

First Fix Scheme

# Uisce Éireann

## Leakage Reduction Programme

First Fix Leak Repair Scheme

H2 2022 Report to the CRU



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# 1. Introduction to the Leakage Reduction Programme

Water is one of our most valuable resources. Clean potable water is expensive to produce and distribute and one of Uisce Éireann's<sup>1</sup> (UÉ) key priorities is to reduce the level of water wasted through leakage.

To enable robust, consistent reporting on Leakage, UÉ has implemented a National Leakage Management System (LMS). The LMS provides UÉ with accurate and timely leakage information required to target and prioritise leakage reduction, along with the ability to report on the effectiveness of leakage reduction activities. Prior to the LMS being available, UÉ provided the CRU with a figure for unaccounted for water (UFW). As part of the Performance Assessment (PA) Framework<sup>2</sup>, UÉ has transitioned from reporting UFW to reporting Net Leakage.

Over the last three years, UÉ and the CRU engaged on a technical review to agree the methodology and calculation for Customer Supply Pipe Leakage. In May 2024, the CRU informed UÉ that it accepts UÉ's proposed RPS proprietary Leak Runtime and Flow Rate analysis methodology to provide a calculation of Customer Supply Pipe Leakage. Following agreement of the Customer Supply Pipe Leakage methodology and calculation, UÉ is working to update for progress for RC3.

UÉ produces approximately 1.7 billion litres of treated water every day. In 2022, some 607 million litres per day were utilised by domestic households, 421 million litres per day were utilised by non-domestic customers with approximately 626 million litres per day reported as net public side leakage<sup>3</sup>. The equivalent figure for 2021 was 637 million litres per day, indicating an annual saving of 11 million litres per day. The cumulative reduction has slowed from 2021<sup>4</sup> to 2022 for two following reasons:

- Since the start of RC3 UÉ has made significant progress in reducing leakage, including putting in place the necessary systems to effectively track, report and reduce leakage. While strong progress was achieved in the first three years of RC3, diminishing returns mean it is now proving more challenging to achieve significant net annual leakage savings. In addition, constraints in the supply chain and the impact of UÉT programme have decreased the level of resources working on leakage activity, with a significant number of vacancies in Operational Leakage Management and water network operations. These teams

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<sup>1</sup> Since 1 January 2023, Irish Water is known as Uisce Éireann, a standalone, regulated, national authority for water services.

<sup>2</sup> The PA Framework is designed to assess UÉ's overall performance in delivering defined services to its customers for the money it is allowed to spend by the CRU. See [here](#) for further information on UÉ's reporting under the PA Framework.

<sup>3</sup> Please see UÉ's PA 2022 annual data report for more information on the methodology for calculating net leakage at [www.cru.ie](http://www.cru.ie)

<sup>4</sup> The equivalent saving between 2020 and 2021 was 41 million litres per day.

are responsible for maintaining leakage levels across the country, managing the natural rate of leakage, which, in turn, maintains the savings made by the Capital Leakage Programme.

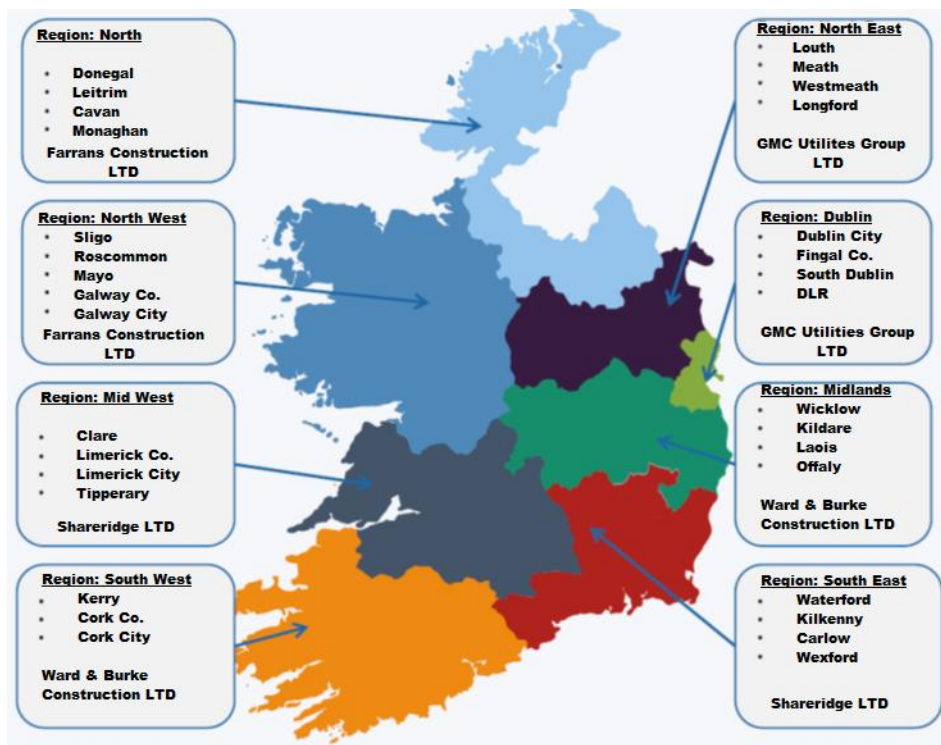
- Resourcing challenges mean the ‘net leakage’ projections for the end of RC3 are currently difficult to determine. It is, however, unlikely that the RC3 target for end of 2024 will be met.

