be taken at meetings open to all members of the group.
8. Four Members, including the Chair will form a quorum at all meetings of the Group.

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**Belfast City Council**

<b>Report to:</b>	Development Committee
<b>Subject:</b>	<b>Cities of the Isles, Glasgow, October 2012</b>
<b>Date:</b>	4 September 2012
<b>Reporting Officer:</b>	John McGrillen, Director of Development, ext 3470
<b>Contact Officer:</b>	Shirley McCay, Head of Economic Initiatives, ext 3459

<b>1</b>	<b>Relevant Background Information</b>
1.1	Members will be aware that the 'Cities of the Isles' (COTI) Partnership is a network of six City Councils in the UK and Ireland (Belfast, Cardiff, Dublin, Edinburgh, Glasgow and Liverpool). Since 2000 these cities have come together annually to share urban regeneration experiences, develop joint projects and establish a co-ordinated approach to issues of strategic importance.
1.2	Each of the member cities takes it in turn to host the annual event in their city. The 2012 COTI meeting will take place in Glasgow on 24-25 October 2012.

<b>2</b>	<b>Key Issues</b>
2.1	The 2011 COTI meeting took place in Cardiff. There was senior level member and officer representation from each of the cities involved. The delegates took part in a structured discussion on the challenge of regenerating cities within the context of public sector financial restraints. There was a particular focus on innovative financing models for regeneration and the role of universities in the city. A site visit to a number of key regeneration sites was also part of the programme.
2.2	The draft programme for the 2012 event has recently been circulated by Glasgow. The discussion will focus on two key themes: <ul style="list-style-type: none"> <li>– Youth Employment, including apprenticeships and training</li> <li>– Using sport as a tool to engage with young people.</li> </ul>
2.3	Glasgow – like Belfast – has seen significant investment and regeneration in the last two decades in particular. However, despite this growth, the city has a major problem with economic inactivity, particularly in a number of neighbourhoods. It was one of the pilot "city strategies" that were supported under the previous

	government and much of the learning from this experience is being drawn on by partners working on Belfast's employability and skills strategy.
2.4	With regard to young people and sport, Glasgow is to host the Commonwealth Games in 2014. This discussion will offer an opportunity to talk about the potential legacy of investment in sport and of its role in engaging young people.
2.5	It is proposed that the Chair and Deputy Chair of Committee (or nominees) as well as up to two relevant officers take part in the Glasgow meeting.

<b>3</b>	<b>Resource Implications</b>
3.1	<u>Financial</u> All programme costs to be covered by Glasgow. Travel and accommodation costs estimated at £250 per person.

<b>4</b>	<b>Equality and Good Relations Considerations</b>
4.1	There are no specific equality or good relations considerations attached to this report.

<b>5</b>	<b>Recommendations</b>
5.1	Members are asked to: <ul style="list-style-type: none"> <li>– Note the COTI event to be held in Glasgow on 24 and 25 October 2012</li> <li>– Agree to participation by Chair and Deputy Chair of Committee (or nominees) as well as up to two officers at the event at a cost of around £250 per person.</li> </ul>

<b>6</b>	<b>Decision Tracking</b>
A report on outcomes of the visit will be brought back to Development Committee in December 2012.	
Timeframe:	December 2012
Reporting Officer:	Shirley McCay

<b>7</b>	<b>Key to Abbreviations</b>
COTI – Cities of the Isles	



<b>Report to:</b>	Development Committee
<b>Subject:</b>	<b>Global India Business Meeting 2013 Update</b>
<b>Date:</b>	4 September 2012
<b>Reporting Officer:</b>	John McGrillen, Director of Development, ext 3470
<b>Contact Officers:</b>	Shirley McCay, Head of Economic Initiatives, ext 3459

<b>1</b>	<b>Relevant Background Information</b>
1.1	At Development Committee of 8 May 2012, Members agreed to support the hosting of the Global India International Meeting in 2013.
1.2	Global India Business is a major international networking event which brings together over 350 chief executives from major Indian companies with their European counterparts to examine the potential for trade development and investment between the two regions.
1.3	The Global India Business Forum is the foremost annual gathering of Indian business leaders and their global counterparts. The event is open to CEO's of the world's leading companies. Horasis the event organiser has a partnership with leading Indian firms and uses this network to connect with other leading companies across the globe. The 2012 Global India event took place in Antwerp, Belgium on 24-25 June. Other cities which have recently hosted the event include Munich, Madrid and Naples.
1.4	The 2012 event was attended by Councillors Spence and Keenan and the Head of Economic Initiatives.

<b>2</b>	<b>Key Issues</b>
2.1	Following Committee approval work has been ongoing to progress the contractual negotiations and secure arrangements. Presently the proposed dates for Global India are 24-25 June 2013 with the opening taking place in City Hall, the main event in the Waterfront Hall and the closing dinner in Titanic Belfast. Delegates will select from a variety of accommodations but it is likely a city centre hotel will be used as the main venue to accommodate guests.
2.2	The total cost of hosting the event is around £160,000. Should a funding shortfall occur, Members are asked to consider the way forward.

2.3	BCC has agreed to support the costs of the event to a maximum of £100,000 in conjunction with other funding options. To date Invest NI have agreed to provide £40,000 maximum and additional finance is being sought from Northern Ireland Tourist Board (NITB), Tourism Ireland and the university sector.
2.4	The programme will comprise a series of international and local speakers examining global economic issues of particular interest to the Indian Sub-Continent. There will be a dedicated session on Doing Business in Belfast which will be delivered in conjunction with Invest NI. Council will also have the opportunity to influence the programme content to showcase Belfast's competitive edge and contemporary and forthcoming business opportunities. Local delegates will have the opportunity to interface with CEOs of leading Indian firms and business to business meetings will be arranged in parallel with the conference. At this point, Minister Sharma, Commercial Minister for India has confirmed attendance.
2.5	Belfast have agreed with Horasis that access will be given to details of the attending delegates in advance so that advance marketing of Belfast and its opportunities can be undertaken. Furthermore there is the potential of pre and post-conference activity to attract delegates to stay longer and directly explore specific issues or indeed to avail of the tourism offering.
2.6	The format of the Global India meeting is based on the model used over the past 6 years. A great deal of time has been invested to date in ensuring that the local Belfast/NI dimension is adequately reflected in the programme as well as securing the maximum anticipated outputs for the financial resources invested by BCC and its partners. There is a need to conclude the contract details in the immediate future.

