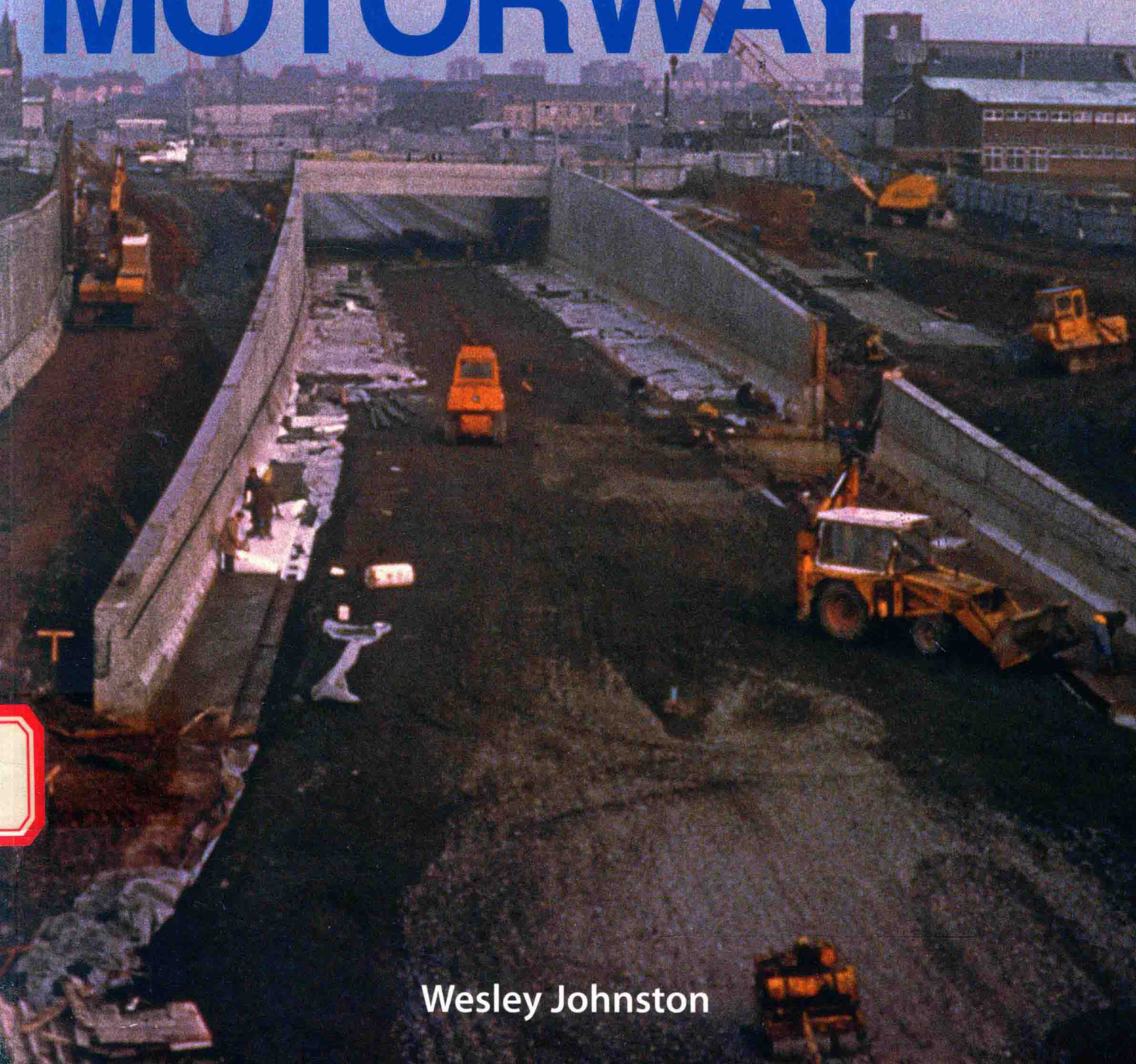


THE BELFAST URBAN MOTORWAY

Engineering,
ambition and
social conflict



Wesley Johnston

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Front cover: Divis Street junction on Westlink close to completion in late 1982.
Rear cover: Photomontage of the Belfast Urban Motorway at Ormeau Road, 1967.

