Grant Thornton

Turley

Summary Position Paper

Joint document

Northern Ireland Chamber of Commerce and Industry

CEF CONSTRUCTION EMPLOYERS FEDERATION

NIfHA

Confronting NI's Wastewater Crisis

There are few things more fundamental to the health of a society than clean water. And yet, in Northern Ireland - famous for our shorelines, rivers and loughs – our wastewater infrastructure is at a critical tipping point, and we now stand at the brink of an economic, social and environmental crisis.

Decades of underinvestment have left Northern Ireland Water (NI Water) facing an enormous **c.£2 billion funding gap** over the upcoming Price Control period (PC28, 2027–2033). Limitations in capacity have already resulted in an effective halt of all new construction in 23 towns across Northern Ireland.

Without urgent intervention, new housing, business development, and broader economic growth will be severely constrained, further damaging investment and impacting on workers directly and across supply chains. The environmental impact sewage pollution is having on the quality of Northern Ireland water bodies is already well documented.

c.£2 billion funding gap

Together the **Northern Ireland Chamber of Commerce, Construction Employers Federation, and Northern Ireland Federation of Housing Associations** have jointly commissioned Grant Thorton and Turley Economics to consider both the likely impact scenarios of our current course, and the potential fiscal approaches that might begin the process of reversing the damage. If left unmanaged, the funding gap could in the next 3 years have a shock in seismic terms equivalent to that of the COVID-19 pandemic.

Our research was commissioned and undertaken independently of the Northern Ireland Fiscal Council's Sustainability Report 2025: special focus - Water (published 10th June 2025).

It raises many similar concerns regarding:

- **the unsustainable nature of NI Water's governance, and the impact on its borrowing and operational model**
- **the limitations of the current Price Control for ensuring adequate investment in waste water infrastructure**
- **the need for greater infrastructure investment than the current and anticipated Price Control allows for.**

We are encouraged, however, that both reports independently conclude that action must be taken now to implement an appropriate fiscal mechanism through which investment in our critical waste water infrastructure can be planned and recouped.

Our report provides this further modeling, detailing the impact of doing nothing, and scenarios for how an infrastructure levy could spread the cost of this infrastructure equitably.

The impact of doing nothing

Our most conservative estimate assumes a continuation of the current downward trend (c.12% reduction year on year) in new home completions and a continued failure to bring forward any of the necessary wastewater infrastructure projects within the next three years (the current Price Control period). This will result in a dramatic **4 percent reduction in the overall construction sector workforce in Northern Ireland (currently circa 60,500) by the end of 2027.**

To put this in context, this is **a similar-sized drop in the construction workforce that occurred during Covid**, between 2020 and 2021, but without the interventions and government support to maintain employment. Our analysis doesn't account for wider forms of development impacted by the current restriction such as industrial and commercial premises, hospital, schools etc. which would add to the economic impact, but focuses on the discrete impact that will result from fewer new social, affordable or private homes.

Housing delivery, which is currently at its lowest level since the post war period, will continue to fall - with an estimated **6,150 homes unable to be built during the remainder of PC21** – adding to rising rental costs and housing stress, and resulting in a **loss of 1,690 jobs** in the construction sector, and a further 870 from indirect employment. **A massive £1.3 billion** in construction investment will be forgone, impacting everyone in Northern Ireland.

If no solution is forthcoming and housing delivery falters and the impact extends into the next Price Control period (2028-33) a 7 percent reduction is anticipated, resulting in the **loss of 2,740 jobs** in the construction sector alone, and a **colossal £4.4 billion investment forgone, equivalent to the non-delivery of approximately 19,000 homes.**

Much of the immediate impact is now unavoidable, but whatever harm can be ameliorated in the short term must be, and solutions agreed upon matched by commitments that provide certainty for the future. **The prize** of addressing the problem, is **an additional net £2.5 billion Gross Value Added (GVA)** added to our economy, stimulated by housing led growth and enabled by the delivery of our required wastewater infrastructure.

6,150 homes unable to be built over next 3 years

How has the situation arisen?

To understand the problem, it is worth setting out why we find ourselves in this situation. In 2007, when NI Water was formed as a Government Owned Company, the idea was deceptively simple: provide clean water and wastewater services across Northern Ireland, and fund it through user charges, both domestic and non-domestic. But the domestic charges never came. In the absence of political consensus, a subsidy system emerged - a patchwork solution that has proven inadequate to the scale of the task.

At the heart of this crisis lies a funding model which is not sustainable. NI Water is reliant on continuing subsidies from the Department for Infrastructure (DfI), without a significant stream of revenue against which it can address long-term infrastructure investment and leaving its finances subject to the limitations and uncertainties of the NI Executive's budget. Now, as the critical infrastructure investment needed approaches **£3.96 billion**, we face a stark choice: continue to defer the inevitable or confront it with clarity and a commitment to long-term reform.

Compounding these issues are deep-rooted governance challenges. Although NI Water is structured as a Government Owned Company, it lacks true financial autonomy. In contrast to counterparts in England and Wales, it does not have the ability to fully borrow against its assets - a restriction that hampers its capacity to invest in essential long-term infrastructure improvements.

The attached papers prepared by Grant Thorton and Turley Economics explore the structural and financial constraints, and potential economic impact and opportunity facing Northern Ireland. They also refer to the 2007 Independent Water Review Panel report along with subsequent reports, and set out a number of choices for government in terms of potential funding mechanisms to address the underinvestment.

NI Water Funding Shortfalls over recent and upcoming Price Control periods

Price Control Period	Years	Investment Needed	Funding Available	Shortfall
PC15	2015–2021	~£1.8 billion	~£0.9 billion	**~£0.8 billion** short (≈45% underfunded).
PC21	2021–2027 (ongoing)	~£2.75 billion	~£1.84 billion (est.)	**~£0.91 billion** short (projected).
PC28 (planned)	2027–2033 (forecast)	~£3.96 billion	~£1.93 billion (proj.)	**~£2.03 billion** short (forecast).

What is the Price Control?

As with other regulated assets, the Price Control process is the main mechanism through which NI Water's funding and capital programme is prioritised, assessed and agreed over a six-year period. On paper, this seems a logical, measured approach - one designed to offer stability and long-term planning for the construction and housing sectors. But in practice, its outcomes have repeatedly failed to meet expectations, and for a number of critical reasons:

- In the context of wider public spending constraint, its ultimate success depends on whether DfI can fund NI Water to the required level for each of the six years. With capital expenditure budgets as constrained as they have been, this has been impossible since year three of the PC21 six-year plan.

- Yearly budgets have directly worked against NI Water's ability to have in place a secure pipeline of work going into each year of PC21, and frequently without legal certainty from an agreed NI Executive Budget until late May (or June in some cases) resulting in inefficient planning of their capital programme.

- As most major wastewater treatment works upgrades are 2-3 years of civils works, NI Water have been unable to maximise the spend they receive causing significant uncertainty for the consultants and civil engineering contractors on their frameworks.

- The result is that the original PC21 plan is now unachievable in the same manner as the PC15 plan was and, unless additional block grant allocations are committed by the UK Government, PC28 would almost certainly be too.

- The Utility Regulator's 2024 Mid Term Review of PC21 has shifted many of the proposed PC21 outputs into PC28 meaning that the quantum of work in PC28 and beyond has grown exponentially.

- In-year allocations, such as that from the October 2024 Monitoring Round, can of course help in unlocking newbuild housing but cannot be anything more than modest in their impact.

Unlike other regulated assets, NI Water begins each financial year without a guaranteed resource/income stream, an inherent vulnerability in the current Price Control process, as highlighted by the Northern Ireland Audit Office in its 2024 report. The die has already been cast for remainder of this cycle, and the economic and social consequences are beginning to unfold. But if we are to avoid a far deeper collapse within the next three years, the time for decisive action is not just near, it is long overdue.

5 potential key actions that could collectively change the trajectory

1. Developer Contributions: DfI is already exploring the introduction of developer contributions to help fund critical upgrades to wastewater infrastructure, whilst viability is a concern against a backdrop of inflationary construction costs the principle of voluntary developer contributions is supported. Whilst voluntary contributions can supplement funding for wastewater infrastructure, they are not expected to generate the billions of pounds required and could result in two-tier housing delivery, with Housing Associations severely limited in the delivery of social and affordable housing if a significant levy is applied. Likewise, the delivery of homes for first-time buyers and of Co-Ownership homes, which have a maximum qualifying value of £210k, could be hampered by a developer contribution that is levied on top of the final value of housing.

2. Reduce the burden: While the proposals around SuDS in the forthcoming Water, Flooding and Sustainable Drainage Bill are welcomed, this will have an extremely limited effect on our wastewater capacity crisis as it will only apply to the drainage on new housing sites. Although it is the right approach to take, it will take many decades before this and this alone would have any meaningful impact on the challenge we face.

Example of SUDS at Belmont Hall, Antrim. (courtesy of Antrim Construction Company)

3. An Infrastructure Transformation Fund (ITF): Most of the major infrastructure projects that will not be delivered in PC21 and are associated with critical wastewater infrastructure, will take more than three years of construction work to complete following consents – so even if funding was available tomorrow, we simply cannot deliver much of the necessary capacity.

Full delivery of the Living with Water Programme (estimated to cost £1.9bn in 2023) could create unrestricted capacity for new homes in Greater Belfast putting within reach the annual target in the NI Executive's Housing Supply Strategy, or enable other forms of development, delivering economic and social benefits. Other critical projects such as combined storm/sewer overflow upgrades and smaller treatment works across Northern Ireland could unlock capacity more quickly if funding became available.

The UK Government has made delivery of new homes a centre piece of their economic strategy in Great Britain. They have also set out a series of infrastructure projects across GB and have introduced a National Wealth Fund and Infrastructure Bank.

We believe that the NI Executive shouldas part of ongoing efforts to increase our fiscal floor, push for the ability for NI to access an 'Infrastructure Transformation Fund' for wastewater infrastructure in Northern Ireland, to unlock the economic potential of new housing, protect jobs in our construction sector and stop this issue being the accelerant of environmental decline that it currently is.

The ITF would commit a maximum amount of funding over a defined period, starting as soon as possible, that could be drawn down by NI Water as construction works are approved. This would not only allow for some additional mitigation of the anticipated economic impact between now and the next Price Control, and the proper planning and stepping up of the construction sector to tackle major projects in PC28, but would also reduce the overall balance of the longer term works required. Agreements and models like this have been negotiated before, such as the £500m (over ten years) that the then UK Government set aside in 2015, as part of the Fresh Start Agreement.