<b>3</b>	<b>Resource Implications</b>
3.1	<p><u>Financial</u> The total required is £160,000.</p> <p>BCC has agreed £100,000 towards hosting of the Conference.</p> <p>Invest NI have agreed £40,000.</p> <p>Current shortfall is £20,000.</p>

<b>4</b>	<b>Equality and Good Relations Considerations</b>
4.1	There are no Equality and Good Relations Considerations attached to this report.

<b>5</b>	<b>Recommendations</b>
	Members are asked to note progress of the Global India Business Meeting 2013 and to consider how to respond, should the full funding package not be secured inside the available timeframe.



<b>6</b>	<b>Decision Tracking</b>
Report back on progress in securing additional funding to be brought back to November 2012 Committee.	
Timeframe: November 2012	
Reporting Officer: Shirley McCay	

<b>7</b>	<b>Key to Abbreviations</b>
BCC – Belfast City Council	
NITB – Northern Ireland Tourist Board	

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**Belfast City Council**

**Report to:** Development Committee

**Subject:** **Belfast Tourism Forum**

**Date:** 4 September 2012

**Reporting Officer:** John McGrillen, Director of Development, ext 3470

**Contact Officer:** Shirley McCay, Head of Economic Initiatives, ext 3459

1	<b>Relevant Background Information</b>
1.1	Belfast City Council, Northern Ireland tourist Board (NITB) and Belfast Visitor and Convention Bureau (BVCB) agreed a tourism framework for the city, the Belfast Integrated Strategic Tourism Framework 2010–2014, which was launched in March 2011. The Belfast Integrated Strategic Tourism Framework (BISTF) 2010–2014 ( <a href="http://www.belfastcity.gov.uk/tourism">www.belfastcity.gov.uk/tourism</a> ) identifies a range of tourism priorities and projects for the city, many of which are now being realised including the extension to the Belfast Waterfront Hall, the relocation of the Belfast Welcome Centre and the development of local tourism destinations.
1.2	One of the recommendations within the BISTF 2010–2014 was to ensure better integration between the delivery bodies for tourism across the city. The Framework identified the need for a Belfast Tourism Forum which would have representation from the main public sector agencies and statutory bodies that impact on tourism development as well as main industry bodies such as Pubs of Ulster, Northern Ireland Hotel Federation, Northern Ireland Tour Guides Association.
1.3	At an operational level, the Forum is supported by an officers group, representing Belfast City Council's Tourism and Events teams, Belfast City Centre Management, Belfast Visitor and Convention Bureau and NITB. This ensures better integration and efficiency at an operational level.
1.4	The current representation on the Belfast Tourism Forum and the Terms of Reference is attached as Appendix 1.
1.5	The first meeting of the Belfast Forum was in March 2011 and launched the start of implementing the BISTF 2010–2014. A 12 month action plan was prepared to identify the key actions to be undertaken in 2011/2012 and reports were made at quarterly meetings on progress. Subsequent meetings also identified key topics for discussion, for example;

	<p>Meeting 1, March 2011; Belfast Integrated Strategic Tourism Framework</p> <p>Meeting 2, June 2011; GB Market and barriers to growth</p> <p>Meeting 3, Sept 2011; City Events and 2012 Our Time, Our Place Campaign</p> <p>Meeting 4, Dec 2011, Industry engagement and communications</p> <p>Meeting 5, March 2012, Research Trends and Visitor Satisfaction</p> <p>Meeting 6, June 2012, Review Workshop on the impact of the Tourism Forum</p>
1.6	Some of the key outputs from the Belfast Tourism Forum have included a meeting with the Minister for Tourism to discuss tourism priorities for the city, whereby both Members of Development Committee and the industry representatives presented a joint approach; the development of a new programme of industry support 'Destination Belfast' funded by BCC and Invest NI and the roll out of a programme of support for local tourism destinations.
1.7	Overall a number of additional workshops and industry sessions have been held due to the work of the Tourism Forum and in summary a minimum of 200 businesses/organisations have participated in these.

<b>2</b>	<b>Key Issues</b>
2.1	In June 2012, representatives of the Belfast Tourism Forum attended a facilitated workshop to review progress and identify the best way forward for the Forum. The report from the workshop is attached as Appendix 2.
2.2	<p>In general there is support for a Belfast Tourism Forum and recognition that Belfast City Council is best to lead on this. Whilst the previous action plan captured all the key priorities, it was perhaps too detailed and the Forum members wished to develop more strategic work streams. The main topics, areas raised during the workshop, fell under the following headings;</p> <ul style="list-style-type: none"> <li>- Strategic Coordination – including better and more regular research</li> <li>- Branding &amp; Marketing – how best to maximise on Titanic message and reinvigorate the city brand</li> <li>- World Host City – Belfast needs to be committed to customer care and service and should attain World Host City status</li> <li>- Belfast Destinations – work has commenced on developing local destinations across the city and this should continue</li> <li>- Products and Programmes – music, food, literature, city events are all areas which have and continue to receive investment – what are the next themes, experiences that visitors will be drawn to?</li> </ul>
2.3	The next meeting of the Belfast Tourism Forum is planned for 25 October 2012. The Belfast Tourism Officers Group has met to discuss the findings of the workshop and each organisation has agreed that their priorities for tourism fit within these workstreams. It is therefore proposed that the officers begin populating these workstreams for presentation to the next meeting of the Belfast Tourism Forum. The next meeting will also provide a platform to update stakeholders on the World Police and Fire Games and opportunities for 2013.
2.4	To date, Belfast City Council's representation on the Belfast Tourism Forum has included the Chair and Deputy Chair of Development Committee, Director of Development, Head of Economic Initiatives, Tourism, Culture and Arts Manager and

	Tourism Development Officer. It is recommended that this remains the same, however should the Chair/Deputy Chair be unavailable, that other Members can be approached to ensure that there is political representation at these high profile meetings.
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<b>3</b>	<b>Equality and Good Relations Considerations</b>
3.1	There are no specific equality or good relations considerations attached to this report.

