



The £2.5 billion ripple effect

We don't just pump water. We pump millions of pounds into the local economy.



Pumping more than just water

NI Water as a water utility is an integral partner with government and other stakeholders in health, wellbeing and job creation in Northern Ireland. Water is the primary resource upon which nearly all economic, social activity and ecosystem functions depend.

Every day we supply 560 million litres of clean water for almost 1.8 million people as well as treating 330 million litres of wastewater. Our investment in new treatment works and associated infrastructure also pumps millions of pounds into the local economy. The ripples from our investment don't just reach our own employees and suppliers. They are felt by a wide range of other businesses from agri-food production, to new house construction, to tourism development.

This publication builds on analysis undertaken by Dr Mark Bailey, an economist at Ulster University Business School, which examines the ripple effect of our investment. Ulster University Business School estimate that for every £1 invested by NI Water, the knock-on effect in the local economy is almost double. In purely economic terms then, our £2.5 billion 'ripple effect' over the 6 year PC15 period (2015-2021) can be viewed as a major contributor to Northern Ireland's Gross Value Added¹ (GVA).

Challenges lie ahead in crystallising the ripple effect, most notably the need for a medium term funding settlement over PC15. We continue to work with the Department for Infrastructure to explore funding options.

Our support for the local economy is an example of how NI Water creates sustainable value². We hope that you will find this publication of interest.

Sara Venning
Chief Executive
April 2017

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Cautionary note – this publication includes forward-looking statements which involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Such forward looking statements are based on numerous assumptions. Forward-looking statements should, therefore, be construed in light of such risk factors and undue reliance should not be placed on forward-looking statements.

¹ Gross Value Added is an economic indicator which measures the value of goods and services produced.

² Find out more about how NI Water creates long term sustainable value
<http://www.niwater.com/annual-report/>

The £2.5 billion ripple effect

Investing
£620 million in
Northern Ireland's
water and sewerage
infrastructure through
our capital works
programme

Spending £870 million on
goods, services and wages

Supporting more than 350 local businesses

Employing more than 1,300 staff

Creating a £2.5 billion ripple effect over PC15 (2015-2021)



We are creating a
£2.5 billion
ripple effect over PC15
(2015-2021)

The technical bit – how Ulster University estimated the ripple effect

Dr Mark Bailey, an economist from Ulster University Business School, analysed NI Water's expenditure for 2015/16 (year 1 of the 6 year PC15 period) in order to estimate the ripple effect over PC15 (2015-21). The methodology used is set out below.

Standard multiplier approach

All expenditure by organisations (be it on capital projects, day to day operations or staff) produces a "local economic multiplier effect" – which is the creation of local employment opportunities and the retaining of investment within the local and regional economy. This "local economic multiplier effect" encompasses further economic activity (jobs, expenditure or income) which is in its turn associated with additional local income, local supplier purchases and longer term development effects.

This local economic multiplier effect encompasses two effects:

- a supply linkage multiplier (sometimes referred to as an indirect multiplier) which comes about due to purchases made as a result of projects and further purchases associated with linked firms along the supply chain; and
- an income multiplier (also referred to as a consumption or induced multiplier) which is associated with local expenditure as a result of those who derive incomes from the direct and supply linkage impacts of the project.

All expenditure by organisations (be it on capital projects, day to day operations or staff) produces a "local economic multiplier effect".



The ripple effect in action

NI Water worked closely with its contractor, Lagan Construction Group on the £14 million Castor Bay (Craigavon) to Belfast Water Pipeline. This major programme of work has improved the security of the water supply infrastructure for our customers in Belfast and Lisburn, as well as having a positive effect on the water quality. The vast majority of Lagan Construction Groups' spend on wages, sub-contractors and materials is probably spent in the local economy, benefiting many other local businesses. Lagan Construction Group also received a prestigious CEF – Construction Excellence award in recognition of their work on the pipeline.