In January 2024, UÉ established a project team to prioritise the reduction of leakage and demand in the Greater Dublin Area (GDA) and is developing action plans under three pillars aligned to the NWRP – Supply Smarter, Lose Less and Use Less. Targeted initiatives include water supply interventions and enhanced production planning network control; increased network resources and activity to reduce leakage; increased meter reading coverage and penetration; and proactive customer engagement to reduce demand. UÉ will present a progress update to the CRU on the impact of these action plans in Q4 2024.

Despite the challenges, we have made significant progress on bringing leakage down year on year. Since UÉ establishment, we have achieved a cumulative saving of 177 MLD per day. That is enough water to fill 70 Olympic-size swimming pools every day.

The National Leakage Reduction Programme (LRP), which targets resources at areas of highest leakage and lowest headroom across water networks, is responsible for delivering on UÉ’s RC3 commitments. The overall aim is to reduce leakage on a national scale to economically sustainable levels, leading to improved water network performance and reliability. The LRP and associated works will ensure a clean, safe, and reliable public water supply now and into the future to support our growing population and economy.

To support delivery of the LRP, UÉ has sub-divided the country into eight regions and is working in partnership with local authorities and regional contractors to plan and complete activities. Details of the LRP regions and contractors are provided below:



The scope of the works included in the LRP includes undertaking improvements under the following seven principal work streams:

**(i) DMA (District Metering Area) Works**

This involves the configuring the network to group premises in a suitable geographic area and the installation of a district meter to monitor the DMA water usage. Additional works to control and monitor the water entering and exiting the DMA are also complete as part of this workstream.

**(ii) Find & Fix**

The Find & Fix scheme involves leak detection crews undertaking surveys using multiple technologies, including sounding equipment, to locate leaks on pavements and other public areas. If a public side leak is identified, UÉ will carry out the necessary repairs.

**(iii) First Fix Free**

The First Fix Free scheme offers free leak investigations and free repairs for qualifying properties where a constant flow of water is found on the external water supply pipe. UÉ estimates that over 208 million litres of water per day have been saved as a result of this scheme to the end of H2 2022 including, 15.65 million litres per day saved in H2 2022. Further information on the First Fix Free scheme can be found at <https://www.water.ie/water-supply/first-fix/>.

#### **(iv) Mains Renewal including Shared & Backyard Services**

Water mains renewal works usually include the replacement or renewal of ageing public water mains to improve water quality and supply, thus, reducing the number of interruptions to customer supply. As our water pipes are underground, we need to dig down to inspect the pipes and carry out any necessary repairs or replacements.

A shared service connection means that two or more properties are fed by a single water pipe. These connections pipes are often made of iron or lead and prone to leaks.

In some older properties water connections may be installed to the back of the property and run through customer's back gardens. These connections are prone to leaks and can cause reduced levels of service and poor water pressure.

#### **(v) Lead Services**

Lead in drinking water is a recognised health concern. We will be investigating the pipes that connect individual properties to the public water mains and replacing any lead pipes with new plastic pipes.

#### **(vi) Non-Domestic Metering**

UÉ is replacing old non-domestic meters installed by the Local Authorities with new meters that have Automatic Meter Reading technology. The new meters allow for more accurate and timely billing for customers and better identification of leakage on non-domestic customer sites.