We also understand that UKG would only consider such an arrangement as part of a wider agreement, with the NI Executive playing its part. Therefore, all of these suggestions need to be taken together.

4. A revised fiscal model re-establishing the explicit link between rates and water - In the absence of any political support for water charges, alternative fiscal models need to be considered that can sustainably fund the delivery of critical wastewater infrastructure. NI Water currently receives a subvention from DfI on an annual basis, including a customer subsidy of £397.7m from the NI Executive Budget, with the balance of its revenue generated through non-domestic rates and other smaller charges and income from assets.

Assuming the NI Executive continues to fund the customer subsidy at a similar level, overcoming the anticipated capital expenditure deficit will require some form of revenue raising in a way which enables NIW to borrow what is needed to address the deficit over the next Price Control period. This is likely to require re-establishing the relationship between water and waste water services and the rates system as set out in the Independent Water Review Panel (2007) report's recommendation and model the link between water and wastewater services and rates. This gives a guaranteed funding stream, which lenders require.

Below are some possible ways of addressing the need to raise more revenue as part of a combined package to address the problem. In all of these scenarios, keeping the actual burden on the user to a minimum is at the core of what is set out.

Scenario 1 and 2: Linking NI Water to Rates (with borrowing)

To enable NI Water to access private capital markets on favourable terms, a 'Hypothecated Infrastructure Levy' could be introduced that retains public ownership of NI Water, supports long-term strategic investment and minimises pressure on the NI Executive's budget. The PC28 has yet to be confirmed and may be over a six-or five-year period.

- **6-year PC28 scenario** – i.e. borrowing to address a £2.03bn deficit – the levy would add an average of **£95.80** to an annual domestic rates bill. For non-domestic customers, the levy would average c.£290 per year.

- **5-year PC28 scenario** – i.e. borrowing to address a £1.69 bn deficit – the levy would add an average of **£79.80** to an annual domestic rates bill. For non-domestic customers, the levy would average c.£242 per year.

The above scenarios envisage that a similar proportion of the levy is generated from non-domestic customers, to that which is already paid by businesses through commercial water charges i.e. around 21%. However, recognising businesses already pay this contribution to waste water infrastructure, the scenario where the levy is applied directly to domestic users only would result in:

- **Domestic only levy** – i.e. borrowing to address a £2.03bn deficit – the levy would add an average of **£121.40** to an annual domestic rates bill in a 6-year PC28 scenario, or **£101.15** in a 5-year PC28 scenario.

These scenarios present an indication of the relatively modest increases to domestic rates bills that would be required over a defined period of time, the income from which would be needed to be ring fenced as part of this Infrastructure levy (alongside the DFI subvention) from 2027. As businesses already pay commercial water charges, NIW would need to work with the NI Executive and Utility Regulator to agree a fair charging framework proportionate to the contributions that businesses make to the overall costs. This would also need to be kept to a minimum, to ensure that the cost burden on businesses are minimised.

However, the NI Executive could keep these increases to an absolute minimum, using this combined approach and the detailed figures for each scenario as set out in the report. The important aspect of this change is creating the link and guaranteeing the revenue stream. This is a much more palatable option than those set out in scenarios 3 and 4 below.

Scenario 3 and 4: Linking NI Water to Rates (without borrowing)

In a case where the current anticipated cost of NI Water's capital shortfall is not borrowed but is collected 'as needed' through the 'hypothecated infrastructure levy', i.e. at a level of approximately £338m per annum.

- **"As needed" scenario -** in this scenario the 'hypothecated infrastructure levy' would add an average **£314** to an annual domestic customer bill. For non-domestic customers, the levy would average an additional £949. Or **£398** per annum if a domestic only levy was applied.

We do not believe that this would be palatable at this point in time. In an even more extreme scenario, where NI Water was fully funded directly through the rates system i.e. without a continued customer subsidy from the NI Executive, i.e. without the £339m annual customer subsidy + annual deficit level of approximately £338m, totalling c.£677m per annum

- **"Full cost burden" scenario –** in this scenario the average rates bill in Northern Ireland will rise by **£625**, more than **50% increase in rates** from today's levels, and for the average non-domestic bill the levy would average £1,890 per year. Or **£792** per annum if a domestic only levy was applied.

We have added this scenario, purely to illustrate the scale of the issue and the fact that a blended solution, involving borrowing, whilst still challenging, is a lesser requirement.

These figures are reflective of clearing a capital expenditure backlog. Once cleared, it could be reasonably expected that the 'hypothecated infrastructure levy' would decrease. Whilst average income in Northern Ireland is lower with higher average deprivation in most areas, it is also worth noting that the average water and sewerage charge bill in England and Wales is £473 per annum, on top of an average Council Tax bill for a typical family home of £2,171 per year in England and £2,024 in Wales.

However, NI has the lowest average earnings in the UK, so this has to be borne in mind.

5. Engagement with Citizens and Business – In 2007, the Independent Water Review Panel offered a vision for a sustainable water system - funded through a mix of user charges, borrowing and public subsidy, designed to balance fairness with fiscal responsibility.

A 'hypothecated infrastructure levy' reinstates an explicit link between our rates and our infrastructure, but other suggestions designed to ensure investment in infrastructure and avoid further revenue raising have been proposed previously, including a Tax Increment Financing (TIF) or Gainshare Model, or Regulated Asset Base (RAB) Model and Levy. We have not gone into substantial detail on these models as they would require further legal, fiscal and political discussions.

Regardless of the fiscal mechanism, building a social licence for change is essential, and that means engaging the public and business early, transparently, and meaningfully in the process, acknowledging the scale of change, and managing it accordingly from a communications and engagement perspective.

To help break the long-standing political deadlock and build public trust around the future of water infrastructure in Northern Ireland, there needs to be a deliberate campaign involving public and media debates, consultation and engagement to examine the funding, governance, and sustainability challenges facing NI Water beyond PC28.

Conclusion

The evidence is clear, continuing to rely solely on public subsidy is not viable, unless the UK Government steps in and injects significant new capital. We know this is highly unlikely without joint political pressure from all NI Executive parties. The scenarios modelled in this paper show that practical, fair, and less financially challenging solutions are possible – but all involve political choices. Whether through borrowing, rates-based levies, developer contributions, or innovative financing models, addressing the investment backlog is now unavoidable.

Northern Ireland is no longer simply under strain - it is facing a full-blown crisis. A crisis, by definition, is a critical juncture marked by an acute imbalance between demands and resources, where failure to act leads to widespread negative consequences. This precisely describes the situation NI finds itself in today. As with so many crises, the true cost of inaction will only be clear once it is too late.

Recently completed social housing development of 120 homes for Apex Housing on the lands of the former Newtownabbey High School, Rathcoole (image courtesy of contractor - Kelly Brothers Ltd)

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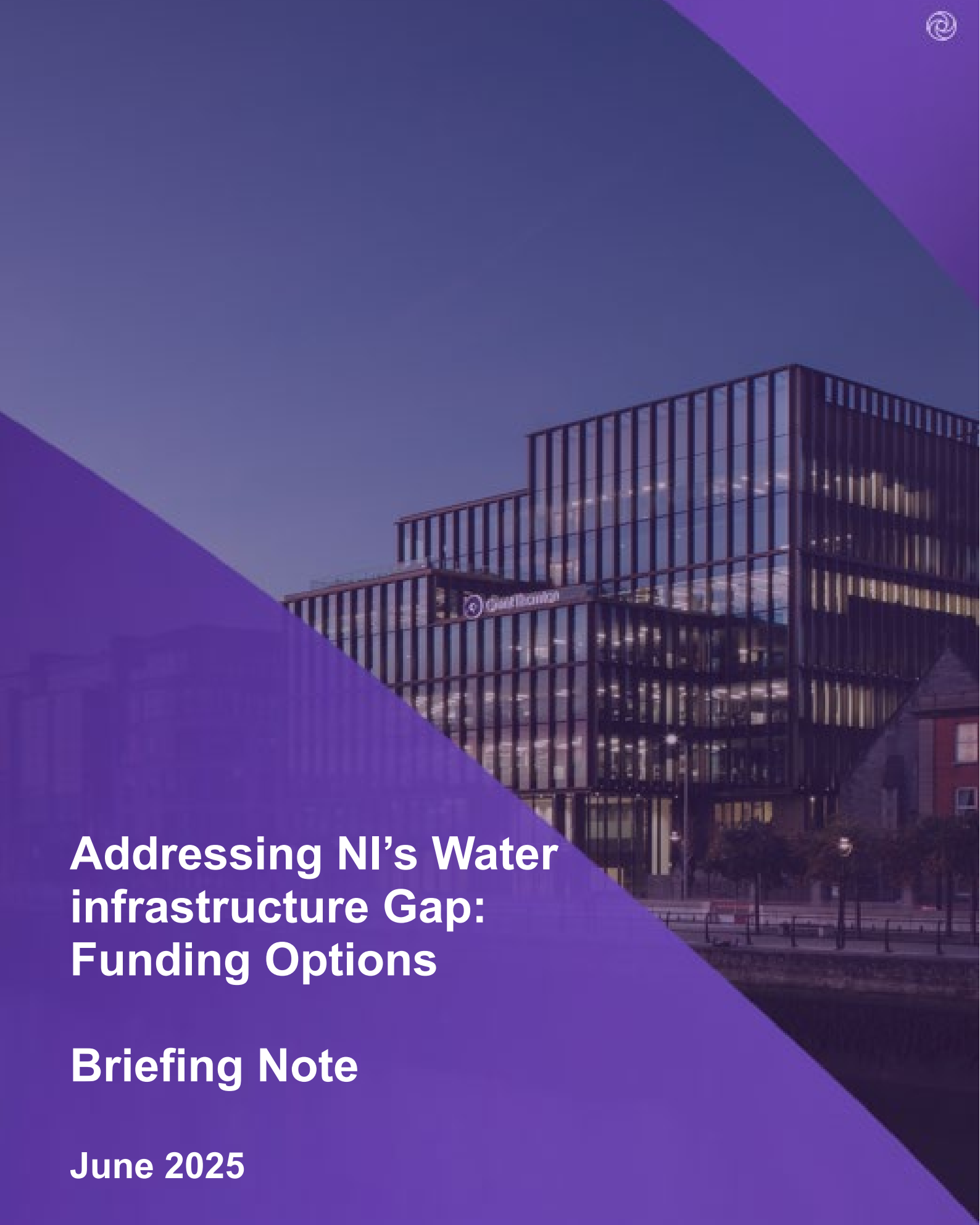


Addressing NI's Water infrastructure Gap: Funding Options

Briefing Note

June 2025

Grant Thornton

Executive Summary

Northern Ireland's wastewater infrastructure is at a critical tipping point. Decades of underinvestment have left Northern Ireland Water (NI Water) facing a £2.03 billion funding gap over the upcoming Price Control period (PC28, 2027–2033). Without urgent intervention, new housing, business development, and broader economic growth could be severely constrained.