Capital Works Programme

At present, there are no reliable estimates of the construction sector multiplier for Northern Ireland; however the Scottish Executive estimate a Type II GVA multiplier (including direct, indirect and induced impacts) for the construction industry in Scotland in 2013 of 2.0³. It is likely that the Northern Ireland construction multiplier that is relevant for the capital input of the water industry in Northern Ireland is slightly higher than this because this is largely made up of output from the quarrying

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and aggregates sectors⁴. On balance, the considered opinion of the Ulster University Business School economist is that the GVA construction sector multiplier in Northern Ireland is likely to be in the range of 2.1 for the direct, indirect and induced effects - thus for every £1 million of capital expenditure by NI Water, £2.1 million will be created or sustained elsewhere in the economy. So, with an annual capital works programme of £103 million, the projected impact on the local economy is of the order of £216 million.

³ Scottish Government (2016), "Input-Output Tables and Multipliers for Scotland, 2013" [accessed online at <http://www.gov.scot/Topics/Statistics/Browse/Economy/Input-Output> on 25th October 2016]

⁴ Whilst the Scottish quarrying and aggregates sectors are proportionately larger than the comparable sectors in Northern Ireland the Scottish Forestry Industry is proportionately larger in terms of output relative to Northern Ireland with more than 25% of Scottish softwood production goes into the construction sector in Great Britain according to Forestry Scotland (Forestry Scotland: "Scottish Forest Industries Cluster" [accessed online at <http://www.forestryscotland.com/pages/publications.asp> on 6th March 2009]) so Ulster University Business School estimate the balance of evidence is that the relevant multiplier here will be slightly higher as the inputs being used are largely from the quarrying and aggregates sectors.



The ripple effect in action

We employ a number of Graduate Civil Engineers. They probably spend most of their wages in the local economy. This means that the majority of their wages pass the ripple effect on to local shops and businesses.

Staff Costs

The Scottish Executive estimated a Type II GVA multiplier (including direct, indirect and induced impacts) for public administration in Scotland in 2013 of 1.7³.

Ulster University Business School sees no reason to suppose that this estimate of the multiplier is significantly out of line for that existing in Northern Ireland, although expenditure is more likely to be contained within the country for an island nation (so it may well be higher) and also feel that the nature of NI Water in terms of staff costs merit its treatment as part of the broader public sector in terms of assigning it to that industry category for the purpose of assigning the appropriate multiplier. Thus, with total net staff income from employment by NI Water of £36.8 million (i.e. after removing income taxes, employee national insurance and employee pension contributions⁵), the projected impact on the local economy is of the order of £62.5 million.

Goods and Services

The Scottish Executive estimated a Type II GVA multiplier (including direct, indirect and induced impacts) for the water and sewerage industry in Scotland in 2013 of 1.2³. Ulster University

Business School again see no reason to suppose that this is massively out of line for Northern Ireland, although again expenditure is more likely to be contained within the country for an island nation so with total goods and service costs for NI Water of £107.9 million, the projected impact on the local economy is of the order of £129.5 million.

Combined effect of Capital, Staff, Goods and Services Costs

Thus, the combined impact of the total spend of NI Water in 2015/16 of £247.7 million on the NI economy via the multiplier is £408.3 million.

If the returned taxation is added in as suggested in footnote 5 that rises to just over £440 million so nearly £200 million is added to the Northern Ireland economy by the spending actions of NI Water above and beyond the direct spending of NI Water.

In other words, for every £1 invested by NI Water, the knock-on effect in the local economy is £0.80, almost doubling the initial investment. The ripple effect of the £440m over the 6 year PC15 period (2015-2021) is estimated at over £2.5 billion.

The ripple effect in action

NI Water worked closely with Solmatix Renewables, based in Crumlin, to install 55 solar installations across our network, as part of a £1m investment in renewable energy. The majority of the wages of Solomatix Renewables' employees are probably spent in the local economy, benefiting many other local businesses.



⁵ Of course, it can be argued that much of that part of the £23 million removed which is due to income taxes and employee national insurance payments will be returned to Northern Ireland and thus subject to a further multiplier. Let us say hypothetically that 90% of this £23 million is due to taxation and that 90% of that is returned to Northern Ireland so the multiplier effect of the taxation when returned as public expenditure is £31.7 million (£23 million x 0.9 x 0.9 x 1.7).

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