Dr Wesley Johnston grew up in Omagh, County Tyrone. His PhD was in Software Engineering but he has always had a fascination with local history. His studies of old maps led him to explore the history of the local road network, eventually setting up a web site on the topic in 2006. Since then he has continued to both research the history of roads in Northern Ireland and act as a commentator on the current road network and its future development. He maintains an archive of historical material relating to all aspects of the local road network. He currently lives in Belfast with his wife and daughter, both of whom are very patient when Wesley makes detours to photograph obscure pieces of transport infrastructure.

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An appeal: There must be an abundance of remarkable material on the Northern Ireland road network in private ownership. I would love the opportunity to make contact with anyone who has photographs or archive material on (a) any aspect of the development of our road network or (b) Craigavon New City. I can be e-mailed at roads@wesleyjohnston.com or contacted on Twitter @niroads. I also maintain a web site full of information about the current road network, its history and plans for future road schemes at www.wesleyjohnston.com/roads.

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To my Father
who nurtured my fascination with transport

AUTHOR'S PREFACE

The Belfast Urban Motorway was the most audacious road scheme never to see the light of day.

Yet, few in the city today have even heard of it. When I first dusted off the covers of the almost forgotten 1967 plans in Belfast Central Library and saw the scale of the proposals for a fully elevated three-lane motorway encircling the city centre, it took my breath away. So began a seven-year research project to trace the story of this remarkable plan from its genesis before the Second World War, through its remarkable rise, and fall, before its eventual transformation into the Westlink and M3 that we know today.

Yet this book is about much more than civil engineering – although I do devote a generous amount of space to this aspect of the story. Fundamentally, it is a story about the contradictory needs of the people of Belfast and what they were and were not prepared to accept – and pay for – to keep their city moving.

To fully understand it we need to set aside the issues that are foremost in the city today, and go back in time to eras with different mindsets and different world views.

The story encompasses all the significant issues in Belfast's recent history – the Second World War, socialism versus capitalism, housing, public transport, the rise of the private car, pollution, the class war, redevelopment, centralised planning, the 'Troubles', gentrification, traffic congestion, architecture, environmentalism and global warming.

The story of the Belfast Urban Motorway is also the story of how the fabric of the city's transport system came into being. As such, it is vital reading for anyone seeking to understand Belfast's urban development, the transport system that exists today, and who seeks to influence the city's direction in the years to come.

There are many elements of the 1967 plan that we would fundamentally disagree with today. But rather than going down the easy path of derision and scorn, perhaps it should instead cause us to stop and think. Perhaps, in a few decades' time, our children and grandchildren, with different world views, and priorities that we cannot foresee, will look back and judge the decisions we are making today just as harshly.

Many people have helped me with my research on this book, and I offer them my sincere thanks. In particular I wish to acknowledge, in no particular order, the assistance of Roy Spiers, Lionel Walsh and Colin McBurney at DRD Roads Service; Grahame Fraser; Denis O'Hagan; T Jackson McCormick; Aubrey Dale; Tim Morton; Billy McCoubrey; Frankie Quinn; Declan Hill and Mark Hackett at the Forum for Alternative Belfast; John Eltham; Gary Potter; Paul Savage; Norman Johnston and my editor Rachel Irwin at Colourpoint.

Wesley Johnston
January 2014



CHAPTER 1

SETTING THE SCENE

The Growth of Belfast

The town of Belfast originally grew up along the banks of the River Farset, close to where it flows into the River Lagan. The location in Irish, *Béal Feirste* ('mouth of the Farset'), gave its name to the city and indeed the river still flows beneath High Street today, sealed in a culvert since 1770.¹ While it proved straightforward to bridge the humble River Farset, carrying travelers efficiently over the adjacent River Lagan has proved to be a persistent problem for the city, from its foundation to the present day. Before the 1680s the only way across to the east bank at Ballymacarrett was either by boat or by utilising a ford, the site of which almost certainly lay a few dozen metres upstream of today's Queen's Bridge.²

At this time, the Lagan at Belfast was considerably wider than it is today, and the first bridge to be constructed, the appropriately named Long Bridge (completed in 1682) had a total span of 260 metres (840 feet), comprising 21 narrow arches.³ This is in contrast to the modern Queen's Bridge, on the same site, which has a much shorter span of 115 metres (375 feet).