NI Water, a government-owned company, currently relies on a combination of non-domestic water charges and a public subsidy from the Department for Infrastructure (DfI). Domestic customers pay no direct water charges. This funding model, unchanged since 2007, has resulted in chronic underfunding relative to investment needs.

Grant Thornton was engaged to model a range of funding scenarios to close the £2.03 billion gap. These include:

- Borrowing against NI Water's asset base, repaid over 50 years via a hypothecated infrastructure levy on rates bills.
- Introducing a direct rates-based infrastructure levy without borrowing.
- Exploring developer contributions, UK Government requests, Tax Increment Financing (TIF)-style mechanisms, and sustainable drainage solutions (SuDS).

Modelling indicates that a borrowing approach would require an average water infrastructure levy of £95.80 per year if a proportion of the cost (21%[1]) is borne by non-domestic customers. In this scenario, businesses would contribute an average of £290 per annum to the levy. If funded without borrowing, the impact could rise to £314 annually for domestic customers and £949 for non-domestic customers.

Of course, there is an argument that because businesses already pay for water and waste water infrastructure it would be inequitable to seek further payment. If the costs of the infrastructure levy are borne solely by domestic users the average levy range from £121 - £398 per annum depending on the whether the funding is borrowed with a 50 years payback or funded without borrowing.

Northern Ireland's model is increasingly out of step with the rest of the UK, where average household water bills are over £470 per year in addition to council tax. The Independent Water Review Panel (2007) had previously recommended moving to a fairer, property-value based charging system. These recommendations were deferred – but the underlying issues remain.

The current unsustainable approach risks worsening infrastructure decay, economic stagnation, and further fiscal pressure. The scenarios set out here provide a platform for urgent, informed political and public decision-making. The key challenge is clear: balancing affordability, fairness, and investment to ensure Northern Ireland's water services are fit for the future.

[1] Non-domestic water charges account for 21% of NI Water income, hence applying this proportion.

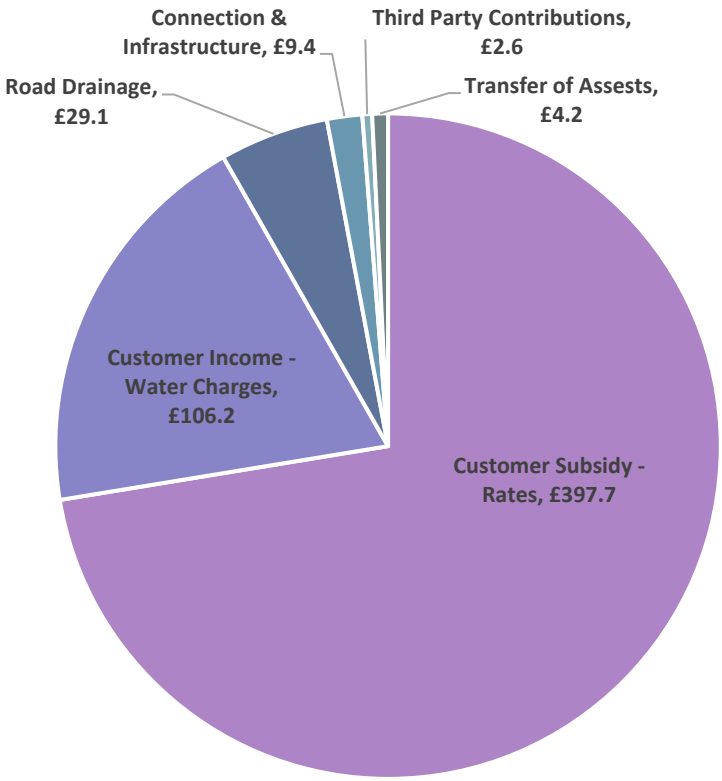
Introduction

Northern Ireland faces wastewater infrastructure capacity challenges to the extent that, after decades of underinvestment, there is a very real prospect of halting construction of new houses and other buildings.

NI Water was formed in 2007 following the re-establishment of the Northern Ireland Executive and is government owned company. It provides water and sewerage services to the whole of Northern Ireland. Initially, NI Water was set up to be funded through user charges for both domestic and non-domestic customers. However, following opposition, domestic charges were never implemented, and non-domestic customers were required to pay.

To cover the cost of the domestic water services, the Department of Infrastructure (DfI) pays a direct subsidy to NI Water each year. This subsidy, along with non-domestic charges, accounts for, according to 2023/24 accounts, 91.8% of total revenue.

Figure 1: Revenue from NI Water Sources, 2023/24



Source: NI Water Annual Accounts (2023/24)

The funding received by NI Water is determined through the submission of business plans, which are reviewed by the Utility Regulator. Each business plan aligns with the Price Control (PC) periods, which set out revenue, expenditure, and investment plans. As part of these PC rounds, NI Water submits a business plan outlining the necessary investment to deliver an effective and efficient water and wastewater system.

Chronic underfunding of NI Water since its creation in 2007 has led to a growing infrastructure investment gap. Each regulatory Price Control period has seen required capital investment far above the funding actually provided, resulting in deferred projects and capacity constraints.

Table 1: NI Water Funding Shortfalls over recent and upcoming Price Control periods

Price Control Period	Years	Investment Needed	Funding Available	Shortfall
PC15	2015–2021	~£1.8 billion	~£0.9 billion	**~£0.8 billion** short (≈45% underfunded).
PC21	2021–2027 (ongoing)	~£2.75 billion	~£1.84 billion (est.)	**~£0.91 billion** short (projected).
PC28 *(planned)*	2027–2033 (forecast)	~£3.96 billion	~£1.93 billion (proj.)	**~£2.03 billion** short (forecast).

Source: NI Water and CEF

On the basis that shortfalls 'roll over' into the following PC period, for the purposes of this report, the cumulative capital funding gap is taken as £2.03 billion. This backlog in investment has real impacts: multiple development projects are on hold due to inadequate wastewater capacity, and aging infrastructure is not being replaced at the needed rate.

The scale of the shortfall (~£2 bn) is enormous – approximately twice the total value of all NI City Deal investments and broadly equivalent to the NI Executive capital budget 2024-25 of £2.1 billion, a figure that has to be allocated to many different areas of high demand, such as roads, health, schools etc. Given Northern Ireland's challenging public expenditure environment, there is clearly a wastewater funding challenge.

This paper proposes a selection of scenarios that close this gap. For clarity, Grant Thornton is not proposing or endorsing any one option over another, merely assessing a selection of different approaches to funding a £2bn capital requirement. The start point for the assessment is revisiting the Independent Review of NI Water, undertaken in 2007.

The Independent Water Review Panel (2007) Options

The Independent Water Review Panel's (2007) Strand One Report[2] recommended that non-domestic charges be introduced and be regularly reviewed by the Regulator. In reviewing the potential options for funding a domestic charge the Independent Water Review Panel (2007) report outlined four options:

- **NI Block Grant Option:** Continue to fund water & sewerage from the Northern Ireland Block Grant (general public expenditure). Under this option, additional investment needs would be met by either **raising the regional rates** significantly or **cutting other public spending** to divert funds to water. No direct water bills for households – effectively maintaining the status quo subsidy.
- **Property Valuation Option:** Introduce an explicit domestic water charge based on the **capital value of each property**, similar to how household rates are calculated. Charges for water and sewerage would appear as separate line items on rates bills, and only properties connected to the services would pay. Notably, **no standing charge or volumetric (usage-based) charge** for domestic users was included – every household would pay according to property value, using the existing rates billing system. This **property-value model** was the Panel's **preferred option**, chosen for ease of integration with rates and perceived fairness by ability to pay.
- **Direct Rule Option:** Implement the originally planned **hybrid charging scheme** (as proposed by Direct Rule ministers for 2007) for full cost recovery. This would have extended water charges to households via a combination of a **flat standing charge** and a **variable charge** based on property value, with an **optional meter** for certain groups. Under that scheme, a typical household would pay a £105 annual standing charge plus ~£180 per £100k

[2] Independent Water Review Panel: Strand One Report Costs and Funding; Professor Paddy Hillyard (2007); https://www.infrastructure-ni.gov.uk/sites/default/files/consultations/infrastructure/independent-water-review-strand-one-report-costs-and-funding.PDF

of property value (capped so no household pays over £770/yr), with optional metering (e.g. seniors 60+ could opt to install a meter and pay volumetric rates). Any revenue shortfall (gap to full cost) would still be covered by the NI Block grant. This model was expected to ramp up combined domestic/non-domestic income from ~£37 m in 2006/07 to ~£217 m in 2008/09 and ~£425 m by 2013/14.

- **Metering Option:** Implement **universal water metering** for households, charging purely by volume of water used (extending the approach already applied to large non-domestic users). Each domestic customer would be billed according to their metered usage (volumetric charge), similar to utility bills for electricity/gas. This was presented as a theoretical option for future consideration – however, the 2007 Panel explicitly **advised against general domestic metering at that time**, given the costs and circumstances.

The Independent Water Review Panel (2007) report recommended the introduction of the **Property Valuation Option**, under which domestic users would pay a charge based on their property's capital value. Regarding collection, the report proposed that the existing billing and collection system for rates be used to collect these charges. This would mean that **Land & Property Services (LPS)** would assume responsibility for collecting and distributing the payments.

The report also emphasised the need to avoid double counting. It noted that, up until 1998, a proportion of regional rate revenue (£178 million) had been earmarked for water and sewerage services, with £80 million (£109 million in 2006/07 prices) of this coming from the domestic regional rate. However, after 1998, this link with regional rates was severed, yet regional rates were not reduced accordingly. This, the review contested, meant 'ratepayers understandably believed that they were continuing to contribute.' To address this, the report recommended that from 2008/09, an 'annual sum of around **£109 million should be taken from the domestic regional rates** in recognition of ratepayers' historical contributions', with any remaining water funding requirement met from the Northern Ireland Block Grant. **In crude terms, £109m in 2008/09 is £160m today if applying inflation**. In reality, the situation is more nuanced than that, which is assessed below.