<b>4</b>	<b>Recommendations</b>
4.1	Members agree that the Belfast Tourism Forum continues and that work streams are developed for Strategic Coordination, Branding & Marketing World Host City, Belfast Destinations, Products and Programmes
4.2	The Chair and Deputy Chair or their nominated representatives attend the next meeting of the Belfast Tourism Forum

<b>5</b>	<b>Decision Tracking</b>
The next update on the work of the Belfast Tourism Forum will be in March 2013.	
Timeframe: March 2013	Reporting Officer: Shirley McCay

<b>6</b>	<b>Key to Abbreviations</b>
BISTF - Belfast Integrated Strategic Tourism Framework NITB - Northern Ireland tourist Board BVCB - Belfast Visitor and Convention Bureau	

<b>7</b>	<b>Documents Attached</b>
Appendix 1 – Terms of Reference and Membership of Belfast Tourism Forum Appendix 2 – Notes from Workshop	

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**Belfast Tourism Forum****Aim**

To oversee the implementation of the Belfast Integrated Strategic Tourism Framework 2010 – 2014

**Terms of Reference**

1. To agree actions arising from the Belfast Integrated Strategic Tourism Framework and monitor and review its progress, providing regular feedback to Development Committee
2. To develop and establish sign up and ownership amongst key stakeholders to an operational annual city tourism workplan which will include key actions, research and monitoring, an internal and external communications plan and reporting structure.
3. To spread the benefits of tourism to communities across the city through establishing/developing linkages with community led tourism projects.
4. To prioritise and co-ordinate the implementation of tourism projects and programmes for 2012/13 and monitor and review progress, providing feedback to the co-ordinating Steering Group, Development Committee and other groups as appropriate.
5. To provide two way communication between the wider tourism industry and Development committee on tourism activities, opportunities and issues.
6. To communicate tourism developments, tourism performance (via the Council's Belfast Tourism Monitor) and opportunities to wider tourism industry across Belfast
7. To consider relevant Best Practice models elsewhere and share information
8. To regularly review all funding opportunities
9. To advise Belfast City Council on a range of tourism related issues

**Meetings**

Meetings will be held quarterly.

**Reporting**

Quarterly updates to Development Committee

**Representation on Belfast Tourism Forum**

ACNI
Area Partnership Boards include East Belfast Tourism Group, Fáilte Feirste Thair and Greater Shankill Tourism Group
BCCM
Belfast Chamber of Trade and Commerce
Belfast Hills Partnership
BVCB
DCAL
DETI
DOE
DRD
DSD
Good Food NI
Hotel Federation
Invest NI
NI Tour Guide Association
NIEA
NITB
People 1 <sup>st</sup>
Pubs of Ulster
PRONI
Queen's University of Belfast
Titanic Foundation Limited
Tourism Ireland
University of Ulster

**Representation may be added subject to topic / actions for discussion at the Forum Meetings**



## **Summary of Feedback from the Belfast Tourism Forum (BTF) Workshop on 7 June 2012 at The MAC**

### **Introduction**

This is a report from a strategy and action planning review workshop held on the subject of implementing the Belfast Integrated Strategic Tourism Framework 2010-14 (BISTF) and refreshing the Belfast Tourism Forum Action Plan 2012. The workshop was attended by 18 people and facilitated by Richard O’Rawe. An attendance list is attached as Appendix 1 and a long list of points raised at the workshop is included as Appendix 2.

The follow report is a summary of the conclusions reached at the workshop.

### **General Feedback on the Forum**

Asked about what participants felt was good about the work of the Forum they identified a number of areas of note:

- The Council has done a good job in facilitating the Forum
- Participants complimented the work done to get the BISTF developed and the way that the BFT Action Plan 2012 had been drawn together and used to engender cohesion and partnership working
- Playing an important role in getting tourism put on the mainstream economic agenda of Northern Ireland
- Practical work to profile and promote the city and indeed to dress the city: people felt it was “looking good for visitors”.

There was general consensus that the Forum provided a vehicle for developing and coordinating the tourism sector’s response to programmes of work to attract visitors to and keep them longer in, the city.

### **Future of the Forum**

Comments on the future of the Forum can be summarised as follows:

- BCC is best placed to lead the Forum and facilitate coordination
- There was a desire for BCC to actively manage the Forum to ensure engagement and integration across Forum members
- Leadership can be shared with different members leading in different project areas
- The Forum can act as a sounding board and sector voice on some tourism matters
- It was suggested that the Forum should increase private sector input and participation
- The revised and updated action plan should be shorter and more focused.

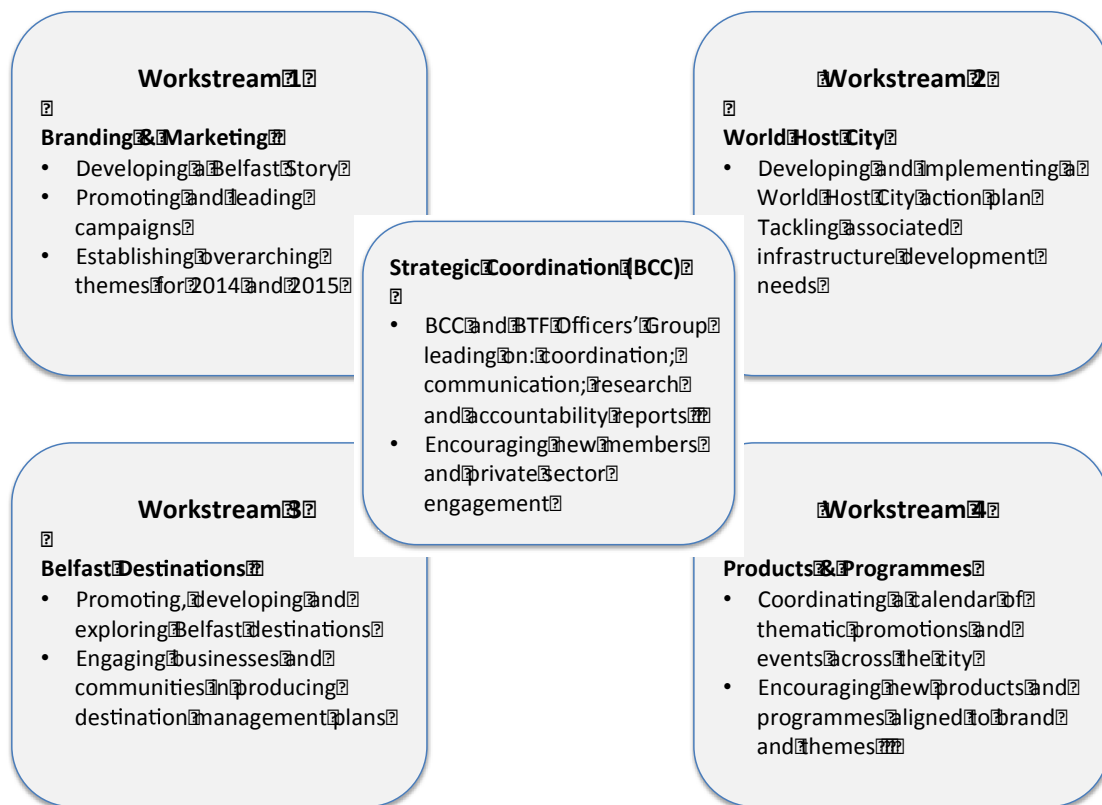
## Suggested Way Forward

Following discussion there was broad acceptance that the Framework (BISTF) was still valid and relevant and that the BTF Action Plan be updated to cover the period 2012-13. There was a request for the Action Plan to be focused and less detailed. In summary, the following areas and potential lead organisations were highlighted for attention in 2012-13:-

- |                            |      |
|----------------------------|------|
| 1. Strategic Coordination  | BCC  |
| 2. Branding & Marketing    | BVCB |
| 3. World Host City         | BCC  |
| 4. Belfast Destinations    | BCC  |
| 5. Products and Programmes | BCC  |

The suggestion is that these form workstreams with a project leader for each. The broad agenda for each workstream is illustrated in the diagram below.