The Long Bridge, Belfast, as painted by Andrew Nicholl (1804–86). It was demolished in 1840. (Andrew Nicholl, BELUM.U1696, © National Museums Northern Ireland, Collection Ulster Museum)



Before the nineteenth century, the urban area remained almost exclusively on the west bank of the Lagan, with only limited development across the river in Ballymacarrett. By the mid nineteenth century, however, the city was rapidly industrialising. The growth of shipbuilding had led to the establishment of the Harland and Wolff shipyard on the eastern shore at Queen's Island, along with many other industries, such as the Sirocco engineering works at the north end of Short Strand (in 1881).

At the same time, the city's population burgeoned, growing from perhaps 19,000 people in 1802 to 71,000 in 1841, and reaching 349,000 by 1901.⁴ This expansion led to increasing pressure on the city's transportation system. One of the main focal points of this pressure was the River Lagan itself, partly because the bulk of the population lived on the west bank of the Lagan while a significant level of employment was to be found on the east. Some of this traffic crossed the Lagan by ferries, as existed, for example, between Donegall Quay and Queen's Quay.⁵ However, the rest used the bridge, and the ever increasing pressure on crossing points led to a sequence of bridge construction or improvement projects between the early nineteenth and late twentieth centuries.

In 1831, a second crossing was provided to relieve the Long Bridge. This five-arch toll bridge was erected about 700 metres (2,300 feet) upstream. It earned the name Halfpenny Bridge, although the toll was abolished after just 16 years.³ In 1840, the Long Bridge was demolished and replaced, in 1844, by the Queen's Bridge, an elegant structure consisting of five sweeping stone arches. The structure was designed by Sir Charles Lanyon and John Frazer, and cost



Queen's Bridge, Belfast, showing its original 1844 stone arches and its later cantilevered iron extensions. (Ardfern: Reproduced under the Creative Commons Attribution-Share Alike 3.0 Unported license)

£27,000. However, even this structure quickly proved inadequate, and it was widened to 20 metres (65 feet) in 1885 by adding a cantilevered iron structure to each side of the bridge.³ This work was carried out by JC Bretland. In 1863, a third bridge was opened at the edge of the city to carry the Ormeau Road over the Lagan. The bridge, known simply as Ormeau Bridge, consists of four stone arches.

When two arches of the Halfpenny Bridge collapsed without warning in 1886, it was replaced by the city's first iron bridge, named the Albert Bridge, which opened in 1890. The bridge was designed by JC Bretland and cost £36,500 to construct. It consists of three wrought iron arches mounted on stone piers. Yet another bridge, the King's Bridge, was constructed even further upstream at Stranmillis in 1911.⁶



Albert Bridge, Belfast,
which opened in 1890.
(Author's collection)

Transportation

The growth of the city led to an increasing need for transportation both within the city and linking to other urban centres. A rail link to Lisburn opened in 1839, with Ballymena, Carrickfergus and Holywood following in 1848, and Bangor in 1865. The construction of the Central Railway linked the east and west banks of the Lagan via a new railway bridge, the Lagan Viaduct, from 1884. The railway network continued to grow across Ireland.

An extensive system of trams was developed in Belfast from 1872. By 1895 the system was carrying 11 million passengers per year on the 39 km (24 mile) network,¹ and had facilitated the expansion of Belfast's new suburbs. Bus services began to take over from the trams from the 1920s, and trolleybuses from the Second World War.

