

# Guide to the Tidal Lagan Lagan Bridge to Stranmillis Weir

**Edition 5**

April 2017





## CONTENTS

Introduction	2 – 3
Brief Guide to Navigation	4 – 6
Views of the Lagan Weir	7 – 8
Views of the River and Features	9 – 10
<b>Map:</b> The tidal River Lagan	11
Views of the River and Features	12 – 15
<b>Map:</b> Navigation approaching the Lagan Weir	16
Special points for all river users	17 – 18
Useful Addresses and Publications	19
Appendix 1	20

## Introduction

Welcome to Belfast. If this is your first visit to Lagan side we hope you will discover the same spirit of pleasure and excitement at the regeneration of the riverfront that so many others have discovered before you, and come back again.

This guide has been specially prepared for our boating visitors as well as to advise the current river users and boat clubs. It tries to answer many of the common questions about navigating the tidal stretch of the River Lagan through the centre of Belfast. There is advice about safety procedures, especially when crossing the Lagan Weir, as well as general courtesy towards other river users.

Please follow the simple rules and guidance and help us keep the river safe for all recreational and leisure activities.

The Tidal River Lagan extends upstream from Belfast Lough through the Port of Belfast to Stranmillis Weir.

From No. 1 buoy (the Northerly end of the buoyed channel) to the downstream side of the Lagan Bridge is controlled by Belfast Harbour Commissioners.

The Lagan Weir impounds the river upstream of Donegall Quay to Stranmillis Weir, a distance of 4.8 km. The river varies in width from a maximum of 110 metres below the McConnell Piers to 30 metres at the narrowest stretch between Cutter's Wharf Restaurant and Stranmillis Weir. It is a low flow river with surface velocities reaching 1.5m/sec in flood conditions and is very safe for navigating and water based activities.

The Department for Communities owns, and is the navigation authority, for the stretch of the river from Stranmillis Weir to the Harbour Commissioners limit on the downstream side of the Lagan Bridge.

## Department for Communities

The Department is responsible for enforcing the River Lagan Tidal Navigation and General Bye-Laws (Northern Ireland) 2007 for this stretch of the river.

Monitoring river user's compliance with the navigation and safety procedures is the duty of the River Manager and River Warden.

With more than 40 hectares of water available the River Lagan provides a unique environment for water-based leisure in the heart of Belfast.

The Lagan Weir is located downstream of the Queen Elizabeth Bridge. It is a dynamic structure with five flap gates, each operated by a large hydraulic ram, and is used to control the water levels in the impoundment upstream to Stranmillis Weir. The Lagan Weir can operate automatically linked to water level gauges, or when conditions indicate, on manual over-ride. The mechanism is able to respond to varying weather, tidal and water quality conditions and affords a measure of flood protection from surge tides for the city centre. The gates can be operated to permit the passage of boats across the weir into the impoundment.

The installation of aeration equipment in the upper stretch of the river above the McConnell Piers assists improvement in water quality which helps sustain fish life, in addition to improving the aesthetic appearance of the river. The frothing of small bubbles at stations in the upper stretch of the tidal river above McConnell Piers is a noticeable feature of the aeration process.

Operation of the Lagan Weir and aeration equipment, regular water quality monitoring and pollution control procedures are all part of the River Manager's responsibility.

Emergency Service safety arrangements which include a rescue craft and trained crew located at the Lagan Weir Control Building further safeguard the river user.

## BRIEF GUIDE TO NAVIGATION

### On the river:

The Harbour area is a busy port with frequent arrivals and sailings including fast craft and ferries. Prior to transit, contact must be made with Harbour Radio to obtain permission to enter the area on:

<b>Channel number</b>	<b>Frequency</b>	<b>Call Sign</b>
12	156.600	Belfast

It is compulsory to report when entering, leaving, passing Beacon 14 (at the Southerly end of the channel) and at any point designated by the Harbour Operator.

The River Lagan is fully tidal from Belfast Lough to the Lagan Weir with a spring tidal range of 3.1 metres. The Lagan Weir creates an impoundment between the weir and the Stranmillis Weir reducing the tidal range to 1.2 metres for spring tides.

The minimum navigable depth of water above the Lagan Weir is 1.5 metres, rising to 2.7 metres on high spring tide, and extends the full width of the river to quay walls. At the locations of the natural earth banks and stone revetments the dredge depth of water extends to within 5 metres of the bottom of their slopes.

The views of the bridges and historical and development features shown in the guide are in order of approach for boats navigating upstream from the Port of Belfast to Stranmillis weir. The recommended navigation openings and headroom under each bridge are indicated.

Illuminated directional signs mounted on the Queen Elizabeth and Queen's bridges provide river users with early warning of the recommended navigation openings on the approach to the Lagan wier, in order to avoid collisions with boats navigating upstream.