### Coordination and Workstreams 2012-13



Other ideas suggested for retention and inclusion in the BTF Action Plan 2012-13 included:

- City dressing
- Visitor pass
- Tours
- Developing volunteers
- Digital Belfast

- Action plans for designated city destinations

### **Forum Meetings and Communication**

The Forum will continue to meet quarterly with reports being presented from the workstreams and from invited speakers. There is also a continuing role for the Officers Group so that work is being coordinated between meetings. One suggestion was for a new ToR to be drawn up for this Officers' Group.

There is a desire for the Council to coordinate and also to ensure that there is regular communication across the Forum. The Council should develop a communication plan to ensure that all members and wider stakeholders are kept up-to-date with new developments in city tourism.

**Appendix 1****Attendance List from the Belfast Tourism Forum Workshop of  
7 June 2012**

Shirley McCay	BCC
Kerrie Sweeney	BCC
Wendi Kane	BCC
Roisin McKee	People 1st
David Carson	UU
Dee Morgan	NITGA
David McAnirn	NITGA
Aine Kearney	NITB
Judith Webb	NITB
Jim Bradley	Belfast Hills Partnership
Anne Trainor	Invest NI
Claire Bradshaw	Titanic Belfast
Mandy Patrick	East Belfast Partnership
Lawerence Stanford	DCAL
Andrew Irvine	BCCM
Gerry Lennon	BVCB
Sean Quinn	Fáilte Feirste Thair

**Appendix 2****Long List of Issues Raised During the Belfast Tourism Forum Workshop on 7 June 2012****Section 1: “Plus” What has Gone Well**

- Tourism Framework itself
  - Cohesion
  - Partnership
- Profile of Belfast/N.I.
  - Titanic
  - Events
- Tourism accepted as economic driver (by Government)
- City pride
- Marketing of city
  - Our Time, Our Place
  - Maritime heritage
- City looks good.

**Section 2: “Delta” Challenges Faced and Areas for Improvement**

- Evolve Titanic brand
  - Industrial
  - Maritime
- Licencing
  - Opening hours/Sundays
- Belfast City Marketing (Stand alone/Independent Company?)
- Cross Selling – Communication – Integration
- Digital Capacity
  - Tourists and infrastructure
- Languages
- Quality control
  - Taxi tours – regulate/pricing

**What is the Next Big Thing for Us?**

- Better knowledge of what’s happening
- Enhanced support
  - Microbusinesses
  - Local communities
- Bilaterals - outside of Forum
- Opportunities for future
  - Did you know?
  - Belfast story 2013/14/15
- Belfast Story
- Maintain momentum
- New ways to increase spend

**Section 3: Priorities for Action**

- Evolve the brand
- Belfast Story
  - Definition
  - Visitor experience
  - Political history
- Continue to take forward
  - Main drivers/destinations
    - Maritime heritage
    - Cultural strategy
  - Continuity and momentum
- Identify and Develop new products
  - Sport
  - Film studios
  - Art tours
- Languages (BCC take lead)
  - Tour guides (linguists)
  - Use of students
  - Technology
- Transport/access
- Accommodation
  - Quality
  - Character
  - More
- Delivery of framework
  - Ownership/action by members of forum
- Lobby for VAT reduction, and Airport Passenger Duty and improve access (Lord Mayor/Council)
- Community based tourism support (BAPs?)
- Timely, Robust Accurate Data (e.g, ASM Howarth and led by BCC)
- 4. Visitor spend ££ (BVCB/BCC)
  - Research and identify best practice locations
  - Action plan
  - Business training SMEs
    - Belfast MET
    - UU
    - DEL/Invest NI
- Evolution of brand
  - BVCB facilitate/BCC/BAPs
- Commit Belfast to being a world host destination
  - Cultural awareness
  - Language guides
  - Customer service and spend
  - Continuous monitoring
  - Business skills
  - BCC supported by NITB, People 1<sup>st</sup>, delivery partners
- Reininvigorate the brand messages (BVCB)
- Develop the Belfast Story further and communicate to the trade (BCC)

#### **Section 4: Summary**

- What we really want to see in the updated Action Plan for 2013/14
- Action of feedback
  - Providers taken to task on manners, quality of welcome, street cleansing etc.
- Airport Passenger Duty
- Direct Access
  - Transport
- VAT Reduction
  - Campaign lobby
- Community Based Tourism
  - BAPS
  - Central Coordination
- Evolution of Brand
  - Reinvigorate
  - A focus for the Forum
  - Delivery support
  - Community – define what this means
  - Belfast Story (local and visitor)
- Data and Research
  - BCC
  - NI Hospitality Federation HF
  - Capture from members
  - NITB
- Accommodation Mix
  - Character
- New Products
  - Casement Park – potential for concerts etc.
  - Film Studios
    - Game of Thrones etc.
- Themes
  - Music
  - Maritime
- World Host City
  - BCC+
  - Supporting activities

### **Section 5: Feedback on the Forum**

- Good for integration
- BCC prepared to lead – this is needed
- Heartbeat for tourism sector (+listening)
- Works well (3-4 meetings a year)
- Officers' group to deliver
- Themed meetings and challenges
- More two-way interaction at meetings
- Build in challenge for reality checks and feedback

- Need clear hook to attract attention and common issues
- Thematic focused issues to be debated
- More focused action plan
- Membership – more private sector input
- BCC engages sectoral clusters (food, music, literary)
- Potential voice for the sector
- Great representation across industry.





