<u>This project has a history of significantly over-estimating future water demand, yet Irish Water's latest methodology is even more aggressive than those used in the past</u>

This project was conceived in 1996 under the remit of Dublin City Council. Projections of Dublin's anticipated future water demand were produced by RPS Consulting for Dublin City Council in **2006** (in the "*2006 Report*") and in an updated report in **2010** (the "*2010 Report*"). In 2006 and again in 2010 the conclusion was that water demand was set to increase hugely and a huge new water source was needed as a matter of urgency. **It has since emerged that the projections of future water demand in the 2006/2010 Reports were both *significantly overstated*.**

In its 2006 report RPS projected that, over 6 years, average water demand would increase by **108.7Mld**. In fact, demand increased by only **19Mld**: RPS **over-estimated the growth in water demand by over 470%**. What is more, in its next report (in 2010) it projected that average water demand would **increase by 5%** in only 5 years: in fact, according to published data, over that period **average water demand actually *decreased*.** Predicting water demand over a long horizon is uncertain and errors are to be expected (hence the inclusion in Irish Water's latest calculations of a 35% safety buffer of water that must be made available every single day of the year *over and above "average demand"* to cover, among other things, the possibility that data emerges to have been incorrect). However, such significant errors over such a short time-frame are surprising. Irish Water infers that this can be explained away with reference to the "Celtic Tiger" era and the subsequent recession – but the 2010 projections were produced when the recession was well underway and indeed the report itself made reference to that fact. Rather, it can be observed that the **data** that was used for per capita consumption ("PCC") is now known to have been *incorrect* and that it used a **method for projecting non-domestic demand** ("NDD") that has since been *strongly discredited.*

The project passed into Irish Water's remit in 2014 and a fresh set of water demand projections was produced in the Project Need Report ("*PNR*") in 2015. In those projections, **Irish Water adopted a methodology even more aggressive than either of the methodologies adopted by the 2006 and 2010 Reports to predict, yet again, enormous increases in water demand for the next 35 years.** The new 2015 "need" analysis had the benefit of new PCC data (obtained from meter readings) and discarded the "zoning" approach for calculating future NDD. As a result, the projections for *average demand* in the PNR were *significantly lower* than those of the 2006/2010 Reports which is *entirely appropriate* given how overstated we now know the 2006/2010 projections to have been. However, the PNR offset some of that reduction by introducing the following **new additional elements** to the calculation for the predicted 2050 *total* water requirement (i.e. over and above the "average demand") that had *not* been included in the 2006/2010 Reports:

(a) a higher requirement for "*peaking*": the PNR increased "*peaking*" **from 12.5% to 20%,**
(b) a higher requirement for "*headroom and outage*": the PNR increased "*headroom and outage*" **from 6.25% to 17.5%** (tapering to 15%),
(c) a requirement of an additional amount of water (equating to **5% of total production**) for use by the water treatment plant itself during treatment (*no equivalent* had been incorporated in the 2006/2010 Reports), and
(d) a "strategic allowance" of **100Mld** for potential future high-water-using industry - the 2010 report had considered that this was adequately provided for in the "headroom" buffer. Note: this 100Mld is *cumulative* to the projected *organic growth* in demand from Dublin's existing industrial users, whose *total* water demand is currently only around 110Mld.

All of the above supports the statement made in the Kennedy Report that: "*despite its predecessors having hugely overestimated future water demand… Irish Water is now taking an even more aggressive approach to calculating future water demand – only time will tell how wrong their current predictions will be*". Irish Water's response refuted this statement (with reference to the Celtic Tiger economy and to figures that were not, in fact, demand figures) and countered it by stating: "*If … new demographic or consumption information, and a strong commitment to conservation and leakage reduction, permits the downward estimation of water demand…then Irish Water are happy to recognise this evolving situation and any reductions in demand which may arise. Irish Water has stated and continues to state that it will constantly be reviewing and updating demand projections in light of more detailed and recent information as and when it becomes available. That means that demand projections may continue to change to allow for this more up-to-date information*".

This is highly misleading: the Shannon project is ALL-OR-NOTHING. Not a single drop of water can be supplied until the entire EUR1.3billion mega-project has been completed. If, in the meantime Dublin's demand grows at a slower rate than Irish Water's analysis assumed then, *contrary to its inferences*, there is very little that Irish Water can do by way of response.

The investment costs of the Shannon project are heavily front-ended: there is almost no scope for phasing of investment expenditure or bringing the project online in increments. The project will cost the best part of EUR1.3billion regardless of whether, in the end, it needs to supply Dublin with the full 215Mld (which is the PNR's predicted 2050 Dublin deficit) or 50Mld or indeed no water at all (which is identified by the Kennedy Analysis as the most likely scenario).