Assessing Options in the current context

The recommendations on direct domestic water charges made in the Independent Water Review Panel (2007) report were deferred in 2010, with the latest deferral extending legislation until 31 March 2027[3]. As a result, the Northern Ireland Executive, through a subsidy paid by the Department for Infrastructure (DfI), has covered the charges for domestic users. However, this approach has proven challenging, as the subsidy falls below the level required for NI Water to invest in and upgrade its infrastructure.

There are a range of options (some of which require legislative change) that could be considered as a way to fund the £2bn capital requirement shortfall that has been identified in the planning for PC28. These include:

- **Request to UK Government:** A request to the UK Government for a major infrastructure fund, to correct for decades of underinvestment, is a relatively common approach. With the UK having completed its Comprehensive Spending Review delivering challenging financial settlements across the public sector, a request for additional funding for NI infrastructure may not land well.

- **Developer Contributions:** The Northern Ireland Executive is currently exploring the introduction of developer contributions to help fund critical upgrades to wastewater infrastructure. In March 2025, the Department for Infrastructure (DfI) launched a public consultation outlining two potential approaches:

[3] Consultation on Water and Sewerage Charges – Options for Revenue Raising; Department for Infrastructure (2023); https://www.infrastructure-ni.gov.uk/sites/default/files/consultations/infrastructure/consultation-water-and-sewerage-charges-dec2023.pdf

- **Voluntary Developer Contributions**: Developers could choose to fund specific wastewater infrastructure improvements that directly benefit their projects. This option allows for targeted investments but may lead to uneven development opportunities, favouring areas where developers are willing or able to contribute.
- **Compulsory Wastewater Contribution Levy**: A mandatory levy imposed on all new developments, with funds pooled to address wastewater infrastructure needs across Northern Ireland. This approach aims for equitable distribution of resources but may increase development costs and require new legislation to implement.

While developer contributions can supplement funding for wastewater infrastructure, they are not expected to generate the billions of pounds required.

- **Tax Increment Financing (TIF) or Gainshare Model:** It has been suggested in some commentary that NI Water's capital investment plans could be funded through a TIF model. TIF is a mechanism where **future increases in business rates (or other taxes)** generated by new development are **captured and reinvested** in infrastructure or regeneration projects that made the development possible. TIF is **not formally legislated** for in Northern Ireland, although similar mechanisms (like City Deals and Regeneration Frameworks) use **"earn-back"** or **"gain-share"** models. A bespoke legislative or policy vehicle would be needed to allow business rate uplift in a defined area to be ringfenced for infrastructure investment, including water and wastewater. **Gainshare** is used in City Deals and Growth Deals to link investment in infrastructure to future economic growth and tax receipts. It's not tied to a specific tax, but rather a **fiscal uplift agreement** between central and devolved governments.
- **Regulated Asset Base (RAB) Model and Levy:** The RAB model is a framework used to finance infrastructure by allowing investors to earn a **regulated return** on their investment, backed by a reliable, long-term revenue stream. It's most common in utilities like water, energy, and transport.

  In this model, a regulator (e.g. Utility Regulator for NI) sets the allowed return on capital for infrastructure assets. The **asset base** includes capital investment in water infrastructure. Revenues from users (or a levy) are used to **pay back investors** with an agreed rate of return. Because returns are stable and regulated, investors accept **lower rates**, reducing the cost of capital. The Levy can be a fixed amount of based on property values.

- **Reduce the burden:** NI Water and the Department for Infrastructure both recognise the potential of Sustainable Drainage Systems (SuDS). SuDS manage rainfall at the source, reducing the volume and speed of surface water entering sewers. Key benefits include:
  - **Alleviating sewer overloads**: Especially in older combined sewer systems where rainwater and sewage are carried together.
  - **Reducing flood risk**: Slows and stores stormwater during heavy rainfall.
  - **Improving water quality**: Filters pollutants before they reach watercourses.
  - **Enhancing amenity and biodiversity**: Features like rain gardens and green roofs improve urban spaces.

There are undoubtedly other funding models that could be explored, and blended solutions based on the above, but the primary purpose of this paper is to consider the implications of covering NI Water's costs and investment requirements through the rates base. The aim is to bring much needed analysis to an urgent issue. Additionally, we have examined the implications for rates of NI Water borrowing against its asset base to address long-term funding shortfalls.

Re-establishing the explicit link between rates and water

The assessment that follows focusses on funding NI Water's capital expenditure deficit, i.e. £2bn, by the end of PC28. **A key assumption in the modelling that Grant Thornton have undertaken is that the NI Executive continues to provide funding to NI Water at similar levels to now.** Therefore, it is only the projected capital gap that requires additional funding. To enable NI Water to access private capital markets on favourable terms, our modelling assumes a 'Hypothecated Infrastructure levy' is introduced that retains public ownership of NI Water, supports long-term strategic investment and minimises pressure on the NI Executive's budget. In effect we follow the Independent Water Review Panel (2007) report's recommendation and model re-establishing the link between water services and rates but our assumption is that the 'infrastructure levy' will be based on rateable values but separate to the rate poundage, falling outside the regional and local authority rate setting process.

Domestic Rates & Water Charges

Using data on capital values and data on the total domestic poundage (district and regional rates) for 2025-26, average and total rates bill in each council area is estimated as follows.

Table 2: Average & Total Domestic Rates Bill by Regional and District Rates, Northern Ireland District Council Areas, 2025/26

	2025/26			
	Total District Rates (£m)	Total Regional Rates (£m)	Total Rates (£m)	Average Rates Bill (£)
Antrim and Newtownabbey	£31,950,540	£39,363,779	£71,314,319	£1,097
Ards and North Down	£48,996,050	£61,118,070	£110,114,120	£1,422
Armagh City, Banbridge and Craigavon	£55,329,945	£55,634,707	£110,964,652	£1,195
Mid and East Antrim	£34,605,770	£42,615,247	£77,221,017	£1,198
Causeway Coast and Glens	£41,426,558	£44,431,158	£85,857,717	£1,256
Newry, Mourne and Down	£56,525,316	£46,984,617	£103,509,933	£1,364
Belfast	£83,655,648	£101,066,408	£184,722,056	£1,128
Lisburn and Castlereagh	£36,588,323	£50,919,711	£87,508,034	£1,329
Mid Ulster	£36,587,541	£35,178,795	£71,766,336	£1,210
Derry City and Strabane	£33,408,977	£42,231,883	£75,640,860	£1,136
Fermanagh and Omagh	£27,823,090	£30,295,236	£58,118,327	£1,125
Northern Ireland	**£486,897,762**	**£549,839,614**	**£1,036,737,376**	**£1,218**

Source: Department for Finance and Grant Thornton Analysis

The information in the table above has been used as a baseline against which any changes in rates bills from modelling different scenarios can be compared. It is important to note that data from NI Water's accounts shows that approximately 21% of their turnover is from non-domestic consumers. In scenarios where businesses bear some of the burden, this ratio is applied as the split between domestic and non-domestic. In other scenarios, because businesses already pay for water and waste water infrastructure, the full levy is applied to domestic users.

Borrowing for Capital Investment

This scenario considers that NI Water's governance and funding model enables it to borrow against its assets to raise the required level of capital expenditure required to fully fund PC28. Repayment would be through a hypothecated infrastructure levy. Engagement with NI Water noted that PC28 has

yet to be confirmed and may be a six or five year period. The results of our modelling consider both a 6-year PC28 period – i.e. a £2bn requirement – and a five-year PC28 period prorated to £1.7bn.

Each model assumes repayment costs on a long-term gilt period of 50 years at an interest rate of 4.535%.

6 Year PC28 Period

Borrowing £2bn over a six-year period (i.e. borrowing approximately £338m per annum for six years). Annual repayment costs will amount to £103.3m, inclusive of interest payments and the principal amount.

Grant Thornton's calculations suggest that the domestic infrastructure levy would add an average of £95.80 to an annual rates bill, per the tables below. For non-domestic customers, the levy would average c.£290 per year. Table 5 presents the outcome where domestic consumers fully meet the levy charges.

Table 3: Average Domestic Rates Bill and Infrastructure Levy, Northern Ireland District Council Areas

	Average Rates Bill (incl. Infrastructure Levy) (£)	Infrastructure Levy (£)
Antrim and Newtownabbey	£1,183	£86.20
Ards and North Down	£1,534	£111.90
Armagh City, Banbridge and Craigavon	£1,289	£94.00
Mid and East Antrim	£1,293	£94.20
Causeway Coast and Glens	£1,355	£98.80
Newry, Mourne and Down	£1,471	£107.30
Belfast	£1,217	£88.70
Lisburn and Castlereagh	£1,433	£104.50
Mid Ulster	£1,305	£95.20
Derry City and Strabane	£1,225	£89.30
Fermanagh and Omagh	£1,214	£88.50
Northern Ireland	**£1,314**	**£95.80**

Source: Grant Thornton Analysis

Table 4: Non Domestic: Average Water Charge Bill and Infrastructure Levy, Northern Ireland District Council Areas

	Average Rates Bill (incl. Infrastructure Levy) (£)	Infrastructure Levy (£)
Antrim and Newtownabbey	£1,408	£367.10
Ards and North Down	£980	£255.40
Armagh City, Banbridge and Craigavon	£904	£235.70
Mid and East Antrim	£1,002	£261.10
Causeway Coast and Glens	£808	£210.50
Newry, Mourne and Down	£821	£214.10
Belfast	£1,539	£401.10
Lisburn and Castlereagh	£1,482	£386.30
Mid Ulster	£832	£217.00
Derry City and Strabane	£1,091	£284.30
Fermanagh and Omagh	£846	£220.60
Northern Ireland	**£1,112**	**£289.90**

Source: Grant Thornton Analysis

Table 5: DOMESTIC LEVY: Average Domestic Rates Bill and Infrastructure Levy, Northern Ireland District Council Areas

	Average Rates Bill (incl. Infrastructure Levy) (£)	Infrastructure Levy (£)
Antrim and Newtownabbey	£1,206	£109.30
Ards and North Down	£1,564	£141.70
Armagh City, Banbridge and Craigavon	£1,314	£119.10
Mid and East Antrim	£1,318	£119.40
Causeway Coast and Glens	£1,381	£125.10
Newry, Mourne and Down	£1,500	£135.90
Belfast	£1,241	£112.40
Lisburn and Castlereagh	£1,461	£132.40
Mid Ulster	£1,331	£120.60
Derry City and Strabane	£1,249	£113.20
Fermanagh and Omagh	£1,237	£112.10
Northern Ireland	**£1,339**	**£121.40**

Source: Grant Thornton Analysis

5 Year PC28 Period

Over five years, the PC28 funding gap is estimated at £1.7bn. In this scenario, we calculate annual repayments of £86.1m.