**Belfast City Council**

<b>Report to:</b>	Development Committee
<b>Subject:</b>	<b>Visual Arts Feasibility Study</b>
<b>Date:</b>	4 September 2012
<b>Reporting Officer:</b>	John McGrillen, Director of Development, ext 3470
<b>Contact Officers:</b>	Shirley McCay, Head of Economic Initiatives, ext 3459

<b>1</b>	<b>Relevant Background Information</b>
1.1	Members will be aware that the new draft Cultural Framework 2012-15 notes that Council will take a leadership role on the strategic alignment and co-ordination of the culture and arts sector, will provide opportunities for organisations to develop and diversify their income streams, and will promote partnership working and collaboration.
1.2	Belfast City Council has been approached by the Arts Council of Northern Ireland in relation to providing support for a needs analysis and feasibility study for visual arts in Belfast. Following comparative analysis with UK cities, it has been identified that Belfast needs to look at the future provision of visual culture in order to compete nationally and internationally, including options of a hub, collaborations, mergers. The idea for the project has been voiced in a number of public forums, including the Arts Council's Consultation on the Ormeau Baths Gallery closure, the Arts Council's Visual Arts Stakeholders Group and the Arts & Business in-camera event at Stormont.
1.3	The needs analysis and feasibility study would look at the potential for four or more arts venues to co-locate in one venue or combine to form a new arts institute and hub for contemporary art. It is in response to the city's need for destination venues and the sector's need for shared resources to best use funding available.
1.4	The aim is not just to provide a world class visitor destination, but also to represent the artists, creative industries practitioners and craftspeople living and working in Belfast.

<b>2</b>	<b>Key Issues</b>
2.1	The feasibility study will cost a total of £25,000. The Arts Council would provide 75% (£18,750) and Members are asked to consider approval of the further 25% (£6,250).
2.2	The four principle venues participating in the initial feasibility study are Golden Thread Gallery, Belfast Exposed, PLACE, Queen's Film Theatre. Consultation will be a key part of the study and will be reflected in any outcomes. It will identify the need, the best solution and the future sustainability for such a project.
2.3	Combining four arts organizations will dramatically increase the breadth of activities offered and the increased building size will make these activities available to a wider number of people. Each of the organizations taking part in the feasibility study has a separate area of expertise and attracts a different audience. Housed under one roof, the new venue will allow audiences to conveniently visit a selection of art forms when they previously may have only visited one.
2.4	The result should be a study that reflected the existing arts provision in Belfast and that makes a number of suggestions as to the feasibility of a new project. The tender process for the consultation document would require consultation with all art galleries, individual artists, as well as key stakeholders. The project would be overseen by the project partners and the steering committee that will include representatives of both Belfast City Council and the Arts Council of Northern Ireland.
2.5	If approval is given, we would recommend that the study also includes a review of the following: <ul style="list-style-type: none"> <li>– Belfast's visual arts infrastructure, exhibition and workplace provision including the impact of new gallery capital developments such as the MAC, An Culturlann and the Ulster Museum, the impact of the Ormeau Baths Gallery closing, and a review of workspace provision including Queen's Street Studios' plans for relocation.</li> <li>– A review of City Investment Programme and City Masterplan from a visual arts perspective, including an audit of Council publicly owned assets to ascertain potential partnership opportunities.</li> <li>– Opportunities arising from creative industries and cultural tourism, including proposals for creative digital hubs.</li> </ul>

<b>3</b>	<b>Resource Implications</b>
3.1	<u>Finance</u> The feasibility study will cost a total of £25,000. The Arts Council will provide 75% (£18,750) and Members are asked to consider approval of the further 25% (£6250) to be provided for within the current Tourism, Culture and Arts Budget 2012/13.

<b>4</b>	<b>Equality and Good Relations Considerations</b>
4.1	There are no Equality and Good Relations Considerations attached to this report.

<b>5</b>	<b>Recommendations</b>
5.1	It is recommended that Members; <ol style="list-style-type: none"><li>1. Note the contents of this report</li><li>2. Consider approval of support of £6,250 to support 25% of a needs analysis for visual arts in Belfast and feasibility study for arts venues to co-locate and combine to form an arts institute.</li></ol>

<b>6</b>	<b>Decision Tracking</b>
There is no Decision Tracking attached to this report.	

<b>7</b>	<b>Key to Abbreviations</b>
ACNI – Arts Council of Northern Ireland	

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<b>Report to:</b>	Development Committee
<b>Subject:</b>	<b>Tall Ships 2015</b>
<b>Date:</b>	4 September 2012
<b>Reporting Officer:</b>	John McGrillen, Director of Development, ext 3470
<b>Contact Officers:</b>	Gerry Copeland, City Events Manager, ext 3412

<b>1</b>	<b>Relevant Background Information</b>
1.1	<p>The purpose of this report is to highlight to Members proposed plans for the delivery of the 2015 Tall Ships event in Belfast.</p> <p>The Council meeting of October 2011 agreed that it would stage and contribute £1.3 million to the delivery of a Tall Ships Race event in 2015. The overall race, owned by Sail Training International (STI), will start in Belfast on the 2 July and finish on the 4 August. The ports taking part in this nautical escapade are:</p> <ul style="list-style-type: none"> <li>- Belfast - (Thu 2 – Sun 5 July 2015) <i>Race 1</i></li> <li>- Ålesund - (Norway, 15 – 18 July) <i>Cruise-in-Company non race</i></li> <li>- Kristiansand - (Norway, 25 – 28 July) <i>Race 2</i></li> <li>- Aalborg - (Denmark, 1 – 4 August)</li> </ul> <p>As stated above the Council will contribute £1.3 million to the 2015 event. In 2009 the Tall Ships Atlantic Challenge produced the following key outputs:</p> <ul style="list-style-type: none"> <li>- Almost 750,000 people witnessed the event first hand, 500,000 attended the Belfast event.</li> <li>- Visitors rated the event at an average 8.6 out of 10</li> <li>- Numerous port visits across Northern Ireland</li> <li>- 27 local trainees spent three weeks crossing the Atlantic Ocean</li> <li>- Many other local trainees, including those with disabilities, placed on other vessels travelling to and from Belfast</li> <li>- £1m of new quayside infrastructure</li> <li>- Creation of 90 jobs and hundreds of other employment / volunteering opportunities</li> <li>- £16m economic impact</li> <li>- Several industry awards</li> </ul>
1.2	<p><u>2009 Tall Ships Audit Reports</u></p> <p>Audits and analysis of the 2009 project were conducted. The first was a GATE review, which was undertaken by the Council's Property and Projects Department. The outcome gave the project highest scores possible under each of the GATE</p>