#### **(vii) Pressure Management**

Pressure management works are required to improve the quality and security of water supply to customers. The aim of these works is to reduce leakage within the mains network and to ensure a consistent supply of water to all customers. Too much pressure in the network can result in burst pipes and leakage. This can then result in a low water supply pressure for customers at the tap.

## **2. Overview of the First Fix Free Scheme**

In May 2014 the Government announced funding of €51m for a scheme to address water leakage on pipework within customer properties under a "First Fix" scheme. Following a public consultation in August 2015 the Commission for Regulation of Utilities (CRU) approved UÉ's proposed First Fix Leak Repair Scheme. The First Fix Leak Repair scheme was mobilised under the national Domestic Metering

Programme. In its RC3 determination<sup>5</sup> the CRU outlines its ongoing support for the First Fix Leak Repair scheme. On 19 April 2021, following a public consultation, the CRU published a decision to expand the eligibility criteria for the First Fix Scheme.

Under the First Fix Leak Repair scheme, UÉ assists customers by notifying them where suspected leakage is occurring within the boundary of their property. Eligible Customers who have a leak on the external supply pipe serving a property are offered a free leak repair. The First Fix Leak Repair scheme does not apply to leaks within a dwelling.

While it not essential for a property to be metered to avail of the First Fix Leak Repair scheme, utilising meter read data to identify the most significant leaks has proven key to operating the First Fix Leak Repair scheme efficiently. Prior to the introduction of the First Fix Leak Repair scheme, leakage programmes had been based around time-consuming and labour-intensive sampling of areas to try to detect anomalies on pipework. The UÉ domestic metering programme has provided both the platform and the technology-based solution to address this challenge. Data obtained from meter reading information highlights unusual water usage patterns and allows UÉ to isolate the source of leaks to a particular property, thereby reducing the time required for leak investigation. The technology used for monitoring water flow developed further during the initial years of the operation of the First Fix Leak Repair Scheme. Since the CRU's decision to expand the eligibility criteria of the Scheme was published in April 2021, UÉ has used alternative methods to measure water flow for unmetered properties. These methods include identifying high water usage through District Metered Areas (DMAs) analysis<sup>6</sup>, Step-Testing<sup>7</sup> and analysis of nightline<sup>8</sup>. This means that UÉ now has means to detect leakage where the customer does not have a meter.

Given the need to prioritise water conservation and capital expenditure, UÉ prioritises repairs under the First Fix Leak Repair scheme by size, based on the estimated volume of water lost. A constant flow of water, (that is 6 litres per hour over a 48-hour period), will trigger a constant flow alarm (CFA) on the meter, indicating a potential leak. The largest leaks wasting the most water are priorities to be fixed first.

By H2 2022, it is estimated that over 208 million litres of water per day have been saved as a result of First Fix repairs.

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<sup>5</sup> Published on 5 December 2019 and available at [www.cru.ie](http://www.cru.ie)

<sup>6</sup> A district metered area (DMA) is a discrete area of a water distribution network. DMA's allow Uisce Éireann to closely monitor flow and pressures through its telemetry system. DMAs vary in size and depend on the nature of the water supply scheme and can differ between urban and rural areas. Typically, it is in the region of about 2,000 properties.

<sup>7</sup> Step Testing facilitates the monitoring the flow of water and pinpointing leaks.

<sup>8</sup> Analysis of data collected from night-time flow measurements for unexpected increases in water consumption that might suggest a leak.

### 3. How to avail of the scheme

Customers can avail of the scheme, once they are aware of a leak on their property. A CFA alarm is triggered where a constant flow of water to the property is identified (6 litres per hour over a 48-hour period). When a CFA alarm is recorded, customers are issued with a letter from UÉ, indicating a potential leak on their property.

Customers with a visible leak on their property can also contact UÉ to avail of a free leak investigation.

As a result of the changes in criteria made by the CRU in its decision of April 2021, the following customers were brought within the scope of the First Fix Leak Repair Scheme:

- Unmetered domestic Customers;
- Customers with properties without an ISV;
- Customers with properties with a suspected shared or backyard services;
- Some mixed-use customers<sup>9</sup>, and
- Customers that are not registered with UÉ.

Eligibility criteria and the process for availing of the scheme are outlined on the UÉ website<sup>10</sup>. A handy infographic outlining the customer journey is also available on the UÉ website.<sup>11</sup>

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<sup>9</sup> See section 3 of the CRU's First Fix Scheme Policy Decision, April 2021 [here](#)

<sup>10</sup> See UÉ website [here](#).

<sup>11</sup> See UÉ website [here](#).