The Lagan Weir Control Building is a licensed VHF radio base station and will receive calls on:

<b>Channel number</b>	<b>Frequency</b>	<b>Call Sign</b>
71	156.575 MHz	Lagan Weir

River users crossing the weir must notify Weir Control in advance, either by telephone or VHF radio.

The River Warden's boat and quick response craft are both based at the weir and are available during normal working hours to deal with incidents on the river. At other times a call out facility exists for emergencies i.e. to aid the emergency services, and to respond to water pollution etc.

### **Crossing the Lagan Weir:**

During normal tidal and river conditions the Lagan Weir gates are raised on each falling tide to impound the river upstream and lowered during the period when a tidal range rises above the impounded control level for the river. A horn is sounded to warn boats when the gates are about to rise.

Navigation across the Lagan Weir is possible for a period of approximately 2 hours 30 minutes either side of high tide. The times of high tide for the current year are given in tide tables. Tide Tables are available by application to Weir Control Tel: 028 9031 5304.

In emergencies the gates are raised to quay level as a barrage for flood protection from exceptionally high tides and to deal with pollution incidents. Boats are not permitted to cross the Lagan Weir at these times.

The Navigation system for crossing the Lagan Weir comprises of multi-lamp traffic lights and water depth boards for back up as shown on the Lagan Weir

– Upstream Navigation Opening view.

Floating safety booms lie across the non-navigation openings of the weir with rise and fall boom frames installed across the navigation openings. Both systems are on the up stream side of the gates.

Pontoon mooring facilities located on the upstream and downstream sides of the Lagan Weir at Donegall Quay provide short term mooring facilities for craft waiting to cross the weir. Short term mooring facilities are also provided at a pontoon upstream of Governor's Bridge, and a pontoon at Ravenhill Reach.

## Department for Communities

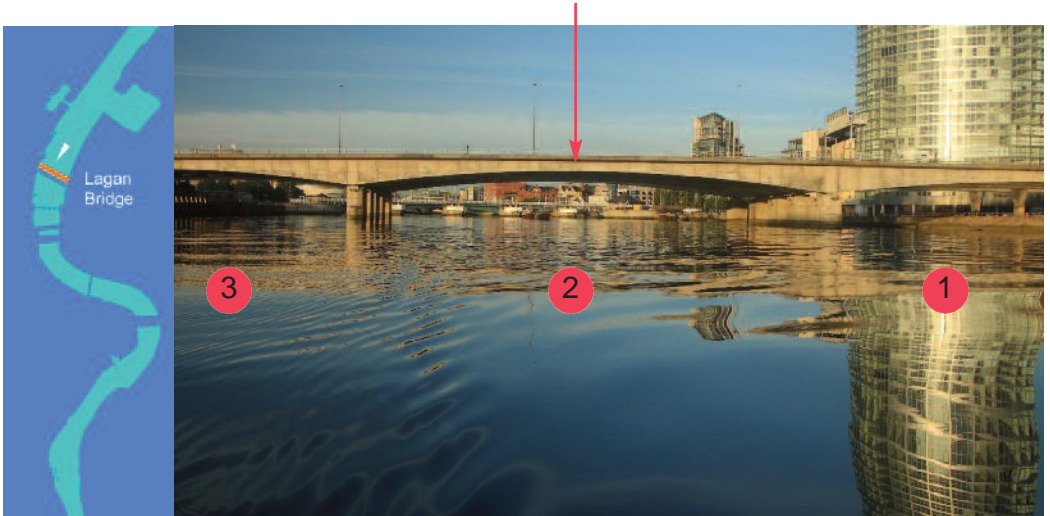
The River Lagan Marina is located on Donegall Quay upstream of the Lagan Weir and provides a secure overnight berthing facility for recreational visitors. The marina provides water, electricity and a secure access monitored by CCTV. Boats are welcome to berth for a maximum of three nights and charges and conditions of use are as detailed in the River Lagan Marina berthing Conditions.

Please contact **Weir Control - 028 9031 5304** for any enquiries or bookings regarding the marina.



