

PC21 Draft Determination NI Water Response

Annex 6.1 - Plan for DG2 Low Pressure Register Refresh

Version 1.0



Plan for Refresh of the DG2 Register

December 2020

1.0 Background

The PC21 Submission included for a refresh of the DG2 Register of low pressure properties. This refresh will increase confidence in the process used to identify properties experiencing low pressure below the 15m minimum level of service. This is evidenced by the fact that in recent years a significant number of DG2 properties were added to the register. This is mainly due to properties at a similar elevation to properties on the register which is only realised by pressure logging and detailed analysis.

2.0 Summary of Plan

The refresh of the register uses all available GIS data, logged pressures and models to prioritise areas for pressure logging. This will allow properties to be added and removed from the register in a proactive manner as we progress from PC15 into PC21.

The steps to refresh the DG2 Register are to firstly create a Pressure Mapper and identify all of our customers potentially experiencing low pressure. The next step is to log pressures at these locations and update the DG2 Register for properties receiving <15m pressure at the ferrule (ie in the adjacent main). When the verified low pressure areas have been prioritised, schemes will be developed for construction. Post-construction, the pressure will be logged again and properties receiving >15m will be removed from the DG2 register. These steps are detailed below.

Our intention throughout PC21 is to quantify the customer improvement achieved by the low pressure interventions, by analysing both the reduction in customer complaints of low pressure and the number of properties removed from the DG2 Register by company action (CAPEX and OPEX interventions). We intend to engage with the UR at the PC21 mid-term review to consider the approach adopted by other UK water companies whereby their performance targets are focussed on reducing low pressure customer contacts as opposed to DG2 removals.

3.0 Process for DG2 Register Refresh

Our 4-step process for refreshing the DG2 Register is detailed below.

Step 1 - Create a Pressure Mapper

We have developed a NI wide map of low pressure using our logged and modelled pressures to estimate the minimum pressure at all property ferrule locations. We overlaid the low pressure complaints and the existing DG2 Register to identify clusters of low pressure properties which have been categorised as DG2 (<15m pressure) and at-risk DG2 (15-20m pressure). The DG2 Register has been imported into a GIS layer ready for the updates following the pressure logging exercise.

This Pressure Mapper is currently being replicated on the Common Data Environment using automated routines so that the map can be regenerated at regular intervals using updated models and pressure logs. When the permanent pressure monitoring sites are installed over the PC21 period under the Smart Networks project this will provide 'live' pressure data (and will reduce and potentially remove the need for temporary logging). These 'live' pressures will be used to estimate the minimum pressure at all properties within the PMA. This will allow us to identify properties which 'move' into the <15m and 15-20m pressure category, for potential intervention.

Step 2 – Pressure Logging and Analysis

The clusters of low pressure are being collated into eight batches for 7-day logging between December 2020 and May 2021. Each batch of pressure logs will be applied to property elevations using the existing methodology to calculate the minimum pressure at the property and the ferrule.

We intend to categorize the low pressure properties as:

- $<7.5\text{m}$ severe DG2
- $\geq 7.5\text{m} < 15\text{m}$ DG2
- $\geq 15\text{m} < 20\text{m}$ 'at risk' DG2

Properties within 10m elevation of their supplying SR will be identified and confirmed if they are abandoned or have a private supply. We will continue to liaise with customers where adequate pressure is recorded at the ferrule and it is suspected that the customer owned supply pipe or plumbing is causing the low pressure, or the property is at a higher elevation than the ferrule.

Step 3 – Scheme Development

We will prioritise the low pressure areas on severity, frequency of complaints, length of time on the DG2 Register etc. Lowest TOTEX schemes will be developed for the low pressure areas, in priority order. We will ensure that linkage is maintained between the DG2 scheme and the DG2 property addresses so that costs and benefits (ie DG2 removals and reduction in customer complaints) can be tracked at scheme and any higher level such as work package or financial year. The intention at this stage is to package the DG2 schemes separate from the WIIM packages (ie structural, water quality and leakage schemes) for ease of monitoring the DG2 removals against the targets and to monitor unit rates. The DG2 schemes will still need to be reviewed against the WIIM schemes to ensure an holistic approach across the wider PMA/DMA/Supply Zone.

Step 4 – Post Construction Report

We intend to continue with the existing process of preparing DG2 Investigation Report to confirm post-construction pressures. Properties will be removed from the DG2 Register where 7-day pressure logs indicates pressure >15m at the ferrule. If pressure is still <15m at the ferrule, we will investigate the reason why the scheme did not resolve the problem. We will retain properties on the Register whilst we develop further schemes to resolve, and we will prioritise the scheme for construction as per Step 3 above.

4.0 Programme for DG2 Register Refresh

An indicative high-level programme for the refresh of the DG2 Register and development of DG2 schemes for Years 1-3 is as follows:

[illegible]