## 4. Initiatives to increase Customer Engagement Levels

Following the completion of the First Fix Scheme under the Metering Programme in February 2017, UÉ analysed engagement levels to establish initiatives to improve the First Fix process and increase productivity.

The First Fix scheme was initially relying on the following to achieve water reduction:

- The First Fix letter reaching its desired destination to inform the customer of the possible leak;
- The customer engaging with UÉ to arrange a leak investigation, and
- The customer returning the signed waiver allowing UÉ to repair the leak on their property.

The following changes have been implemented to increase customer engagement levels:

### First Fix Letter

In order to increase uptake of the scheme, UÉ pursued the following initiatives:

- UÉ sent 10,871 First Fix letters to properties with a constant flow alarm (CFA) in H2 2022. Letters were issued to properties with a constant flow alarm plus usage **in excess of 1,000 litres per day**. Targeting customers above this level for the First Fix scheme is an attempt to engage customers in properties that are using over twice the national average usage. (365 litres per property per day).
- The average daily usage of the property and the expected daily usage of 133 litres<sup>12</sup> per person per day were included on the notification letter. This informs the customer of the quantity of excess usage at their property and will encourage the customer to engage with us to arrange a leak investigation.
- In order to improve customer engagement, UÉ improved the information it provided customers on the CFA notification letters (for example, by equating the number of litres used at the premises to the equivalent average usage by a person).

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<sup>12</sup> UÉ currently calculates the average water use of one person at 133 litres per day (see [here](#) for more information).

## Waiver Return Process

Under the metering programme, waivers were posted to customers that qualified for a leak repair following the investigation. The customer was required to sign the waiver and post it back to UÉ. It was found that there was a delay in customers returning the waivers and in some cases the waiver was not returned.

Under the leakage reduction programme this process has been amended to increase the return of the signed waivers:

- Upon completion of the Leak Investigation, the crew issue the waiver to the customer and answer any questions the customer may have. If the customer is willing to sign the waiver at the time, the crew will return the signed waiver to UÉ, and a repair can be scheduled. They will also leave a copy of the waiver with the customer for their own reference.
- If the customer is not willing to sign the waiver at this time, the crew will issue the waiver and a pre-paid envelope to the customer in the hope the customer will sign the waiver and post it back to UÉ.

UÉ is also encouraging our contractors to be proactive and contact customers that have received a first fix letter but have not engaged with the scheme.

## 5. First Fix Update

In H2 2022, a significant number of large leaks, identified as properties with usage in excess of 1,000 litres per day, appeared on the CFA list. When contacting customers, UÉ start with the largest users (properties with usage in excess of 5,000 litres per day). It was found that 3,778 properties were using more than 5,000 litres per day based on meter readings and were accountable for over 39 million litres of Potential Leakage (PL)<sup>13</sup> per day (46%).

Targeting these users first will result in greater savings from fewer repairs and reduce the PL more effectively. The remaining 31,428 properties using less than 5,000 litres per day but greater than 1,000 litres per day accounted for over 45 million litres of PL per day (54%). The following table is calculated using information from the CFA list and is based on the assumption that an average household consumes 365 litres of water per day.

| Item                 | QTY of Leaks  | Average usage (Litres/day) | Total Usage (Litres/day) | Expected Usage (Litres/day) | PL (Litres/day)   | % of PL     |
|----------------------|---------------|----------------------------|--------------------------|-----------------------------|-------------------|-------------|
| >5 000 Litres        | 3,778         | 10,839                     | 40,950,830               | 1,378,970                   | 39,571,860        | 46%         |
| 1,000 - 5 000 Litres | 31,428        | 1,814                      | 57,020,530               | 11,471,220                  | 45,549,310        | 54%         |
| <b>Total</b>         | <b>35,206</b> | <b>2,783</b>               | <b>97,971,360</b>        | <b>12,850,190</b>           | <b>85,121,170</b> | <b>100%</b> |

**Table 1: Potential Leakage (PL) summary H2 2022 (Usage > 1,000 Litres per day)**

<sup>13</sup> Potential Leakage represents the difference between the total usage of this cohort of largest users and their expected usage.

## 6. Reporting on the scheme

In April 2015, the CRU published a decision on UÉ's proposed First Fix Leak Repair Scheme for Domestic Water Customers. Among its recommendations, the CRU expects UÉ to strongly promote the scheme in order to increase customer awareness and to encourage customers to engage with UÉ on the scheme.