### Upstream/Downstream Navigation Opening

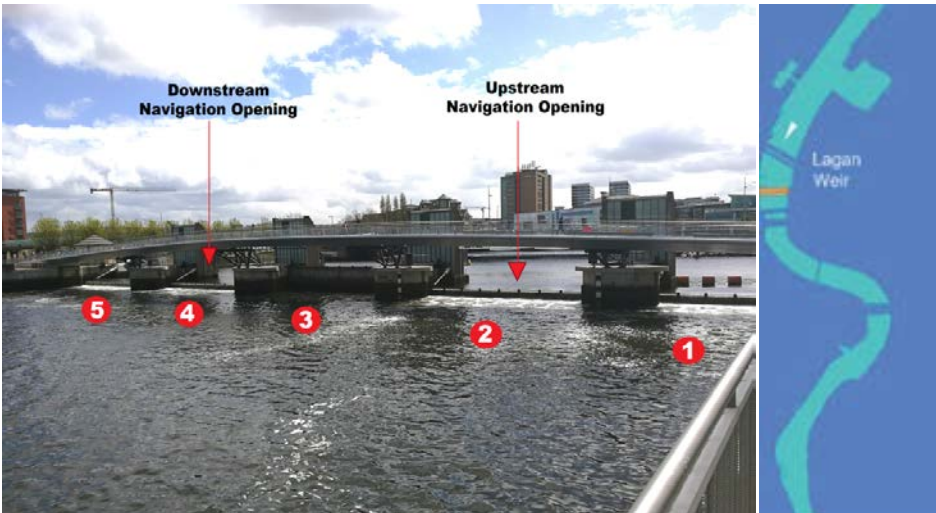
Bridge spans are numbered from the west bank and are indicated ● for reference



### Lagan Bridge

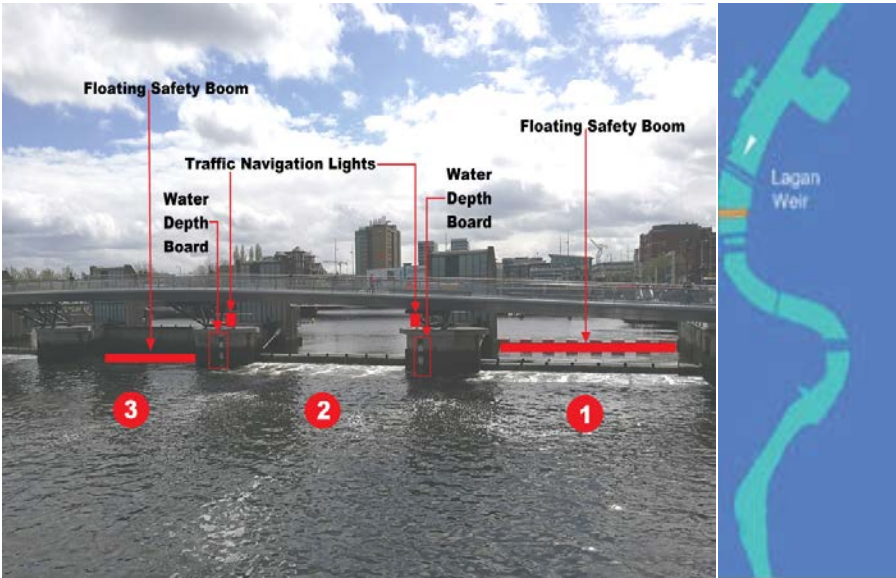
(View upstream)

Road/Rail Bridge headroom at M H W S T =8.0 metres



### Lagan Weir

(View upstream) Footbridge headroom at M H W S T = 4.0 metres



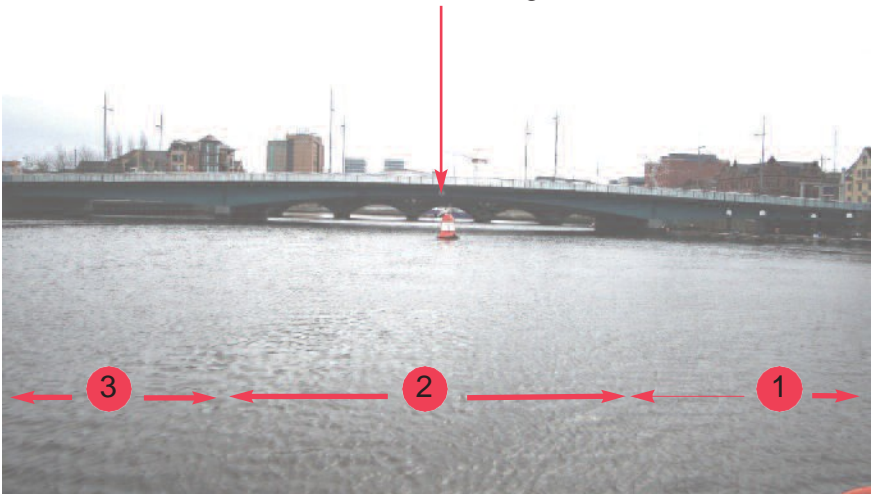
Lagan Weir  
Upstream Navigation Opening