	criteria. In addition to the Council's Audit, Governance and Risk Services (AGRS) completed a 'Lessons Learned' document and gave the event, including delivery and governance, a glowing endorsement.
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<b>2</b>	<b>Key Issues</b>
2.1	<p><u>Management and Delivery for 2015</u></p> <p>The 'Belfast Tall Ships 2009' Company, which was the special purpose vehicle created to deliver the event is still in operation, but its in a dormant state with <u>zero</u> business activity and only four registered Board members (Mr Trevor Anderson, Director of Port Operations at Belfast Harbour), Dr Gerard O'Hare (Chair of Tall Ships 2009 and Board Member of Belfast Harbour Commissioners) and two City Councillors. The latter will be replaced on the new board and given the experience in 2009 it is proposed that the structural format of the company (highlighted in Appendix 1) is replicated. The overall delivery format, based on the 2009 system, will include a number of key operational work groups and the re-establishment of a Tall Ships Assurance Board</p>
2.2	<p><u>Board Representatives</u></p> <p>The 2015 company would be tasked with the delivery of the 2015 event. As with the previous 2009 event, the Board of the Company would have Council representation in the form of two members, which would be proposed to be the Chair and Deputy Chair of Development Committee or their nominees.</p> <p>It would also be suggested that the remaining Board members, alongside Council representation, would be from: Belfast Harbour (this is likely to be Dr O'Hare and Trevor Anderson); NITB; Titanic Quarter; Ocean Youth Trust (STI's endorsed sail training organisation in Belfast); Odyssey Trust, BCCM/BCTC and DSD's City Centre Regeneration Directorate.</p>
2.3	<p><u>Assurance Board</u></p> <p>As in 2009 this group would be co-chaired by the CEO's of BCC and Belfast Port. It would have officer input from their respective organisations including BCC's AGRS section. Primary function of the Assurance Board would be to develop an assurance framework and to review risk issues of the project. This should be a much more straight forward process given the significant work put into the 2009 event.</p>
2.4	<p><u>Logistics and Operations</u></p> <p>The City Events Unit, in partnership with other organisations in the City, but primarily the Belfast Harbour Commissioners, would deliver the event with oversight from the Tall Ships 2015 Board, Tall Ships Assurance Board and the various operational working groups. The Council will not only draw on the experiences of 2009, but also on the delivery of the City's annual Maritime Festival.</p> <p>However, in order to deliver the event a number key public tenders would be issued and these would include:</p> <ul style="list-style-type: none"> <li>- corporate ships hospitality;</li> <li>- markets/food concessions inclusive of bars;</li> <li>- fun fairs;</li> <li>- sail training</li> <li>- external financial management inclusive of HMRC &amp; Companies House processes.</li> </ul> <p>In addition the Council's City Events Unit would work with BCC's Cleansing Services</p>

	<p>Section to develop a tender for additional waste and environmental management services.</p>
2.5	<p><u>Marketing and Public Relations Management</u>  In 2009 these elements were delivered via external contractors. However, for the 2015 event it would be recommended that BCC's Corporate Communications via an SLA with the new Tall Ships 2015 company deliver the marketing strategy for the event. This would include public relations and advertising activity.</p>
2.6	<p><u>Business Support and Staff Resources</u>  It would be envisaged that the current City Events Unit structures would be supplemented with the appointment of a Tall Ships Business Support Assistant (grade Scale 5) and would link with the Department's HR and Financial sections. This post would be for a two year period from October 2013.</p>
2.7	<p><u>Volunteering &amp; Community Development Opportunities</u>  One of the successes of the 2009 event was the opportunities for trainees, some drawn from BCC's community networks. There would be a request that similar inputs to the event are developed for the 2015 event. In order that this could happen it would be recommended that an allocation of staff input from Community Development. In 2009 this was led by John Nelson, Community Development Manager, who inputted to the recruitment and training process for sailing trainees. It would also be envisaged that this section of the Council would work closely with Volunteer Now on the recruitment of volunteers for the event. It would be hoped that these two strands would contribute to the employability outputs that have been identified in the Council's Investment Programme. This will be achieved via training that will develop talent sets that will improve volunteers' and trainees' employability and skills – so taking the outputs of the Tall Ships 2015 race beyond the event.</p>
2.8	<p><u>Partners</u>  The key partners to assist in the delivery of the event would be based on the 2009 model. BCC would lead with operational assistance from Belfast Port. Promotional and marketing activity would be led by BCC's Corporate Communications Section supported by BVCB, in association with NITB and Tourism Ireland. Both BCCM and BVCB would provide input to customer servicing and liaising with the retail, and hospitality sectors in Belfast. Oversight security would have input from PSNI and BCC.</p> <p>In addition there will be considerable Council input across a range of departments/sections e.g. Chief Executives, Legal Services; Environmental Health, etc.</p>

<b>3</b>	<b>Resource Implications</b>								
3.1	<p><u>Finance</u>  It is estimated that the 2015 cash costs of event will be in the region of £2.3m. BCC's contribution will be profiled over three financial years. Details of this will be developed in conjunction with the Department's Business Support Manager.</p> <table> <thead> <tr> <th><u>Organisation</u></th> <th><u>Amount</u></th> </tr> </thead> <tbody> <tr> <td>BCC</td> <td>£1,300,000</td> </tr> <tr> <td>NITB</td> <td>£600,000</td> </tr> <tr> <td>DSD</td> <td>£100,000</td> </tr> </tbody> </table>	<u>Organisation</u>	<u>Amount</u>	BCC	£1,300,000	NITB	£600,000	DSD	£100,000
<u>Organisation</u>	<u>Amount</u>								
BCC	£1,300,000								
NITB	£600,000								
DSD	£100,000								

	Sponsorship	£150,000
	Income streams	£150,000
	<u>Total</u>	<u>£2,300,000</u>
	<p>As the above table shows there would be a notable level of partner funding required. Therefore, it would be the intention of Officers to start applying to these organisations on approval of Tall Ships 2015 update paper by Council. The Council's input to the event would be spread over three financial years 2013/14, 2014/15 and 2015/16. After discussion with the Director of Finance and Resources, it is recommended that the permission of the Strategic Policy and Resources (SP&amp;R) Committee be sought, to include provision for the Council's funding of Tall Ships 2015, in the specified reserve which has been established by SP&amp;R Committee for Major City Events.</p>	
3.2	<p><u>Value in Kind</u> The vast majority of this element will be supplied via Belfast Port and is connected to harbour and marine facilities. In 2009 it is estimated that Belfast Port contributed circa £400,000 inclusive of staff and operational costs for the event. Therefore, there would be an expectation of similar requirement for the 2015 event.</p>	

<b>4</b>	<b>Equality and Good Relations Considerations</b>
4.1	As with all major civic events, public events like this have the potential to bring together people from a wide range of backgrounds and therefore promote good relations in the city.