The CRU is monitoring the ongoing implementation of the scheme to ensure that the costs allowed are efficiently incurred and that benefits are achieved for customers. In line with the CRU's updated 2021 First Fix Scheme Policy Decision, UÉ's performance in the First Fix Scheme will now be reported on a six-monthly basis to the CRU<sup>14</sup>. UÉ previously reported performance on a quarterly basis<sup>15</sup>. The CRU's 2021 policy decision, published in late April, expanded the eligibility criteria to the First Fix Scheme and associated figures are now included in the overall reported totals. Section 6.1 summarises scheme progress during H2 2022.

### 6.1 Six Month Summary

H2 2022 data for the key First Fix Scheme metrics is outlined below.

- **Customer Response Rates and Engagement Levels**

A total of 8,322 customers engaged with the scheme in H2 2022:

5,036 Customers requested a free leak investigation survey,

3,286 Customer repairs completed from data collected from the meter.

- **Leak Investigations**

A total of 5,036 investigations were requested including repeat visits where homes without an ISV and homes served through a shared or backyard service (now eligible for the scheme).

UÉ contacts customers within 10 business days to arrange a convenient time for an appointment to carry out the free leak investigation at a property. A total of 4,819 leak investigations were undertaken in H2 2022. This figure includes some investigations

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<sup>14</sup> See section 4.3 of the CRU's First Fix Scheme Policy Decision, April 2021 [here](#)

<sup>15</sup> See UÉ's First Fix reports from Q3 2015 to Q2 2020 [here](#)

that were requested in H1 2022; similarly, some investigations requested in H2 2022 will be carried out in H1 2023.

From the 4,819 completed leak investigations, 1,683 leaks on external supply pipes were identified as qualifying and these customers were offered a free leak repair under the scheme. The remaining 3,136 non-qualifying leaks are broken down as follows:

- 1) The investigations identified 1,184 internal plumbing and other issues, which come under the remit of the homeowner. As with all internal repair and maintenance in a customer's home, if a leak is confirmed internal to the house, then it should be repaired by the homeowner.
- 2) The remaining 1,952 properties were identified as having leaks either on the public side, inaccessible leaks or otherwise out of the scope of the First Fix for Free Scheme.

- **Leak Repairs**

Customers are asked to review the terms and conditions of the leak repair offer and sign the offer documentation after which UÉ will contact the customer to schedule the leak repair at a suitable time. On receipt of the documentation, UÉ contacts customers within 10 working days to arrange a convenient time for an appointment to carry out the free leak repair at a property.

During H2 2022, UÉ completed 1,602 free leak repairs under the First Fix Leak Repair scheme. This figure includes some leaks that were detected in H1 2022 and repaired in H2 2022; similarly, some leaks detected in H2 2022 will be repaired in H1 2023.

- **Customer Repairs**

From the data collected through meter reading we know that 3,286 customers have repaired leaks on their property themselves after receiving a constant flow advice letter. UÉ would like to thank all customers who repaired leaks on their property. These repairs have made a significant contribution to national water conservation.

- **Gross Water Savings**

All references below to water savings are gross. The issuance of constant flow advice letters has targeted the largest leaks first and the result of this can be seen from the estimated incremental savings of 10.19 million litres of water per day achieved in H2 2022 from contractor repairs and a further 5.47 million litres from customer repairs.

Table 2 estimates water savings from the First Fix Scheme and Customer Repairs since 2018. Previous reports estimated the savings from Q1 2018 to Q2 2020 on a quarterly basis. To facilitate comparison with H2 2020, table 2 now shows half-yearly estimate water savings since 2018<sup>16</sup>.

| Period | UÉ First Fix Repair |                  | Customer Repairs |                  | Total Repairs          |       |
|--------|---------------------|------------------|------------------|------------------|------------------------|-------|
|        | Repairs #           | Savings (ML/Day) | Repairs #        | Savings (ML/Day) | Total Savings (ML/Day) |       |
| 2018   |                     |                  |                  |                  | 2018 Annual Cumulative |       |
| H1     | 1,653               | 8.01             | 1,986            | 5.27             | 3,639                  | 13.28 |
| H2     | 2,512               | 8.25             | 1,151            | 1.58             | 3,663                  | 9.83  |
| 2019   |                     |                  |                  |                  | 2019 Annual Cumulative |       |
| H1     | 2,819               | 7.67             | 1,252            | 3.83             | 4,071                  | 11.5  |
| H2     | 1,392               | 3.3              | 301              | 1.41             | 1,693                  | 4.71  |
| 2020   |                     |                  |                  |                  | 2020 Annual Cumulative |       |
| H1     | 952                 | 2.01             | 159              | 0.7              | 1,111                  | 2.71  |
| H2     | 1,453               | 5.34             | 488              | 1.34             | 1,941                  | 6.68  |
| 2021   |                     |                  |                  |                  | 2021 Annual Cumulative |       |
| H1     | 1,091               | 3.84             | 235              | 0.88             | 1,326                  | 4.72  |