A Belfast trolleybus on Royal Avenue in May 1968. (Norman Johnston)



With the partition of Ireland in 1921, Belfast became the capital city of the new state of Northern Ireland. Although part of the United Kingdom, Northern Ireland had its own devolved Parliament with considerable powers. The Parliament was based at Stormont, on the edge of east Belfast and was dominated by unionists who isolated the province as much as possible from the rest of the island and aligned it closely with Great Britain.

At this time, freight was carried predominantly on the railways, which fulfilled the dual role of ferrying both passengers and cargo. The railway network by the 1920s was extensive, reaching all the principal towns in the province, and was operated by three private companies. The Belfast and County Down Railway ran routes to Bangor, Newtownards, Donaghadee, Ballynahinch, Newcastle, Downpatrick and Ardglass, and had its Belfast terminus at Queen's Quay, on the east bank of the Lagan. The Northern Counties Committee (part of the LMS from 1923) operated trains to Carrickfergus, Larne, Ballymena, Cookstown, Coleraine, Londonderry and Strabane, and had its Belfast terminus at York Road, north of the city centre. The Great Northern Railway (GNR(I)) operated trains to Lisburn, Portadown, Dublin, Omagh, Fermanagh and Londonderry. Their terminus was at Great Victoria Street, to the west of the city centre. The GNR also owned the Central Railway which connected the three termini to the docks and to each other, albeit via a torturous route suitable only for goods wagons.

The Internal Combustion Engine

With the invention of the internal combustion engine, motorised vehicles began to appear on Ireland's roads from the turn of the twentieth century. By the late 1920s, wealthier members of society usually owned a motor car, private operators were setting up bus routes and lorries were appearing to carry freight on roads.

Believing it to be the most efficient way of operating road vehicles, Stormont took the decision in the mid 1930s to nationalise all bus and lorry operations. This meant that, with few exceptions, the government had a monopoly on bus and freight transport on the road

network. These services were operated under the auspices of the Northern Ireland Road Transport Board from 1935.⁸ The buses and lorries tended to be operated on routes and in areas not served by the railways, which remained the dominant option for freight movements between ports and main towns, and were still privately owned.

In Belfast in the 1920s and 1930s, the progressive adoption of motorised transport led to an increasing number of private cars and goods vehicles competing for road space with trams, buses, horse-drawn vehicles, cyclists and pedestrians. Many of the roads in the city had not been widened since they had been laid out, and traffic congestion began to become a serious problem at certain times of the day. Although most arterial routes into the city were bottlenecks, two of the most serious were the Queen's Bridge and Holywood Arches, the latter then being part of the main road from Belfast to Holywood and Bangor.

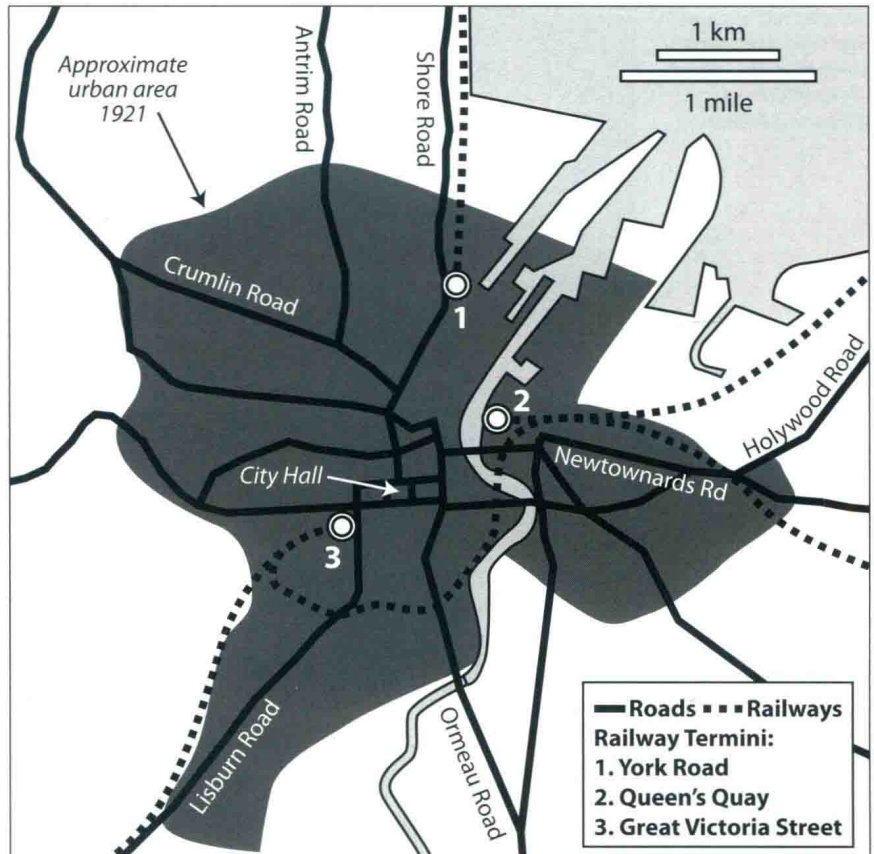
In the early 1920s Lord Pirrie (chairman of the Harland and Wolff shipyard and a member of the Northern Ireland Senate) is said to have become so concerned about the amount of traffic using the Queen's Bridge that he personally approached the Harbour authorities with a proposal to construct a moveable 'transport' bridge over the harbour. This proposal was, apparently, turned down.⁹