Lagan Marina  
View from Riverside West Quay

## Upstream/Downstream Navigation Opening

Directional sign

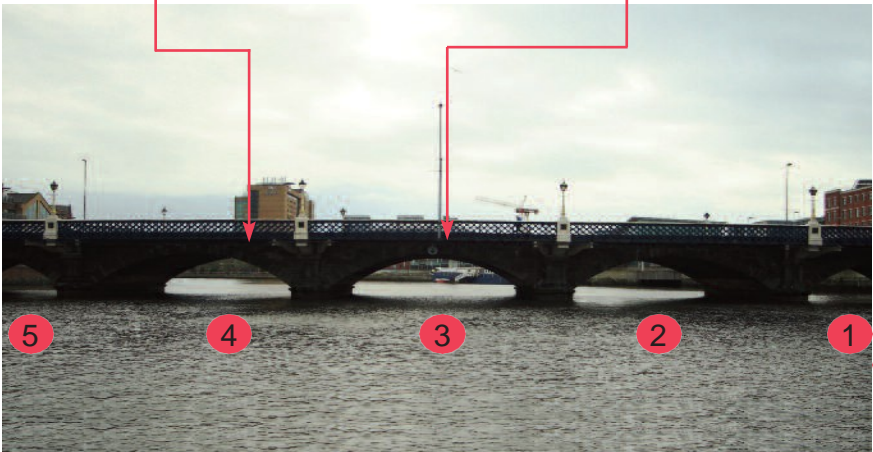


### Queen Elizabeth Bridge (view upstream)

Road Bridge headroom at M H W S T = 3.3 metres

Downstream Navigation Opening  
directional sign on reverse

Upstream Navigation Opening  
directional sign

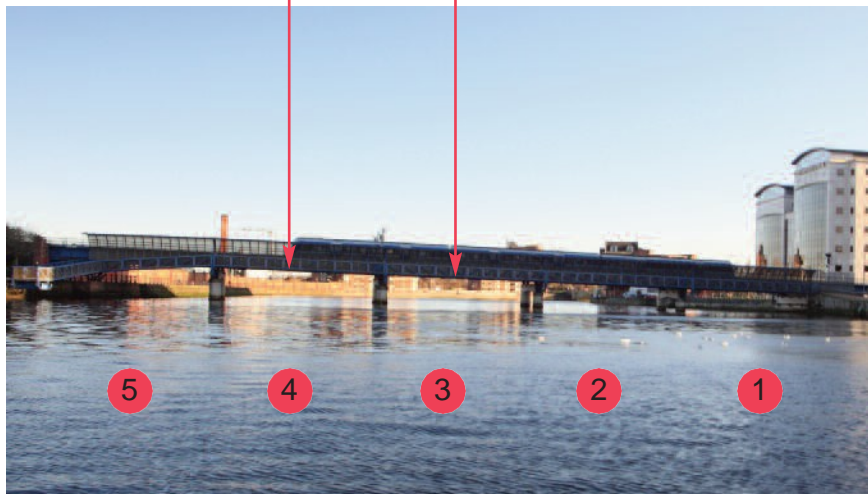


### Queen's Bridge (view upstream)

Road Bridge headroom at M H W S T = 3.0 metres

Downstream Navigation Opening

Upstream Navigation Opening

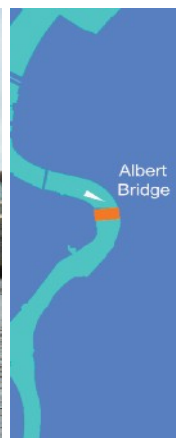
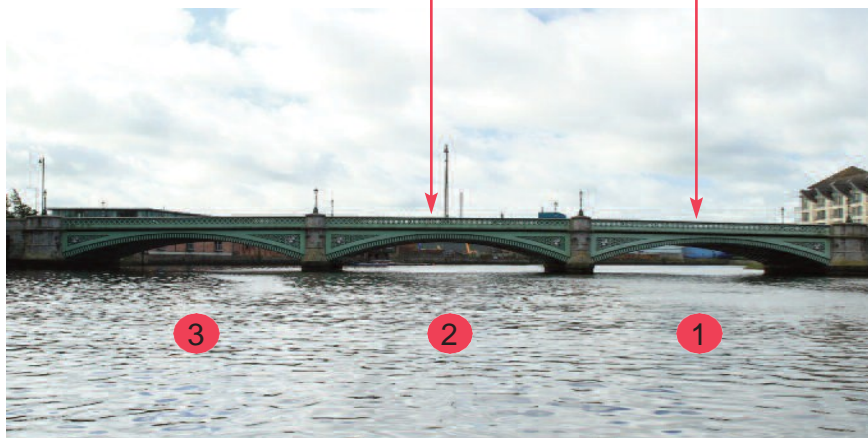


**Lagan Viaduct** (view upstream)

Rail Bridge downstream opening headroom at M H W S T = 3.7 metres  
Rail Bridge upstream opening headroom at M H W S T = 3.2 metres