Grant Thornton's calculations suggest that the domestic infrastructure levy would add an average of £79.80 to an annual rates bill, per the tables below. For non-domestic customers, the levy would average c.£242 per year.

Table 6: Average Domestic Rates Bill and Infrastructure Levy, Northern Ireland District Council Areas

	Average Rates Bill (incl. Infrastructure Levy) (£)	Infrastructure Levy (£)
Antrim and Newtownabbey	£1,168	£71.90
Ards and North Down	£1,516	£93.20
Armagh City, Banbridge and Craigavon	£1,273	£78.30
Mid and East Antrim	£1,277	£78.50
Causeway Coast and Glens	£1,338	£82.30
Newry, Mourne and Down	£1,453	£89.40
Belfast	£1,202	£74.00
Lisburn and Castlereagh	£1,416	£87.10
Mid Ulster	£1,290	£79.30
Derry City and Strabane	£1,210	£74.40
Fermanagh and Omagh	£1,199	£73.70
Northern Ireland	**£1,298**	**£79.80**

Source: Grant Thornton Analysis

Table 7: Non Domestic: Average Water Charge Bill and Infrastructure Levy, Northern Ireland District Council Areas

	Average Water Charges Bill (incl. Borrowing Costs) (£)	Infrastructure Levy (£)
Antrim and Newtownabbey	£1,347	£305.90
Ards and North Down	£937	£212.80
Armagh City, Banbridge and Craigavon	£865	£196.40
Mid and East Antrim	£958	£217.60
Causeway Coast and Glens	£773	£175.40
Newry, Mourne and Down	£786	£178.40
Belfast	£1,472	£334.30
Lisburn and Castlereagh	£1,417	£321.90
Mid Ulster	£796	£180.80
Derry City and Strabane	£1,043	£236.90
Fermanagh and Omagh	£810	£183.80
Northern Ireland	**£1,064**	**£241.60**

Source: Grant Thornton Analysis

Table 8: DOMESTIC LEVY: Average Domestic Rates Bill and Infrastructure Levy, Northern Ireland District Council Areas

	Average Rates Bill (incl. Infrastructure Levy) (£)	Infrastructure Levy (£)
Antrim and Newtownabbey	£1,188	£91.10
Ards and North Down	£1,540	£118.10
Armagh City, Banbridge and Craigavon	£1,294	£99.20
Mid and East Antrim	£1,298	£99.50
Causeway Coast and Glens	£1,360	£104.30
Newry, Mourne and Down	£1,477	£113.20
Belfast	£1,222	£93.70
Lisburn and Castlereagh	£1,439	£110.30
Mid Ulster	£1,311	£100.50
Derry City and Strabane	£1,230	£94.30
Fermanagh and Omagh	£1,219	£93.40
Northern Ireland	**£1,319**	**£101.10**

Source: Grant Thornton Analysis

Full Cost Burden Covered by Rates, not borrowing

In a more extreme case, the cost of NI Water's capital shortfall is not borrowed but is collected 'as needed' through the infrastructure levy, i.e. at a level of approximately £338m per annum.

Similar to our other assessments we have assumed that costs are either spread between both domestic and non-domestic water charges using the same ratio as currently – 21% of NI Water income is from non-domestic customers or that domestic consumers are fully responsible for the levy. For ease of presentation, a six-year PC period is presented.

Table 8: Average Domestic Rates Bill and Infrastructure Levy, Northern Ireland District Council Areas

	Average Rates Bill (incl. infrastructure levy) (£)	Infrastructure Levy (£)
Antrim and Newtownabbey	£1,379	£282.40
Ards and North Down	£1,789	£366.40
Armagh City, Banbridge and Craigavon	£1,503	£307.80
Mid and East Antrim	£1,507	£308.70
Causeway Coast and Glens	£1,579	£323.50
Newry, Mourne and Down	£1,715	£351.30
Belfast	£1,419	£290.60
Lisburn and Castlereagh	£1,671	£342.20
Mid Ulster	£1,522	£311.70
Derry City and Strabane	£1,428	£292.50
Fermanagh and Omagh	£1,415	£289.80
Northern Ireland	**£1,532.**	**£313.70**

Source: Grant Thornton Analysis

Table 9 shows that in this scenario, the average infrastructure levy for non-domestic bill payers would be £949.

Table 9: Non Domestic: Average Water Charge Bill and Infrastructure Levy, Northern Ireland District Council Areas

	Average Water Charges Bill (incl. Infrastructure Levy) (£)	Infrastructure Levy (£)
Antrim and Newtownabbey	£2,244	£1,202.40
Ards and North Down	£1,561	£836.50
Armagh City, Banbridge and Craigavon	£1,440	£771.90
Mid and East Antrim	£1,595	£855.00
Causeway Coast and Glens	£1,287	£689.40
Newry, Mourne and Down	£1,308	£701.10
Belfast	£2,451	£1,314.60
Lisburn and Castlereagh	£2,361	£1,265.00
Mid Ulster	£1,326	£710.60
Derry City and Strabane	£1,738	£931.20
Fermanagh and Omagh	£1,348	£722.50
Northern Ireland	**£1,771**	**£949.30**

Source: Grant Thornton Analysis

Table 10: DOMESTIC LEVY: Average Domestic Rates Bill and Infrastructure Levy, Northern Ireland District Council Areas

	Average Rates Bill (incl. Infrastructure Levy) (£)	Infrastructure Levy (£)
Antrim and Newtownabbey	£1,454	£357.90
Ards and North Down	£1,887	£464.20
Armagh City, Banbridge and Craigavon	£1,585	£390.00
Mid and East Antrim	£1,589	£391.10
Causeway Coast and Glens	£1,666	£409.80
Newry, Mourne and Down	£1,809	£445.10
Belfast	£1,497	£368.20
Lisburn and Castlereagh	£1,762	£433.60
Mid Ulster	£1,605	£394.90
Derry City and Strabane	£1,506	£370.60
Fermanagh and Omagh	£1,492	£367.20
Northern Ireland	**£1,616**	**£397.50**

Source: Grant Thornton Analysis

There are two points to note here. The figures in the tables above are reflective of clearing a capital expenditure backlog. Once cleared, it could be reasonably expected that the Infrastructure Levy would decrease. Further, for context, it is worth noting that the average water a sewerage charge bill in England and Wales is £473 per annum, on top of an average Council Tax bill for a typical family home of £2,171 per year in England and £2,024 in Wales.

Fully funding Water and Water Infrastructure without DFI's subsidy

The scenarios above all assume that DFI continue to provide a subsidy to NI Water. For additional context, the following table presents a position where DFI ceases this practice, and the capital funding deficit is funded through domestic rates. This would result in an increase in domestic rates of an average £792 per annum.

Table 11: DOMESTIC LEVY: Average Domestic Rates Bill and Infrastructure Levy, Northern Ireland District Council Areas, NI Water Subsidy and Infrastructure Deficit, six year PC

	Average Rates Bill (incl. NI Water and Infrastructure Levy) (£)	NI Water funding & Infrastructure Levy (£)
Antrim and Newtownabbey	£1,809	£712.60
Ards and North Down	£2,347	£924.30
Armagh City, Banbridge and Craigavon	£1,972	£776.50
Mid and East Antrim	£1,977	£778.70
Causeway Coast and Glens	£2,072	£816.10
Newry, Mourne and Down	£2,250	£886.20
Belfast	£1,862	£733.20
Lisburn and Castlereagh	£2,192	£863.30
Mid Ulster	£1,997	£786.40
Derry City and Strabane	£1,874	£737.90
Fermanagh and Omagh	£1,856	£731.10
Northern Ireland	**£2,010**	**£791.50**

Source: Grant Thornton Analysis

Conclusion

Northern Ireland's wastewater infrastructure is at a crossroads. Chronic underinvestment, combined with a funding model that no longer meets the needs of a growing economy and population, has created an unsustainable situation. Without urgent action, NI Water faces a funding gap estimated to be in the order of £2 billion by the end of the PC28 period (2027–2033), directly threatening new housing development, economic growth, and environmental protection.

The evidence is clear: continuing to rely solely on public subsidy is not viable, unless UK Government steps in and injects significant new capital. The scenarios modelled in this paper show that practical, fair, and affordable solutions exist – but all involve political choices. Whether through borrowing, rates-based levies, developer contributions, or innovative financing models, addressing the investment backlog is now unavoidable.

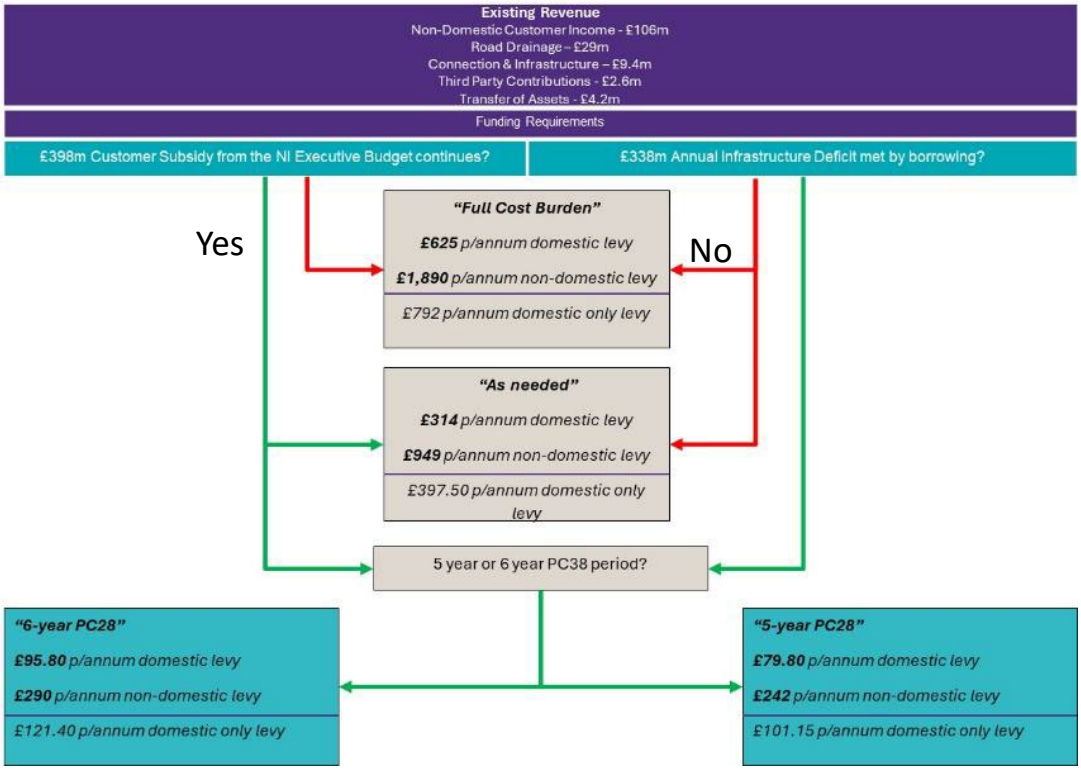
By proposing a Hypothecated Infrastructure Levy, it is acknowledged that this will likely give rise to the need to reexamine NI Water's existing status as a non-departmental public body (NDPB) and reclassification as a public corporation, as is already the case with Translink, as a governance structure that could be considered.