<sup>16</sup> Please see table 2 in the Q2 2020 report ([here](#)) for estimated water savings since 2018 reported on a quarterly basis

|              |               |              |               |              |                        |              |
|--------------|---------------|--------------|---------------|--------------|------------------------|--------------|
| H2           | 1,317         | 7.99         | 356           | 1.65         | 1,673                  | 9.64         |
| 2022         |               |              |               |              | 2022 Annual Cumulative |              |
| H1           | 1,567         | 8.77         | 2,455         | 5.04         | 4,022                  | 13.81        |
| H2           | 894           | 10.19        | 3,286         | 5.47         | 4,180                  | 15.66        |
| <b>Total</b> | <b>15,650</b> | <b>65.37</b> | <b>11,669</b> | <b>27.17</b> | <b>27,319</b>          | <b>92.54</b> |

**Table 2: Estimated water savings from the First Fix Scheme and Customer Repairs (2018 to 2022)**

By H2 2022, total cumulative water savings are estimated at 208.12 ML per day. A cumulative estimated total of 112 million litres per day has been saved through First Fix repairs and a further estimated 89.29 million litres per day saved from customer repairs. Savings are calculated from a comparison of meter data collected prior to and after the repair work being undertaken. For unmetered properties a meter is installed before the repair, if agreeable to the customer, or a temporary flow monitoring device can be used to record the savings associated with the leak repair. For customer repairs, the constant flow alert is no longer active, and the meter data shows a supporting drop in water usage over the next two read periods. Finally, we exclude those with less than 1000l/d as it is suspected that below this level usage has been reduced rather than an actual customer leak repair.

## 7. Project Expenditure

The project expenditure is reported half-yearly. Table 3 sets out the total project expenditure for H2 2022.

| Time Period          | Investigations | Repairs        | Additional Costs | Total         |
|----------------------|----------------|----------------|------------------|---------------|
| H2 2022              | €1,634,667.06  | € 1,804,286.70 | € 60,915.59      | €3,499,869.35 |
| RC3 (2020 – H2 2022) | €9,086,428     | €8,953,337     | €214,417         | €18,254,182   |
| 2015 – H2 2022       | €31,956,726    | €26,710,151    | €4,514,412       | €63,181,289   |

Table 3: Total expenditure on the First Fix Leak Repair Scheme to date.

Note, some costs incurred in a six-month period may not be captured until the following six-month period figures.

## 8. Next Steps

UÉ will continue to implement the First Fix Leak Repair scheme through the LRP. The next report will be issued to the CRU in Q2 2024 and will cover H1 2023.

## Appendix 1 - H2 2022 First Fix Summary Numbers

|   |   |            |         |                            |
|---|---|------------|---------|----------------------------|
| 1 | Number of Continuous Flow Alarms Detected | Total      | H2 2022 |                            |
|   |   |            | 76,002  |                            |
| 2 | Number of Customer Notifications Issued   | Period     | H2 2022 | Cumulative FF Scheme Total |
|   |   | Region     |         |                            |
|   |   | North      | 456     |                            |
|   |   | North West | 1,141   |                            |
|   |   | South East | 791     |                            |
|   |   | South West | 1,899   |                            |
|   |   | Dublin     | 2,448   |                            |
|   |   | North East | 1,550   |                            |
|   |   |            |         | 218,268                    |