Downstream Navigation Opening

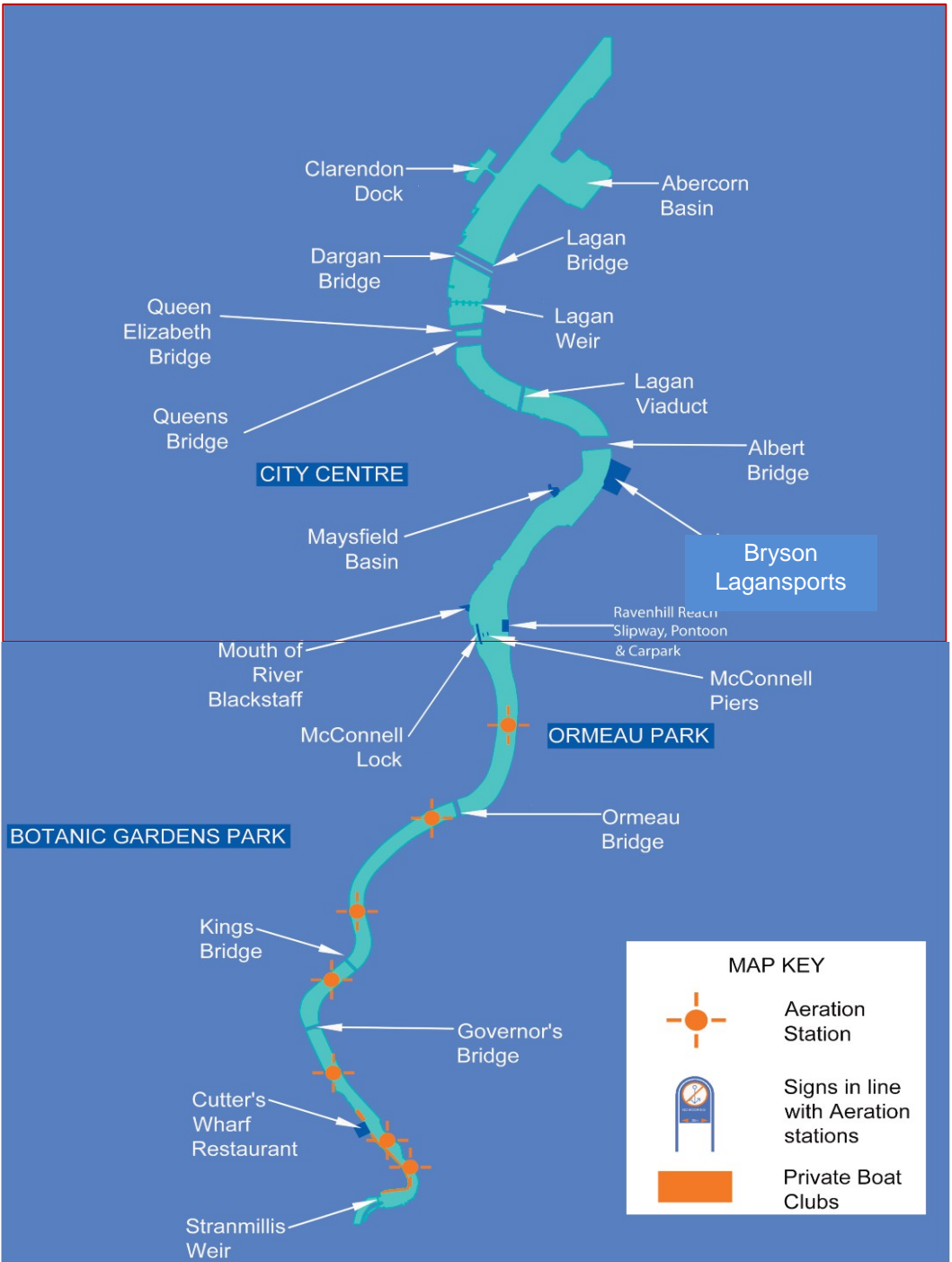
Upstream Navigation Opening



**Albert Bridge** (view upstream)

Road Bridge headroom at M H W S T = 2.7 metres

# Department for Communities



**Department for Communities**

Floating Pontoon

Access Bridge



**Bryson Lagan Sports Centre  
(East bank)**

Ravenhill Reach Slipway

Ravenhill Reach Pontoon



**Ravenhill Reach Slipway and Pontoon  
(view upstream)**

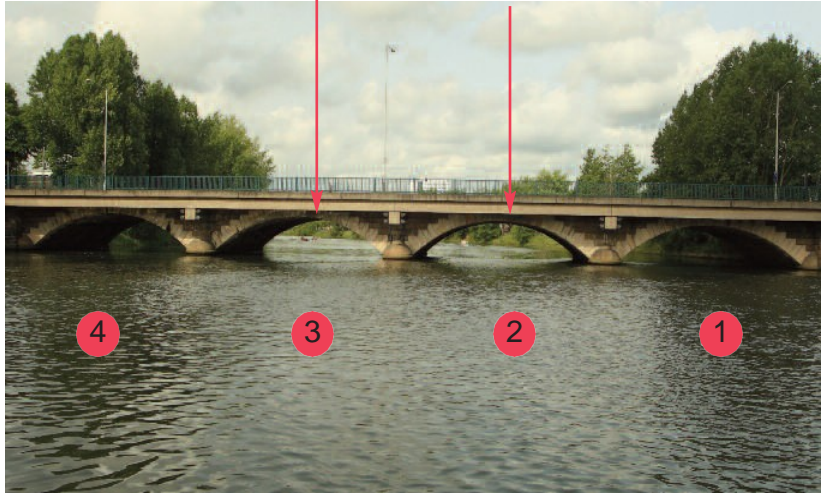
White Hazard  