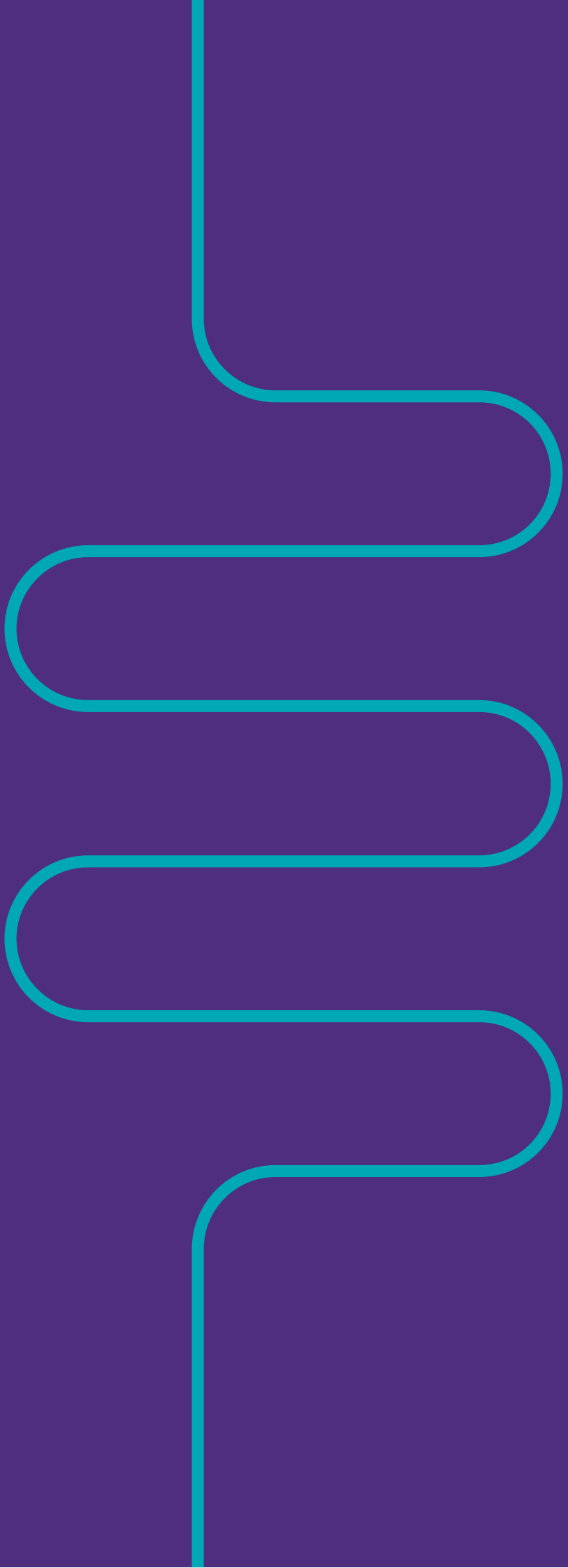
While not for this report, we also believe there is merit in further detailed consideration of how the Capital Departmental Expenditure (DEL)/Annually Managed Expenditure (AME) of Network Rail and National Highways are treated in public expenditure rules and whether such an approach could be practicable and of benefit to NI Water.

Ultimately, Northern Ireland must move towards a sustainable, transparent model for funding water and wastewater services – as originally recommended by the Independent Water Review Panel in 2007. Re-establishing the link between property value and water charges, while maintaining affordability protections, offers a route to fairness and long-term resilience.

Tough decisions are now required. Delay will only increase costs, risk environmental penalties, and harm economic prospects. Urgent, decisive action is now needed to secure a sustainable future for Northern Ireland's water infrastructure.

Summary of Waste Water Infrastructure Levy Options





Northern Ireland Wastewater Economic Impact Scenarios

Construction Impact of Delayed Wastewater Infrastructure in Northern Ireland

April 2025

Turley

Introduction

This report was prepared by Turley Economics on behalf of "Northern Ireland (NI) Wastewater Infrastructure" for the Northern Ireland (NI) Chamber of Commerce, Construction Employers Federation and NI Federation of Housing Associations. Its purpose is to understand the economic implications of the delayed delivery of critical wastewater infrastructure on the construction sector, specifically on the delivery of new housing and wastewater treatment plants. The economic impacts on the construction sector are measured initially for the remainder of the Northern Ireland Price Control regulatory period (NIW PC21) – out to 2027. Given that the impacts on the sector are cumulative and sustained, the economic impacts in the next Price Control NIW PC28 were also modelled. The focus of this analysis is on the impacts to the construction sector only, which is narrowly defined according to Standard Industry Classification. The analysis in this report measures the indirect and induced impact of the shocks to the construction sector, but does not measure the impact of delayed investment from other sectors and business activities due to wastewater constraints. Therefore the results are considered conservative impacts, as anecdotal evidence suggests that investors are locating outside of Northern Ireland due to the wastewater connection constraints.

Understanding the Sector

The impacts calculated in each scenario show the effects on the construction sector, which includes all activities from the UK Standard Industrial Classification (SIC) code 2007: Section F, Construction (also known as the 1-digit code). This covers all activities related to building construction, civil engineering works, and specialised construction activities.[1]

The Business Register and Employment Survey (BRES) aims to collect information about business structure and employee jobs across Northern Ireland. The information is used to maintain a register of businesses that supports statistical enquiries across Government and provides the most accurate employee job figures for Northern Ireland, on an annual basis.[2] The most recent BRES data[3] published by NISRA indicates that there were circa 41,720 construction employees (Full Time Equivalents) in Northern Ireland in 2022. There has been a growth in construction workers since 2019, when there were 35,780 FTEs. BRES classification of construction employees do not include professional services such as design, planning, environmental, land and quantity surveying and legal services, many of which also work on construction projects. BRES classification of construction employees align with the traditional skilled trades and unskilled labour used in construction activities. BRES data estimates that 16 per cent of the construction workforce is allocated to the construction of new domestic buildings, which equated to 5,740 workers in 2022.[4]

Nomis is a service provided by the Office for National Statistics (ONS) that offers detailed and official labour market statistics. The most recent employment data from the Northern Ireland Statistics and Research Agency (NISRA) indicates that there were 40,580 Employee Jobs and 24,371 self-employment jobs in the NI construction sector in December 2024. This is higher than the BRES data which reports on FTE, and it does not concord with the BRES classification. The Workforce Jobs series is the preferred measure of short term employment change by industry. However, the series cannot provide detailed industrial breakdowns (for example, 4 digit SIC 2007), which are acknowledged in the background to the Workforce Jobs methodology as being best sourced from the Business Register and Employment Survey (BRES), and therefore was used to contextualise the findings of the ensuing analysis.

Methodology

Given the national impact of delayed critical wastewater infrastructure projects, Northern Ireland is defined as the study area for this assessment. The assessment is informed by the Homes and Communities Agency's (HCA, now known as Homes England) Additionality Guide[5] and the HCA's Employment Density Guide[6] and draws on published official data sources.

HCA guidance recommends a specific approach to calculating net additionality. This allows for the consideration of:

- **Deadweight:** Considered to be zero;
- **Leakage:** The extent to which employment will be sourced from outside Northern Ireland, which is assumed to be zero in line with NISRA workforce commuting data from Census 2021;
- **Displacement:** The extent to which construction employees would have been relocating from other construction activities is assumed to be 25 per cent in line with HCA guidance; and
- **Multipliers:** Considering indirect and induced impacts, applied to reflect HCA guidance by applying a multiplier of 1.5.

In the first instance, the impact of delayed wastewater treatment infrastructure was measured on its own. This is the impact of planned infrastructure contained within the current Northern Ireland Price Control regulatory period (NIW PC21), which was expected to be delivered in the last three years of NIW PC21 (2025 to 2027) but is delayed. The impact of the delays in delivering critical wastewater infrastructure projects will impact housing delivery, and the impact was measured using scenarios with sets of assumptions on the number of houses that will not be built.

Three potential housing delivery scenarios over the three years (2025 to 2027) were modelled to show the impact of delayed housing delivery on the construction sector. The annual average delivery of new dwellings over the last 5 years was assumed as the baseline. This amounted to 6,555 per annum, and divergence of each scenario is shown in Table 1. The scenarios are:

- **Scenario 1 *"Most likely scenario"*:** Assuming that the recent downward trend in house completions from 2022 continues (approximately 12 per cent reduction year on year). If the downward trend continues, this would amount to a total of 13,515 dwellings completed between 2025 and 2027[7] , against the average delivery over the last five years of 6,555 per annum (19,665 for three years). This scenario measures the non-delivery of 6,150 dwellings—the difference between the average annual delivery over five years and the extrapolated declining numbers being delivered from 2022. This is considered to be the most probable scenario for the remainder of the NIW PC21 period.
- **Scenario 2:** *"Worst case scenario – Moratorium on construction of new buildings over the next three years"* This is a major shock scenario, unlikely to occur, but used to measure the impact/contribution of the current house delivery in Northern Ireland to the economy. There is an assumption of zero delivery of housing over the next three years, with the effect/impact calculated on the average housing delivery over the last five years (6,555 per annum) not taking place. This totals 19,665 homes not delivered over the next three years, considered the worst-case scenario.[8]
- **Scenario 3:** "*Increased housing requirement*": While an average of 6,555 new homes were delivered over the last five years, housing need in Northern Ireland is greater than current delivery. This is especially pronounced for the delivery of social and affordable housing. This scenario explores the effect on the construction sector by assuming that all of the identified requirements of 8,950 future dwellings per annum are built, based on the total LDP Housing Ambitions (26,850 homes over three years).[9] While wastewater connections are one constraint on building to levels of housing need (others include labour capacity and funding), this scenario explores the hypothetical size of the construction sector for housing if the sector expanded to meet Local Authorities' identified housing needs.