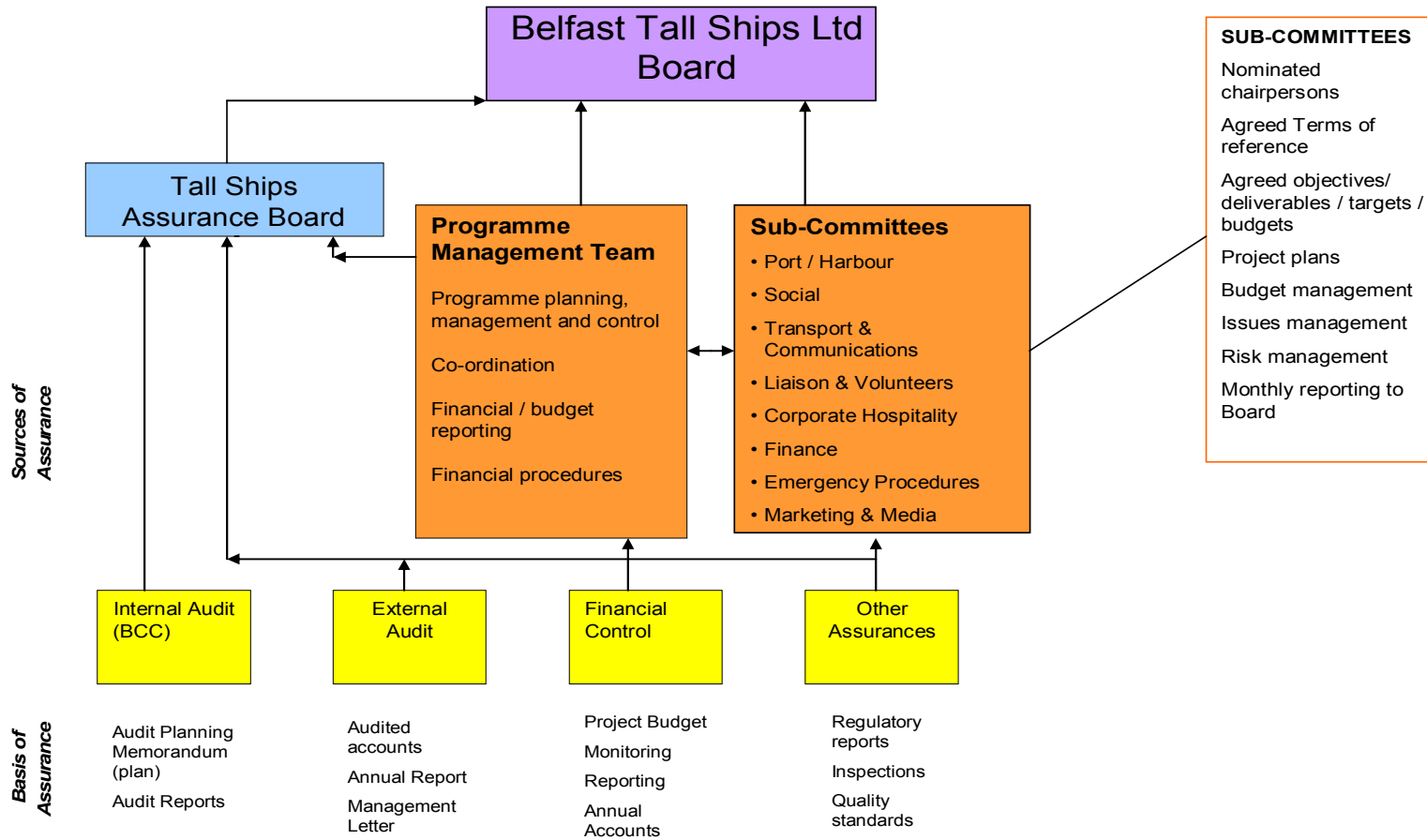
<b>5</b>	<b>Recommendations and Items to Note</b>
5.1	<p>Council are asked to note and approve the following:</p> <ul style="list-style-type: none"> <li>- Proposed make-up of the Tall Ships 2015 Board and the creation of an oversight assurance board</li> <li>- Permission, subject to Council approval, for BCC's Officers to start applying for partner funding</li> <li>- Request that Council nominate two Members to the Tall Ships 2015 company</li> <li>- Request permission of the SP&amp;R Committee to include provision for the Council's funding of Tall Ships 2015, in the specified reserve which has been established by SP&amp;R Committee for Major City Events.</li> </ul>

<b>6</b>	<b>Decision Tracking</b>
Updates will be brought back to Council as the project progresses.	

<b>7</b>	<b>Key to Abbreviations</b>
<p>Sail Training International - STI  Department of Social Development – DSD  Northern Ireland Tourist Board – NITB  Department of Culture, Arts and Leisure - DCAL</p>	

<b>8</b>	<b>Documents Attached</b>
Appendix 1 - Tall Ships 2015 Delivery Structure	

**Appendix 1**



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**Belfast City Council**

<b>Report to:</b>	Development Committee
<b>Subject:</b>	<b>World Chamber Federation Biennial Congress 2015</b>
<b>Date:</b>	4 September 2012
<b>Reporting Officer:</b>	John McGrillen, Director of Development, ext 3470
<b>Contact Officer:</b>	Shirley McCay, Head of Economic Initiatives, ext 3459

<b>1</b>	<b>Relevant Background Information</b>
1.1	Belfast City Council has received correspondence from the Northern Ireland Chamber of Commerce (NICC) who is currently competing to host the World Chamber Federation's Biennial Congress in 2015. Their letter is attached as appendix 1.
1.2	Hosting the event represents huge opportunities, including the economic impact of potentially 2000 delegates from 40 countries over 4 days, to increase the profile of Belfast and Northern Ireland on the world stage with the potential to establish further trade links.
1.3	Previous host cities have included, Marseille; Seoul; Quebec City; Durban; Istanbul; Kuala Lumpur; Mexico City; and Doha, Qatar which is scheduled to host the 2013 World Chamber Congress.
1.4	Following an initial expression of interest in March, Belfast has now been shortlisted alongside Biarritz, Geneva, Gothenburg, Liverpool, Lyon, Manchester and Torino as potential hosts.
1.5	Given the Waterfront extension, the Odyssey is the main proposed conference venue.

<b>2</b>	<b>Key Issues</b>
2.1	NICC is already being supported by Belfast Visitor and Convention Bureau (BVCB) and will be eligible for the conference subvention scheme.
2.2	In NICC's correspondence they have outlined a range of ways in which organisations can support their bid including a simple statement of letter of support, being involved in the advisory committee, participating on the site inspection, contributing to the business or hospitality programme or sponsorship.