Warning Light    White Hazard  
Warning Light

McConnell  
Piers

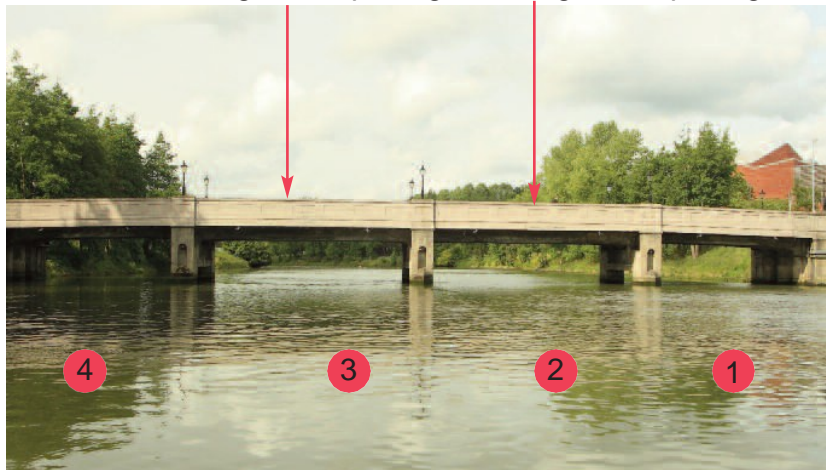
Lock Walls



**McConnell Lock - Not in use**  
(view upstream)



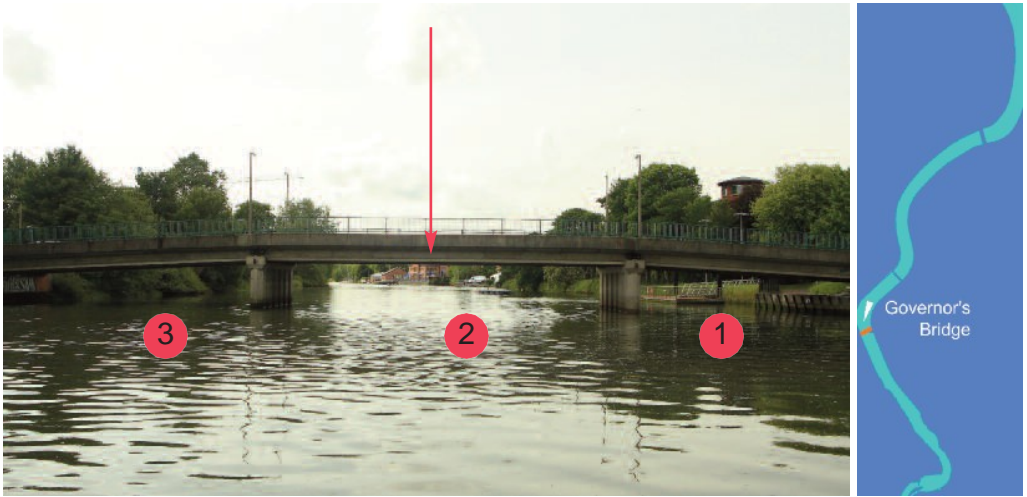
**Ormeau Bridge** (view upstream)  
Road Bridge headroom at M H W S T = 2.7 Metres



**King's Bridge** (view upstream)  
Road Bridge headroom at M H W S T = 2.7 metres



Department for Communities  
Upstream/Downstream Navigation Opening



**Governor's Bridge**

(view upstream)