|   |   |                    |                |                                   |
|---|---|--------------------|----------------|-----------------------------------|
|   |   | <b>Midlands</b>    | 1,448          |                                   |
|   |   | <b>Midwest</b>     | 1,138          |                                   |
|   |   | <b>Grand Total</b> | 10,871         |                                   |
| 10,871 constant flow advice letters were issued in H2 2022.               |   |                    |                |                                   |
| 3   | Customer Responses requesting a Free Leak Investigation | <b>Period</b>      | <b>H2 2022</b> | <b>Cumulative FF Scheme Total</b> |
|   |   | <b>Region</b>      |                |                                   |
|   |   | <b>North</b>       | 466            |                                   |
|   |   | <b>North West</b>  | 715            |                                   |
|   |   | <b>South East</b>  | 565            |                                   |
|   |   | <b>South West</b>  | 791            |                                   |
|   |   | <b>Dublin</b>      | 1,024          |                                   |
|   |   | <b>North East</b>  | 454            |                                   |
|   |   | <b>Midlands</b>    | 503            |                                   |
|   |   | <b>Midwest</b>     | 518            |                                   |
|   |   | <b>Grand Total</b> | 5,036          |                                   |
| 5,036 customers requested a First Fix Free Leak Investigation             |   |                    |                |                                   |
| 4   | Leak Investigations Completed                           | <b>Period</b>      | <b>H2 2022</b> | <b>Cumulative FF Scheme Total</b> |
|   |   | <b>Region</b>      |                |                                   |
|   |   | <b>North</b>       | 412            |                                   |
|   |   | <b>North West</b>  | 678            |                                   |
|   |   | <b>South East</b>  | 547            |                                   |
|   |   | <b>South West</b>  | 773            |                                   |
|   |   | <b>Dublin</b>      | 1,004          |                                   |
|   |   | <b>North East</b>  | 440            |                                   |
|   |   | <b>Midlands</b>    | 463            |                                   |
|   |   | <b>Midwest</b>     | 502            |                                   |
|   |   | <b>Grand Total</b> | 4,819          |                                   |
| 4,819 Leak Investigations were carried out in H2 2022 by LRP contractors. |   |                    |                |                                   |

|   |                      |                    |                |                                   |
|---|----------------------|--------------------|----------------|-----------------------------------|
| 4a  | Leak Repairs Created | <b>Period</b>      | <b>H2 2022</b> | <b>Cumulative FF Scheme Total</b> |
|   |                      | <b>Region</b>      |                |                                   |
|   |                      | <b>North</b>       | 193            |                                   |
|   |                      | <b>North West</b>  | 395            |                                   |
|   |                      | <b>South East</b>  | 85             |                                   |
|   |                      | <b>South West</b>  | 318            |                                   |
|   |                      | <b>Dublin</b>      | 282            |                                   |
|   |                      | <b>North East</b>  | 75             |                                   |
|   |                      | <b>Midlands</b>    | 229            |                                   |
|   |                      | <b>Midwest</b>     | 83             |                                   |
|   |                      | <b>Grand Total</b> | 1,660          |                                   |
| 1,660 Leak Repairs were created in H2 2022. |                      |                    |                |                                   |
| 5   |                      | <b>Period</b>      | <b>H2 2022</b> |                                   |

|   |  |                    |                |                                   |  |  |
|---|--|--------------------|----------------|-----------------------------------|--|--|
|   |  | <b>Region</b>      |                | <b>Cumulative FF Scheme Total</b> |  |  |
|   | Leak Repairs Completed   | <b>North</b>       | 178            | <b>26,070</b>                     |  |  |
|   |  | <b>North West</b>  | 370            |                                   |  |  |
|   |  | <b>South East</b>  | 82             |                                   |  |  |
|   |  | <b>South West</b>  | 318            |                                   |  |  |
|   |  | <b>Dublin</b>      | 270            |                                   |  |  |
|   |  | <b>North East</b>  | 73             |                                   |  |  |
|   |  | <b>Midlands</b>    | 229            |                                   |  |  |
|   |  | <b>Midwest</b>     | 82             |                                   |  |  |
|   |  | <b>Grand Total</b> | 1,602          |                                   |  |  |
| 1,602 confirmed Leak Repairs carried out in H2 2022   |  |                    |                |                                   |  |  |
|   |  | <b>Period</b>      |                | <b>Cumulative FF Scheme Total</b> |  |  |
|   | 6<br>Estimated Water Savings from First Fix Repairs (Litres/day) | <b>Region</b>      | <b>H2 2022</b> | <b>118.83ML</b>                   |  |  |
|   |  | <b>North</b>       | 272,890        |                                   |  |  |
|   |  | <b>North West</b>  | 703,270        |                                   |  |  |
|   |  | <b>South East</b>  | 661,352        |                                   |  |  |
|   |  | <b>South West</b>  | 3,396,805      |                                   |  |  |
|   |  | <b>Dublin</b>      | 2,593,414      |                                   |  |  |
|   |  | <b>North East</b>  | 717,326        |                                   |  |  |
|   |  | <b>Midlands</b>    | 1,305,694      |                                   |  |  |
|   |  | <b>Midwest</b>     | 534,672        |                                   |  |  |
|   |  | <b>Grand Total</b> | 10,185,423     |                                   |  |  |
| It is estimated that 10.19 ML per day of water was saved in H2 as a result of repairs carried out by the contractor. This brings the total incremental Water Savings to 118.83 ML from contractor repairs and an overall saving of 208.12 ML per day. |  |                    |                |                                   |  |  |

