

Summary of the Kennedy Analysis of Irish Water's Shannon Project

- Irish Water proposes a mega-project to pump water 172km from River Shannon to Dublin costing up to EUR1.3billion (**EUR1,000 per family**)
- Irish Water's analysis contained **mathematical errors** - correcting just *three* errors shows there is no need for the Shannon Project
- Irish Water has made **false statements** about the need for the Shannon Project to the public, the media and the government
- Dublin's water pipes are so ancient, corroded and full of holes that they have around **57% leakage rate** - this is far from normal
- London (with leakage rates *less than half* Dublin's) is currently replacing its *entire* Victorian water mains – Irish Water has no such plan: its mains replacement target is just **1% per annum**
- Dublin faces (1) **water outages** and (2) unreliable water quality due to **water ingress** – the Shannon project would not stop this: the only thing that can stop it is replacing Dublin's pipes
- Replacing the pipes will become unavoidable – the Shannon Project would be a very expensive sticking plaster: **why pay twice?**
- Irish Water's reaction to the Kennedy Analysis has been **defensive** – it avoids and denies the issues while providing no substance
- Minister Murphy and the CRU must challenge Irish Water – if they doubt the merits of the Kennedy Analysis they should seek **independent review** of both sets of analysis (the Kennedy Analysis and Irish Water's "need" analysis) - the risk is too high to ignore
- Contact Kennedy Analysis at www.kennedyanalysis.com

**** See next page for more detail ****

Summary of the Kennedy Analysis of Irish Water's proposed Shannon Project (updated: April 2018)

Contact Kennedy Analysis at www.kennedyanalysis.com/contact

Irish Water proposes to pump water 172km from the River Shannon to Dublin, costing up to EUR1.3billion – over EUR1,000 for every family in Ireland. A forensic review found that after just *three errors* are corrected Irish Water's own "need" projection methodology establishes that **there is no need at all for the Shannon Project.**

Dublin's problem is not a lack of water: only around 43% of the water put into Dublin's water supply system each day is actually used. Dublin's problem is that its ancient water mains are in a third world state of decay so for every litre of expensive treated water that is put into Dublin's water supply around 57% is wasted through holes in its pipes and never reaches the taps. **57% leakage** is far from normal: comparable cities identified by Irish Water's predecessor in this project have leakage below 10%.

Dublin's 2013 water crises were not caused by a *lack of raw water* but by *failures at its water treatment plants* resulting from decades of under-investment. Every major water treatment plant has since been upgraded or (in the case of the ancient treatment plant at Vartry, which regularly struggles to cope with "algal bloom") is about to be upgraded - but Dublin's water mains remain neglected. This results in (i) **water outages** caused by mains bursts, and (ii) **unreliable water quality** due to **water ingress** - Irish Water says that in low-pressure situations there is a risk of "contaminated groundwater" *re-entering the pipes* carrying clean water to Dubliners' taps, requiring "**boosted chlorination**" of the water before it is put into the supply system to counteract the "public health risk".

London's leakage levels are *less than half* those in Dublin and have been deemed "*unacceptable*" by its regulator - it is now replacing its *entire* Victorian water mains. Irish Water has no such plan: its leakage reduction targets are (contrary to its claims) *extremely unambitious* given the scale of the problem and its own report questions the availability of funding. An overhaul of Dublin's water mains, involving a truly significant investment, will soon become unavoidable. The Shannon Project would not negate this: it would be a very expensive sticking plaster.

The Shannon Project would be one of the biggest infrastructure projects in Ireland's history but the analysis on which it was based contained **mathematical and data errors**. Irish Water's incorrect analysis concluded that, in 2050, Dublin will have a water *deficit* of 215mld (million litres per day) of water; after *just three* of its calculation errors are corrected that 215mld *deficit* becomes a 55mld *surplus*. Technically, no new raw water source is needed: increased demand over the coming decades will be offset by the water that will be recovered through leakage reduction (*note*: this uses Irish Water's own selected methodology and nothing more than its *current* leakage targets). However, **Dublin needs diversification: 99% of its water currently comes from rivers** which leaves it vulnerable. A smaller, less expensive *non-river water* source would provide Dublin with much needed diversification.

Kennedy Analysis has notified Irish Water of the errors in its analysis and that many of its **public statements about the need for this project have been false** or highly misleading. Irish Water's reaction to the Kennedy Analysis has been defensive. Instead of addressing the issues head-on, Irish Water makes unrelated and irrelevant statements. Its responses deny undeniable errors and even backtrack on issues that it had conceded during its face-to-face meeting with Emma Kennedy in February 2017.

Major projects *must be* subjected to rigorous analysis: **spending EUR1.3bn on a project that is *not* needed means EUR1.3bn is *not* available for projects that *are* needed**. The numbers for the Shannon project do not add up – there is no investment case – so it is *vital* that it does not proceed. Simultaneously, the risks to which Dublin's residents and businesses are exposed because of its ancient pipes and over-reliance on river water must be addressed *now*: **Irish Water's 1% mains replacement target must be challenged, and there should be a fresh review of non-river water supply options (e.g. groundwater/wells) in the context of *correct* demand figures.**

There are ominous parallels between the proposed Shannon Project and the Kielder project, built in the UK in the 1970s and subsequently criticised as an **unnecessary White Elephant**. This should sound alarm bells for those who will rubber-stamp the Shannon project. They must challenge Irish Water before it is too late. If they have doubts about the merits of the Kennedy Analysis then they should seek an **independent review** of the two sets of analysis (Irish Water's "need" analysis and the Kennedy Analysis). The risk is too high to ignore.

For a full summary of the Kennedy Analysis Reports see the "**Kennedy Analysis Overview**" at www.kennedyanalysis.com