	Scenario 1 Most Likely	Scenario 2 Worst Case	Scenario 3 Increased Housing Requirement
Assumed delivery of housing between 2025 and 2027	13,515	0	26,850
Divergence from annual average rate of housing delivery (last five years)	- 6,150	- 19,655	+ 12,730

Table 1: Assumed New Dwelling Delivery by Scenario

Results from scenarios 1, 2 and 3 are shown in Table 2, along with the impact of the construction investment foregone on wastewater infrastructure between 2025 and 2027. While the three scenarios above have a range of impacts over the next three years, it was recognised that the wastewater constraints will impact housing delivery in the longer term. Therefore, Scenario 4 was developed to estimate the impact on the construction sector of shortfalls in investment in critical infrastructure and housing delivery in NIW PC28. This extends from 2028 to 2033/34, and results are presented further down in this report, in **Table 4**.

Results - Economic Impacts

£ million	Wastewater Infrastructure	Scenario 1	Scenario 2	Scenario 3	Scenario 1 + Waste water Infrastructure
Construction Investment foregone by 2027	£0.8 billion	£0.5 billion	£1.7 billion	£2.4 billion	**£1.3 billion**
Person-years of Employment	4,080	2,670	8,550	11,670	**6,750**
Construction Period					**3years**
Direct Net Additional Employment (FTE) – (Construction Sector)	1,020	670	2,140	2,920	**1,690**
Indirect / Induced Net Additional Employment (FTE)	510	330	1,070	1,460	**840**
Net Additional Employment (Total)	1,530	1,000	3,200	4,380	**2,530**

Table 2: Construction Phase Employment – NIW PC21

Delayed Wastewater Infrastructure Investment in NIW PC21

NIW PC21 had planned capital investment in wastewater infrastructure, which will enable the delivery of housing and businesses across Northern Ireland. This investment was expected to go to construction in the last three years of the NIW PC21 period, given the planning and pre-construction activity that is required. There was to be substantial construction investment of approximately £830 million[10] in the latter three years of NIW PC21. These projects are not proceeding, resulting in a failure to deliver the required investment in wastewater infrastructure. This could support approximately 4,080 person-years of direct employment within the construction sector[11]. This equates to 1,020 Direct Net Additional Employment full-time equivalent (FTE) jobs in the construction sector annually, after accounting for the additionality factors of leakage and displacement. These Direct Net Additional Employment figures come from the construction sector itself, and from sectors that support the construction industry, such as engineering/planning/design.

On-site businesses' expenditure on materials, goods and other services, purchased from a wide range of suppliers for the construction of wastewater treatment, will have far-ranging benefits both locally and further afield as it filters down the supply chain (this is termed 'indirect effects' in economic impact assessment). There will be lower wages and salaries paid to workers in businesses related to this expenditure, both from the construction sector and businesses within the supply chain. This reduction in disposable income also impacts the economy, and this effect is termed 'induced effects' in economic impact assessment. In line with published guidance, economic multipliers were applied to estimate these impacts in terms of employment. Indirect/induced effects of 510 FTES are foregone due to the lack of wastewater infrastructure investment; jobs within the construction supply chain (e.g. material suppliers and businesses operating in the supply chain) and jobs across the whole economy sectors that are affected by the lack of wages and salaries from the construction sector being spent within the economy. Direct and Indirect employment taken together make up the "*Net additional employment*", shown in the last row of Table 2. Summing the above direct, indirect and induced employment figures, it is calculated that the failure to deliver the required investment in wastewater infrastructure would have supported an average of 1,530 net additional FTE jobs annually in Northern Ireland, 1,020 of which are in the construction sector.

Delayed Investment in New Dwellings

Table 2 presents the impact of delays on new dwelling/house building construction, as explored through the scenarios. Scenario 1 ("Most Likely") would see £0.5 billion investment in housing foregone, Scenario 2 ("Worst Case") would see £1.7 billion of housing investment foregone, while Scenario 3 ("Delivering to Housing Need") models the unconstrained investment required, £2.4 billion, to meet housing need. In 2022, it is estimated that 5,740 FTE workers were working on the construction of new dwellings, or 16 per cent of the construction workforce.

Scenario 1 (Most Likely) shows the likely slowdown in housing construction over the next three years. The level of investment in new dwellings will be well under what is required to satisfy identified housing needs (**Table 1**), and visually this is shown in Figure 1, as Scenario 3 shows the potential growth in employment in new dwellings. From the analysis it is clear that the Northern Ireland Assembly's comprehensive housing targets in the Housing Supply Strategy 2024-2039[12] will not be met in Scenario 1, as measured against each individual Council's Local Development Plan's targets out to 2030, which would require an annual build rate of 9,322 dwellings per annum to 2030.

The impact on the number of workers in new dwelling construction under each scenario is shown in **Figure 1**. The baseline of circa 5,740 FTEs employed in the construction sector per annum to deliver an average of 6,555 new dwellings is assumed for 2024. Scenario 1, assuming the continued downward trend of construction of dwellings, shows a drop of 670 FTEs by 2027. Scenario 2 shows a greater drop of 2,140 FTE construction workers.[13] Finally, Scenario 3 shows the employment impact if new dwellings were delivered according to need, as identified in the Local Development Plans for each council. This would see a significant increase in the FTE workers in the new housing construction sector, to an estimated total of 8,660 FTE workers by 2027. This is nearly a doubling of the number of FTEs that currently are committed to new residential building, showing the potential for jobs in the new house building sector in Northern Ireland.

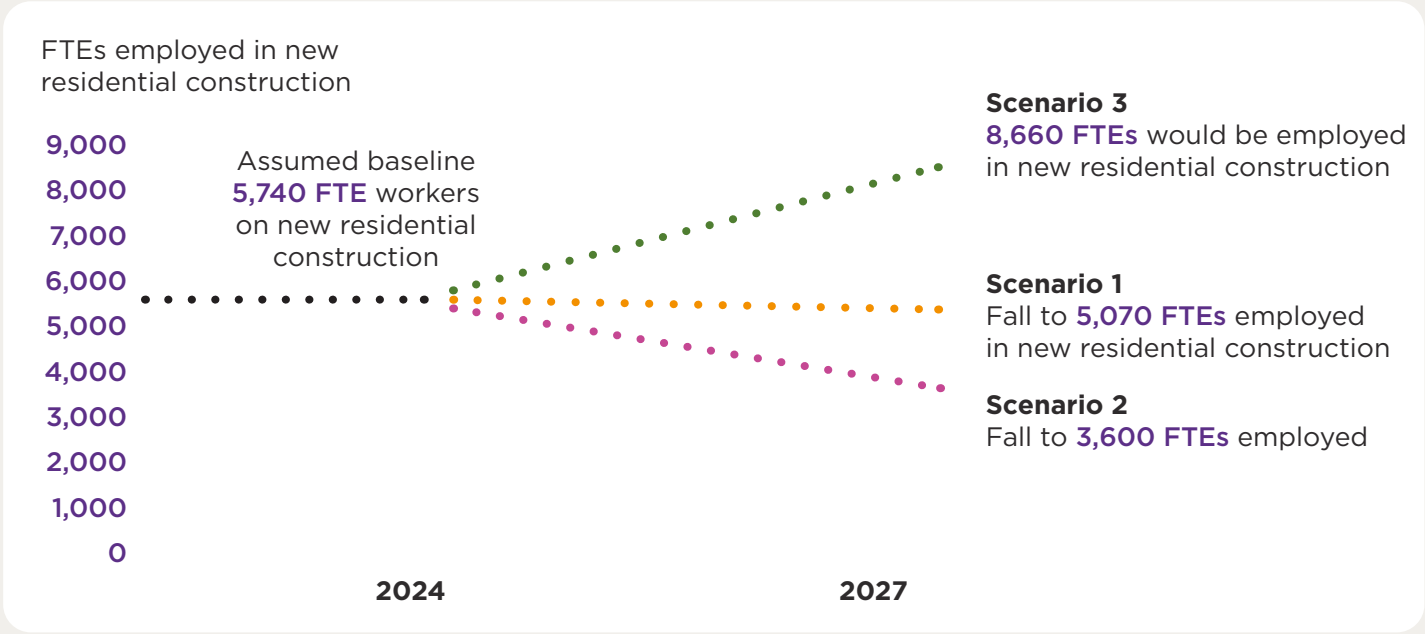


Figure 1 Impact of scenarios on the number of people employed in new housebuilding (only)

When combining the delayed wastewater infrastructure investment with Scenario 1, it is anticipated that 1,690 Direct Net Additional FTEs in the construction sector could have been supported if the wastewater infrastructure and housing investment had been delivered (total of £1.3 billion investment). Net Additional Employment from the combined effect (direct, indirect and induced) amounts to 2,530 FTE workers, 840 of whom are outside of the construction sector.

The failure to bring forward the combined wastewater infrastructure projects along with Scenario 1 will see a loss of 1,690 construction sector FTE workers. This is 4 per cent of the total construction sector workforce (circa 41,720). To put this in context, this is a similar-sized drop in the construction workforce that occurred during Covid, between 2020 and 2021. It is not as large as the impact on the sector experienced over a prolonged seven-year period after the global financial crisis between 2008 and 2014, when the construction workforce contracted by approximately 28 per cent.

Of these circa 41,720 construction employees across Northern Ireland, Department for the Economy data[14] identifies that there are 971 participants in apprenticeships that are within the construction sector. This equates to 2.3 per cent of all employees within the construction sector. Applying this proportion to the gross number of employees that could have been generated from the construction of wastewater infrastructure, this would equate to circa 24 apprentices on site per annum. Combining this with the number of apprentices that could be generated from Scenario 1, a total of circa 39 apprentices could have been employed per annum. Overall, the socioeconomic impact of changes should be assessed in light of who is likely to be affected most and to what extent. A NESC (2013) study on the economic crash of 2008 in the Republic of Ireland noted that men in the construction industry were particularly affected, with low-skilled workers bearing the brunt of the decline[15], along with a high rate of outward migration which occurred among construction workers who lost their jobs. Further study is required on the likely socio-economic impact of the loss of jobs in the Northern Ireland construction sector, given the effective single labour market across the island of Ireland and opportunities for workers elsewhere.

"Most Likely"
Scenario Insight

Contraction of construction sector employment of 4% by 2027

Exclusions from analysis

It should be noted that this analysis does not take into account the businesses that relocate elsewhere, outside of Northern Ireland, due to the wastewater connection constraint. The NI Audit Report, published in March 2024, identified that a lack of capacity in Northern Ireland's water infrastructure has meant that development applications in 100 areas cannot be approved or are subject to restrictions.