|  |  |                    |   |                                   |                                   |
|--|--|--------------------|---|-----------------------------------|-----------------------------------|
| 7  | Customer Repairs Completed                           | <b>Period</b>      | <b>H2 2022</b>  | <b>Cumulative FF Scheme Total</b> |                                   |
|  |  | <b>Region</b>      |   |                                   |                                   |
|  |  | <b>North</b>       | 115   | <b>50,300</b>                     |                                   |
|  |  | <b>North West</b>  | 267   |                                   |                                   |
|  |  | <b>South East</b>  | 727   |                                   |                                   |
|  |  | <b>South West</b>  | 403   |                                   |                                   |
|  |  | <b>Dublin</b>      | 595   |                                   |                                   |
|  |  | <b>North East</b>  | 339   |                                   |                                   |
|  |  | <b>Midlands</b>    | 481   |                                   |                                   |
|  |  | <b>Midwest</b>     | 359   |                                   |                                   |
|  |  | <b>Grand Total</b> | 3,286   |                                   |                                   |
| Customer repairs represent the repairs carried out by the customer after receiving a First Fix Free letter from UÉ. 3,286 customers repaired leaks in H2 2022.   |  |                    |   |                                   |                                   |
| 8  | Estimated Savings from Customer Repairs (Litres/day) | <b>Period</b>      | <b>H2 2022</b>  |                                   | <b>Cumulative FF Scheme Total</b> |
|  |  | <b>Region</b>      |   |                                   |                                   |
|  |  | <b>North</b>       | 313,766   | <b>89.29 ML</b>                   |                                   |
|  |  | <b>North West</b>  | 623,424   |                                   |                                   |
|  |  | <b>South East</b>  | 864,983   |                                   |                                   |
|  |  | <b>South West</b>  | 853,748   |                                   |                                   |
|  |  | <b>Dublin</b>      | 961,736   |                                   |                                   |
|  |  | <b>North East</b>  | 725,434   |                                   |                                   |
|  |  | <b>Midlands</b>    | 609,027   |                                   |                                   |
|  |  | <b>Midwest</b>     | 512,956   |                                   |                                   |
|  |  | <b>Grand Total</b> | 5,465,074   |                                   |                                   |
| It is estimated that 5.47 ML of water per day was saved in H2 as a result of Repairs carried out by the customer. This brings the total cumulative Water Savings to 89.29 ML from customer repairs and an overall saving of 208.12 ML per day. |  |                    |   |                                   |                                   |
| 9  | Counties in Each Region                              | <b>North</b>       | Donegal, Cavan, Monaghan, Leitrim                         |                                   |                                   |
|  |  | <b>North West</b>  | Galway, Galway City, Mayo, Sligo, Roscommon               |                                   |                                   |
|  |  | <b>South East</b>  | Carlow, Waterford, Waterford City, Kilkenny, Wexford      |                                   |                                   |
|  |  | <b>South West</b>  | Cork, Cork City, Kerry                                    |                                   |                                   |
|  |  | <b>Dublin</b>      | Dublin City, South Dublin, Dun Laoghaire Rathdown, Fingal |                                   |                                   |
|  |  | <b>North East</b>  | Longford, Louth, Meath, Westmeath                         |                                   |                                   |
|  |  | <b>Midlands</b>    | Kildare, Offaly, Laois, Wicklow                           |                                   |                                   |
|  |  | <b>Midwest</b>     | Limerick, Clare, Tipperary                                |                                   |                                   |

**Note:** All cumulative totals outlined in table 3 are for the First Fix Scheme from commencement to the end of H2 2022.

**Note:** Meter read data is used to confirm that a customer repair has been carried out. Number of customer repairs and estimated savings will be included in the report once two confirmed meter readings are collected after the repair date. As such, the number of customer repairs noted above for each quarter is expected to increase in the next report as more confirmed readings are collected.