In Stormont in 1938, Independent Labour MP Jack Beattie was heard to lament:

...in view of the congestion of traffic which takes place at Ballymacarrett. I do not think you require to spend much money on expert advice. Common sense should lead you to understand clearly that the Queen's Bridge will never accommodate the growing amount of traffic that is taking place on it.⁷

A more humorous assessment of the new conflicts being created by increasing numbers of cars on Northern Ireland's roads can be found in a comment by Unionist MP James Gamble in Stormont, during a debate on a new piece of traffic management legislation in 1934:

I speak also of pedal-cyclists and cattle that are being driven to and from the fairs. The person in charge of the cattle appears to think that he has the right to the whole of the road, and that motorists should stop and wait the convenience of the person who wants to



Main roads, railways and railway termini in Belfast in 1921.

A preserved Leyland Tiger PS1, built circa 1946-48, a bus typical of the NIRTB era.
(Norman Johnston)



*get the cattle past ... As regards pedestrian traffic, I find very often when motoring, especially about lighting-up time, that, even where there are very good footpaths, people walk in the middle of the road. Whether that is due to the good condition of the road or not I do not know, but I think that where there are footpaths the pedestrians should walk on them.*¹⁰

The government of the time agreed that the “cross river traffic problem” was becoming an increasingly important issue, as was the more general issue of transporting an ever-growing quantity of goods and people through the nineteenth century streets of the expanding city. It was already apparent that the trend towards a rising number of cars and lorries in the city was going to continue. If Belfast’s streets were not to become gridlocked, something had to be done.

CHAPTER 2

PROPOSALS, PLANS AND WAR

The interest that the Ministry of Home Affairs of the Northern Ireland government was taking in the growing traffic problem is evidenced by two reports that they commissioned to examine solutions for the problem.

A Bypass at Sydenham

In 1936, Scottish engineer R Dundas Duncan was commissioned by the Ministry of Home Affairs to submit a report on the feasibility of constructing a new road to relieve the pressure on the Holywood Arches and Holywood Road.¹ Although other roads in the city, such as the Antrim and Lisburn Roads, were also heavily trafficked, there was more scope for a solution to the Holywood Arches problem due to the large amount of open, reclaimed land that existed to the north, beside the Bangor railway line.

There seems to have been talk of a new road through this land since at least 1930. However, problems during negotiations with the Harbour Commissioners, presumably related to land acquisition, appear to have scuppered these early attempts.² Duncan submitted his proposals in December 1936 and recommended the construction of a new road to connect Ballymacarrett and Tillysburn, to be known as the 'Sydenham By-pass Road'. The road would provide two traffic lanes in each direction.

Plans for the proposed Sydenham Bypass, 1936. Note the elaborate freeflow one-way system proposed for Tillysburn at the eastern end. (Belfast Newsletter)