Road Bridge headroom at M H W S T = 2.6 metres

Fish pass

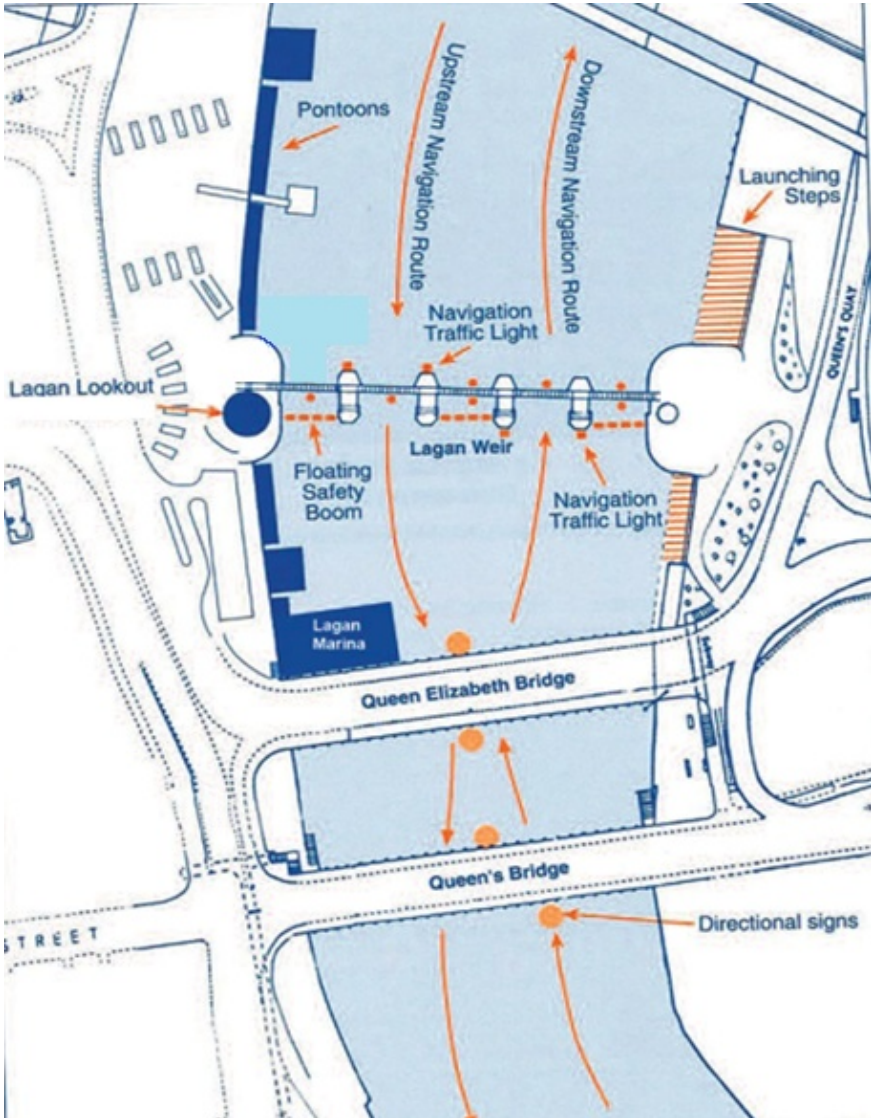
Gates -3 no.



**Stranmillis Weir - Not navigable**

(view upstream)

## Navigation approaching the Lagan Weir



## **SPECIAL POINTS FOR ALL RIVER USERS**

The river is primarily used by rowers from the private boat clubs based on the west riverbank upstream of Governor's Bridge, refer to the river map in the guide. The Lagan Watersports Centre provides coaching for sailing dinghies and canoes on the stretch of the river above the Albert Bridge. Tourist boats from Belfast Lough visit the Lagan Weir and make their way up to Cutter's Wharf Restaurant.

The river is designated as a course fishery by the Fisheries Conservancy Board for Northern Ireland and a course fishing rod licence is required by anglers. Fishing primarily takes place from the East riverbank downstream of the Stranmillis Weir, where fishing stands have been provided.

Applications to hold events on the river are made via the River Manager on a standard form found in the schedule to the Bye-Laws or the DfC internet. The Department for Communities will inform the general public and regular river users about any event which requires a stretch of the river to be closed for a period of time. Other boats are not permitted to obstruct, impede or otherwise interfere with an event or to endanger the safety of the participants.

Boats navigating the river must adhere to the Bye-Laws. Speeds must not exceed 10 kilometres per hour (6.5 knots) in order to reduce wash damage to the banks. Wildfowl must not be disturbed, nor nuisance caused to other river users. All flotsam and debris thrown overboard is dangerous and prohibited. The river must not be polluted with waste or fuel. Sufficient life jackets or buoyancy aids must be available for all on board, this is especially important for non swimmers and children.

Boats should be aware that rowers when accompanied by safety launches are permitted to exceed the river speed limit during coaching and training exercises and take care when approaching them. Speedboats, water and jet skiing are not permitted on the river except during an event which has been approved by the Department for Communities.