The NI Audit Report cites research undertaken by the Ulster University Economic Policy Centre in 2022, which looked at an unconstrained economic environment and projected economic growth. The report highlighted two key points arising from the analysis. Firstly, even if PC21 is fully funded and implemented, the inadequacies within water infrastructure will still be a significant economic constraint in Northern Ireland in 2027 and beyond, due to the additional investment in wastewater treatment that is required. The economy will be smaller than it otherwise would be and fewer than expected new jobs will be created, estimated to be in the region of 5,900 fewer jobs. Secondly, in a scenario where PC21 is not implemented in full, even a relatively small shortfall in funding can magnify the economic impacts arising from constraints in water infrastructure. In an unconstrained economic environment, projected economic growth would see 50,000 new jobs added to the local economy between 2021 and 2027. If no investment was made on delivering on PC21 only 37,000 jobs would be created, indicating an economic impact of 13,000 jobs across the economy. This serves to highlight that Turley's analysis above, which focuses on the fall in construction activity only, is a conservative economic impact assessment, as it does not estimate the opportunity cost of economic activity in other sectors that is constrained by lack of wastewater (e.g. expansion of schools, hospitals and other public services; businesses that are restricted from developing; foreign direct investment that relocates elsewhere).

While a direct comparison of the NI Audit Office modelling and modelling undertaken in this report is not possible due to lack of detail in the NI Audit Office summary, the impact is significant. The NI Audit Office concluded that *"The development restrictions caused by capacity issues within water infrastructure will undermine the ability of the NI Executive to deliver against its strategies. They will also have a significant impact upon the ability of local government bodies to deliver against their responsibilities and objectives, which are also related to central government plans"*.

Gross Value Added NIW - PC21

The construction phase could generate a significant production impact, measured in Gross Value Added (GVA). GVA is the total of all revenue into businesses, which is used to fund wages, profits, and taxes. Therefore, it provides a key measure of productivity.

The GVA that could have been generated during the wastewater infrastructure's construction phase was calculated through analysis of Experian data relating to the average GVA generated per employee by sector in Northern Ireland.

Applying the appropriate GVA figures to the numbers of direct, indirect and induced FTE jobs supported during the construction phase, it is estimated that wastewater infrastructure investment could generate £137.9 million of net additional GVA in the Northern Ireland economy each year, equating to a total of £413.7 million over the estimated construction period, increasing to £709.7 million when considered alongside Scenario 1 (**Table 3**).

	Wastewater Infrastructure	Scenario 1	Scenario 2	Scenario 3	Scenario 1 + Waste water Infrastructure
Direct Net Additional GVA (Annual)	£105.8	£69.4	£221.9	£303	**£175.2**
Indirect / Induced Net Additional GVA (Annual)	£32.1	£21.1	£67.3	£91.9	**£53.2**
Total Net additional GVA (Annual)	£137.9	£90.5	£289.2	£395	**£228.4**
Total Net Additional GVA (over three years)	**£413.7**	**£271.4**	**£867.7**	**£1,185**	**£685.1**

Table 3: Construction Phase GVA (million) – PC21

Scenario 4: Impact of longer-term delayed wastewater infrastructure (NIW PC28 over six years)

The Construction Employers Federation report finds that there is an estimated shortfall in the funding for wastewater infrastructure between 2027-2033 of £2.03 billion.[16] This equates to 51 per cent of the total cost of delivering the infrastructure (£3.96 billion). This will also impact the delivery of housing across Northern Ireland. For this longer-term scenario, it is assumed that 51 per cent of the current housing delivery levels will not be delivered. This equates to 4,589 homes per annum, or 27,531 homes over the six-year period.

£ million	Wastewater Infrastructure	Housing	Wastewater Infrastructure + Housing
Construction Investment foregone	£2.0 billion	£2.4 billion [17]	**£4.4 billion**
Person-years of Employment	9,920	11,970	**21,890**
Construction Period	6 years		
Direct Net Additional Employment (FTE)	1,240	1,500	**2,740**
Indirect / Induced Net Additional Employment (FTE)	620	750	**1,370**
Net Additional Employment (Total)	**1,860**	**2,250**	**4,110**

Table 4: Construction Phase Employment – PC28 (2027-2033) Source: Turley Economics, 2025

Employment

The substantial construction investment of approximately £2 billion foregone in the failure to deliver the required investment in the wastewater infrastructure could support approximately 9,920 person-years of direct employment within the construction sector (**Table 4**).

After accounting for the additionality factors of leakage and displacement, it is estimated that 1,240 direct FTE jobs per annum could be sourced from Northern Ireland's labour force had the additional funding for the wastewater infrastructure been secured. The indirect and induced additional employment foregone amounts to 620 FTE, bringing a net additional employment of 1,860 FTEs for wastewater investment foregone.

The construction investment into new housing foregone amounts to £2.4 billion over the PC28 period. This could support 11,970 person-years of employment, which translates into 1,500 direct FTE jobs per annum that could be sourced from Northern Ireland's construction labour force. Combining the wastewater scenario with the reduction in housing delivery would result in a total of 4,110 FTE foregone, 2,740 of which would have been employed in the construction sector. This analysis confirms that the contraction of construction activities in new dwellings would have sustained effects and impacts over a 10-year period. The contraction in construction sector employment extends from 4 per cent in 2027 to 7 per cent by 2033.

The estimated impact of these economic multiplier effects indicates that a further annual average of 620 FTE indirect / induced employment jobs could have been supported within the Northern Ireland economy throughout the construction period of the wastewater infrastructure for 2027 – 2033 (increasing to 1,370 when considered alongside housing not delivered).

Summing the above direct, indirect and induced employment figures, it is estimated that the failure to deliver the required investment in wastewater infrastructure for 2027-2033 could have supported an average of 2,740 net additional construction FTE jobs annually in Northern Ireland, increasing to 4,110 when considered alongside the housing which cannot be delivered. This amounts to 7 per cent of the current construction FTE workforce in the longer term (next decade).

Applying the 2.3 per cent proportion of apprenticeships of the total construction workforce to the above estimates, construction of the wastewater infrastructure from 2027-2033 could generate circa 28 apprentices on site per annum. Combining this with the number of apprentices that could be generated from housing delivery (36), a total of circa 64 apprentices could have been employed per annum.

Scenario 4 Impacts extending into PC28

Drop in 4,110 FTE workers across the construction sector (-7%)

Economic Productivity (GVA) - PC28 (2027-2033)

Applying the appropriate GVA figures to the numbers of direct, indirect and induced FTE jobs supported during the construction phase, it is estimated that the construction phase of the wastewater infrastructure could generate £167.8 million of net additional GVA in the Northern Ireland economy each year, equating to a total of £1 billion over the estimated construction period, increasing to £2.2 billion when considered alongside housing development. This is summarised in **Table 5**.

While modelling of the NIW PC28 scenario assumes that many other elements of the economy remain constant, it is useful to formulate this scenario to explore the potential impacts. Following on from the analysis of the impact of PC21, this final scenario highlights that the lack of investment will have prolonged effects into the future – the level of impact is sustained for at least a decade, and it marks a significant impact on the construction sector of 7 per cent drop in employment in construction and investment foregone of £2.2 billion between 2027 and 2033.

Scenario Insight

Contraction of construction sector employment by 7% in longer term, to 2033

	Wastewater Infrastructure	Housing	Wastewater Infrastructure + Housing
Direct Net Additional GVA (Annual)	£128.8	£155.3	£283.1
Indirect / Induced Net Additional GVA (Annual)	£39.1	£47.1	£86.2
Total Net additional GVA (Annual)	£167.8	£202.5	£369.3
Total Net Additional GVA (over six years)	£1,007	£1,215	£2,222

Table 5: Construction Phase GVA (million) – PC28 (2028-2033/34) Source: Turley Economics, 2025

End Notes

1 See UK Standard Industrial Classification (SIC) Hierarchy for the list of activities included in SIC 2007 Construction: https://onsdigital.github.io/dp-classification-tools/standard-industrial-classification/ONS_SIC_hierarchy_view.html
2 https://www.nisra.gov.uk/files/nisra/publications/BRES_2023_GUIDANCE_NOTES.pdf
3 NISRA (2023) BRES Publication and Tables 2022
4 The most recent employment data from the Northern Ireland Statistics and Research Agency (NISRA) indicates that there were 60,500 workforce jobs in the Northern Ireland construction sector in 2024. This is higher than the BRES data of FTE, and although the classification of workforce jobs is in NISRA data is not clear, it does not concord to the BRES classification, as it includes additional occupations outside of the Standard Industry Classification for construction, such as professional, non-construction professional and technical office based staff.
5 HCA (2014) Additionality Guide 4th Edition.
6 HCA (2015) Employment Density Guide 3rd Edition.
7 Assumption of 5,415 dwelling completions in 2025, 4,500 completions in 2026 and 3,600 completions in 2027.
8 This is based on analysis of delivery by the 11 District Councils for the period between 2019 and 2024, but indicates the level of drop-off in construction activity that potentially could be experienced.
9 This scenario uses the housing need identified by each of the 11 District Councils in their respective Local Development Plans
10 Construction Employers Federation (March 2025) Construction Employers Federation submission to the consultation on the draft Northern Ireland Executive Budget 2025/26, March 2025. Based on years 2024/25 – 2026/27
11 Analysis utilises the UK Government's Department for Business and Trade's 2024 Business Population Estimates: Northern Ireland data for the construction sector to determine the turnover per employee in the sector, which in turn informs the number of jobs supported.
12 Northern Ireland Executive (2024) Housing Supply Strategy A Home for Everyone 2024-2039 https://www.communities-ni.gov.uk/sites/default/files/2024-12/dfc-housing-supply-strategy-2024-2039.pdf
13 Although it is assumed that house building is zero in this scenario, the modelling includes a factor for "displacement", so the number of FTEs does not go to zero.
14 Department for the Economy (2025) Apprenticeships NI statistics from August 2018 to October 2024
15 NESC (2013) The Social Dimensions of the Crisis: The Evidence and its Implications http://files.nesc.ie/nesc_reports/en/NESC_134_Social_Dimensions_Exec_Summary.pdf
16 Construction Employers Federation (March 2025) Construction Employers Federation submission to the consultation on the draft Northern Ireland Executive Budget 2025/26, March 2025.
17 Based on an estimated average split of homes based across all Strategic Housing Market Analysis Reports issued by the Housing Executive. This is then applied to the average space standards of homes of these sizes and the associated £/sqm of residential development from BCIS.

Turley