2.3	Given Belfast City Council is already supporting the NICC via BVCB, officers recommend that a letter of support is sent along with details on use of the City Hall for an event reception.
2.4	This is a landmark bid for Belfast and the level of political and business support could be a key differentiator for the city against other competitors.

<b>4</b>	<b>Equality and Good Relations Considerations</b>
4.1	There are no specific equality or good relations considerations attached to this report.

<b>5</b>	<b>Recommendations</b>
5.1	Members agree to write a letter of support for NICC to host the World Chamber Federation's biennial Congress in 2015.

<b>6</b>	<b>Decision Tracking</b>
There is no Decision Tracking attached to this report.	

<b>7</b>	<b>Key to Abbreviations</b>
NICC - Northern Ireland chamber of Commerce BVCB - Belfast Visitor and Convention Bureau	

<b>8</b>	<b>Documents Attached</b>
Appendix 1 – letter from Northern Ireland Chamber of Commerce	





*Handwritten signature*

22 Great Victoria Street  
Belfast BT2 7BJ

T: +44 (0)28 9024 4113  
F: +44 (0)28 9024 7024

E: [mail@northernirelandchamber.com](mailto:mail@northernirelandchamber.com)  
W: [www.northernirelandchamber.com](http://www.northernirelandchamber.com)

Company Reg: R78    Vat No: 254 4276 58

*Copy to John.*

*already received pc*

**BELFAST BID**  
Believe in Belfast



9<sup>th</sup>  
WORLD  
CHAMBERS  
CONGRESS

23 July 2012

Ms Shirley McCay  
Head of Economic Initiatives  
Belfast City Council  
Cecil Ward Building  
4-10 Linenhall Street  
Belfast  
BT2 8BP

N.I.C.C.I.	
25/07/12	
E027/12	
STATES	TRANS/PLAN
TOURISM	OTHER

Dear Shirley

**World Chamber Congress in 2015**

Northern Ireland Chamber of Commerce (NICC) is currently competing to host the World Chamber Federation's biennial Congress in 2015. The Congress is the only international forum for business leaders and executives involved in Chambers worldwide to share best-practice, develop international networks, establish trade links and learn about new areas of innovation or from regional expertise.

Hosting this event represents a huge opportunity for the whole of Northern Ireland and with the potential for 2,000 delegates to attend, would contribute significantly to the ambition, shared by many of us to increase our profile on the world stage, establish further trade links and grow business tourism. The four day event could contribute up to £3m to the economy and showcase Northern Ireland as a place to do international business, complementing the Programme for Government.

NICC is working with the excellent team at Belfast Visitor and Convention Bureau (BVCB) to secure the bid for the city and we would also appreciate your support. This can be provided in a range ways such as a simple statement or letter of support for the bid from your organisation, being involved in the advisory committee, participating in the site inspection which takes place in late August, contributing to the business or hospitality programme design or sponsorship. Executives from NICC and BVCB will be in touch to explore this with you shortly, alternatively you can contact Sandra Scannell, who is leading the bid on behalf of NICC directly on 02890244133 or via email on: [sandra.scannell@northernirelandchamber.com](mailto:sandra.scannell@northernirelandchamber.com).

Thank you in anticipation of your support.

Yours sincerely

*Handwritten signature of Mark Nodder*

*Handwritten signature of Ann McGregor*

Mark Nodder  
President

Ann McGregor  
Chief Executive

Working with

Chamber Patrons

Accreditation



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**Belfast City Council**

<b>Report to:</b>	Development Committee
<b>Subject:</b>	<b>Expo Real 2012 Event, Munich</b>
<b>Date:</b>	4 September 2012
<b>Reporting Officer:</b>	John McGrillen, Director of Development, ext 3470
<b>Contact Officer:</b>	Shirley McCay, Head of Economic Initiatives, ext 3459

<b>1</b>	<b>Relevant Background Information</b>
1.1	The Expo Real event takes place each year in Munich, Germany. It is Europe's largest business-to-business trade fair for commercial property and investment. The 2012 event will take place from 8-10 October 2012.
1.2	Expo Real comprises an exhibition (involving over 1600 exhibitors from 72 countries) as well as an extensive conference programme involving 400 speakers on a range of topics within the real estate, investment and financial markets.
1.3	The event is expected to attract 37,000 participants to include exhibitors showcasing their property and investment portfolios and representatives from the property sector including developers, investors and architects as well as representatives from economic regions and cities.

<b>2</b>	<b>Key Issues</b>
2.1	Members will be aware that there is a significant volume of work under way to develop an international marketing and promotional strategy for the city. This has been included as a priority within the Council's Investment Programme 2012-2015. It is expected the future strategy will consider how Belfast can position itself as an international destination in order to attract talent and investment and grow visitor numbers.
2.2	Showcasing Belfast on an international platform is expected to be a key focus of the future strategy. Events such as Expo Real offer the Council a platform to target and promote the city's investment potential to international companies.
2.3	A number of priority investment and promotion activities/events have been identified in the course of the research for this work. These include Expo Real and MIPIM. Members will recall that Belfast City Council was involved in MIPIM in the past but did not attend in 2012. A report on the way forward on this – as part of the wider

	international marketing work – will be presented to Committee next month.
2.4	It is understood that representatives from Belfast Harbour are planning to attend Expo Real to explore the potential of this event to identify and target potential investors for their development sites. It may be appropriate to consider attending the event with them in order to look at the potential wider interest for the city.
2.5	Given that the scale of the opportunity is unclear at this stage, it would be recommended that Belfast City Council attends in an observer capacity only, and therefore there would be no requirement to have a stand at the event, at this stage. However, if it was considered that the event was a viable proposition for attracting potential inward investors to the city, it may be appropriate to consider having a stand – along with other partners from the city – in future years.

<b>3</b>	<b>Resource Implications</b>
3.1	<u>Financial</u> The cost of attending EXPO REAL 2012 in Munich is approximately £1500 per person. This is inclusive of delegate fees, flights and accommodation costs.

<b>4</b>	<b>Equality and Good Relations Implications</b>
4.1	There are no specific equality or good relations implications attached to this report.

<b>5</b>	<b>Recommendations</b>
5.1	It is recommended that that the Chair and Deputy Chair of Development Committee or their nominees attend the EXPO REAL 2012 event in Munich on 8-12 October along with one officer to consider and review the potential of REAL EXPO as a platform to promote the investment potential of the city in future years.

<b>6</b>	<b>Decision Tracking</b>
A report will be presented to the December 2012 Development Committee, if the visit is approved.	
Timeframe: December 2012	Reporting Officer: Shirley McCay