Approved launching locations are at:

**Queen's Quay Steps**

## Department for Communities

**Ravenhill Reach** - Public slipway operated by the Department for Communities normally open during the hours of daylight. Permission must be sought from Weir Control, Tel: 028 9031 5304, prior to use.

The boat clubs and Bryson Lagansports Centre have slipways and steps which are private and permission must be sought from respective club secretaries.

Signage at each aeration station informs boats that mooring is not permitted in a 30 metre zone to protect the aerators feeds in the bed of the river.

Boats when in the vicinity of the Lagan Weir should exercise caution as a wash is created when vessels berth downstream of the Lagan Bridge and travels up through the openings between the piers. The pontoons at Donegall Quay rock severely and care must be taken when boats moor here. The wash may arrive up to 10 minutes after these vessels berth.

The river is lowered to full tidal conditions several times a year for maintenance and inspections of the impoundment. The Department for Communities will inform the general public and river users of this action. Boats are advised to exercise caution immediately downstream of Stranmillis Weir during high river flows when the water is turbulent with dangerous eddies.

The river is not suitable for recreational activities involving either deliberate immersion or a high risk of immersion. There is a risk of infection and disease from pathogenic organisms contained in the urban catchment runoff entering the river.

When boats are navigating the river during the hours of darkness they shall display lights in accordance with the river Bye-Laws, see appendix 1 in the guide.

**All incidents of water pollution should be reported immediately to the: Environment and Heritage Service**

Pollution Emergency and Environmental Protection Klondyke Building 10  
Cromac Avenue, Belfast, BT7 2JA

Telephone Pollution Hotline 0800 807060.

The River Manager is responsible for all removal of debris e.g. oil drums, trolleys, logs which are regularly found floating in the impoundment.

## USEFUL ADDRESSES & PUBLICATIONS

### **Department for Communities**

BRD  
4th Floor, Lighthouse Building  
Gasworks Business Park  
Belfast, BT7 2JB

### **River Manager**

Tel: 028 9031 5304  
Tel: 028 9027 7642

### **Lagan Weir**

1 Donegall Quay  
Belfast, BT1 3EA  
River Warden  
Tel: 028 9031 5304

### **Belfast Harbour Commissioners**

Port Operations Centre  
Milewater Basin  
Belfast, BT3 9AS  
The Harbour Master  
Tel: 028 9055 3014

### **Belfast Harbour Police**

Port Operations Centre  
Milewater Basin  
Belfast, BT3 9AS  
Tel: 028 9055 3000

### **PSNI**

6 Musgrave Street  
Belfast, BT1 3HX  
0845 600 8000

### **Belfast City Council**

Central Office  
Cecil Ward Building  
4 Linenhall St Belfast, BT2 8BP  
Tel: 028 9032 0202

### **Useful Publications**

#### **Admiralty Chart No.1753**

Provides details of the entry to Belfast Lough from seaward and passage through Belfast Harbour up to the Lagan Weir.

#### **River Lagan Tidal Navigation and General Bye-Laws (N Ireland) 2007**

### **Tide Tables**

Up to date tide tables can be obtained free of charge from -  
Belfast Regeneration Directorate, -  
4<sup>th</sup> Floor, Lighthouse Bdg, Gasworks Business Park, Belfast, BT7 2JB.  
Telephone 028 9027 7642. Email: [business.supportunit@communities-ni.gov.uk](mailto:business.supportunit@communities-ni.gov.uk)

## APPENDIX 1

### River Lagan Tidal Navigation and General Bye-Laws (Northern Ireland) 2007 Bye-Law 11

1. The master of a vessel navigating during the hours of darkness shall display lights on such vessel as follows, each to be visible over the water to a distance of 1.6kilometres.
  - a) on the mast or at a height of not less than 1.2 metres above the hull, a bright white light, (power driven vessels only), visible from right ahead to 22.5 degrees abaft the beam on either side
  - b) on the starboard side, a green light, visible from right ahead to 22.5 degrees abaft the beam on the starboard side.
  - c) on the port side, a red light, visible from right ahead to 22.5 degrees abaft the beam on the port side.
  - d) on the stern, a white light, visible from right aft to 22.5 degrees abaft the beam on either side
  - e) any vessel less than seven metres in length may, in lieu of a and b and c display an all-round white light but shall if practicable display side lights.
  - f) any vessel with a narrow beam and exceeding 7 metres in length shall display bright white lights on its bow and stern which comply with the requirements of sub paragraphs a and d.
2. The master of any vessel aground on the river or moored or anchored other than at a public or private mooring place shall during the hours of darkness display on such vessel a bright white light of such character as to be visible upstream and downstream to a distance of two hundred metres in clear weather conditions.

