

Irish Water

First Fix Leak Repair Scheme

For Domestic Water Customers

Quarterly Report

Q1 2017



1. Introduction

Leakage of water from the network is a serious problem on a national scale. Lost distribution side water is estimated nationally at approximately 45% of the water produced for supply.

In May 2014 the Government announced funding of €51m for a scheme to address water leakage on pipework within customer property under a “First Fix” scheme. Following a public consultation the Commission for Energy Regulation (CER) approved Irish Water’s proposed First Fix Leak Repair Scheme on 5th August 2015.

Under the First Fix Leak Repair scheme, Irish Water is assisting customers by notifying them where suspected leakage is occurring within the boundary of their property. Leaks which are identified 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.

Utilising meter read data to identify the most significant leaks has proven key to operating the First Fix Leak Repair scheme efficiently. Previously, the key barrier to addressing leakage was the identification of where leakage arose. The vast majority of leaks remain underground and, as such, they are not visible and go un-noticed and un-detected. Prior to the introduction of the First Fix Leak Repair scheme, leakage programmes have been based around time-consuming and labour intensive sampling of areas in order to seek to detect anomalies on pipework. The Irish Water domestic metering programme has provided both the platform and the technology based solution to address this challenge. Data obtained from meter installation highlights unusual water usage patterns and allows Irish Water to isolate the source of leaks to a particular property, thereby reducing the time required for leak investigation. Operating the First Fix Leak Repair scheme on the basis of meter read data allowed Irish Water to systematically identify significant water wastage at individual locations and focus resources on isolating the source of wastage within these properties.

Following the completion of the metering programme in Q1 2017, the First Fix Leak Repair scheme became part of the wider national Water Network Programme. The scope of this programme is to bring together on a national basis the following network improvement work types:

- DMA (District Metering Area) Establishment
- Find & Fix
- First Fix Free Scheme
- Water Mains Renewal
- Lead Services
- Non-Domestic Metering
- Pressure Management

This is a targeted programme of works to manage the availability, sustainability and reliability of the water supply network and reduce leakage on a national scale to economically sustainable levels. In the period of the transition of the First Fix Leak Repair scheme from the metering programme to the Water Network Programme, there is a temporary postponement on the issuance of constant flow alarm notifications up until the end of Q2 2017. This is to facilitate procurement competition for the Water Network Programme. During this period IW and its interim contractor will continue to engage with Customers reporting possible leaks and will continue to carry out investigation assessing qualification and repair. Irish Water will recommence the issuance of constant flow alarm notifications under the Water Network Programme at the end of Q2 2017.

Given the need to prioritise water conservation, under the First Fix Leak Repair scheme Irish Water prioritises repairs by size, based on the 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 on the meter, indicating a potential leak. The largest leaks wasting the most water were fixed first.

In summary, the total number of Continuous Flow Alarms recorded (Table 2- Row 1) was 53,837 at the end of Q4 2016 and 60,545 at the end of Q1 2017.

2. How to avail of the scheme

Relevant customers for whom a current constant flow alarm is recorded are issued with a letter from Irish Water, indicating a potential leak on their property. This letter is triggered where a constant flow of water to the property is identified. A customer will need to have received this letter from Irish Water, and meet the eligibility requirements¹ in order to avail of the scheme. Customers with a visible leak on their property can also contact Irish Water to confirm if they are eligible to participate in the scheme.

Customers who receive a constant flow advice letter are asked to contact Irish Water to request a free leak investigation. If the leak investigation indicates a leak on the external supply pipe serving the property, the customer will be offered a free leak repair. Irish Water will issue the customer with a First Fix Leak Repair Scheme offer, detailing the terms and conditions of providing the repair. To avail of the repair the customer will need to sign and return the offer document to Irish Water.

If you would like further information on the scheme, please see the ***First Fix Leak Repair Scheme for Domestic Water Customers*** policy document which is available on www.water.ie

3. Reporting on the scheme

¹ For eligibility requirements and detailed information about the administration of the scheme, please see the ***First Fix Leak Repair Scheme for Domestic Water Customers*** policy document which is available on www.water.ie

In April 2015, the Commission for Energy Regulation (CER) consulted on Irish Water's proposed First Fix Leak Repair Scheme for Domestic Water Customers and received eight responses. The CER's decision on the policy, issued on 5 August 2015, was based on a review of the eight submissions received during the consultation period. Among its recommendations, the CER expects Irish Water to strongly promote the scheme in order to increase customer awareness of the scheme and to encourage customers to engage with Irish Water on the scheme.

The CER 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 CER Decision CER/15/178 Irish Water is to report on a quarterly basis on the progress of the First Fix Leak Repair scheme, the following section outlines the progress of the scheme to the end of Q1 2017.

4. Quarterly Summary

4.1. Constant Flow Advice Letters and Customer Response Rates and Engagement Levels

The total number of constant flow advice letters issued at the end of Q1 2017 is 100,559 resulting in 40,949 customers requesting a free leak investigation survey.

A total of 68,943 customers have engaged with the scheme to date, representing 69% of the 100,559 constant flow advice letters issued. Customer engagement is measured under the following three categories (see Chart 1 below):-

1. Customers requesting a free leak investigation survey (as reported in section 4.2).
2. Customer repairs completed from data collected from the meter (as reported in section 4.4).
3. Customers contacting Irish Water to advise of an un-qualifying leak.

Each number underlined in the chart represents the total number of customers who engaged by that category. In cases where the customer engagement is common to two of these categories, it is noted in the overlapping area in white text. The total number of customers who engaged is outline below.

$$\text{Total Customer Engagement (\%)} = \frac{40,949 + 31,750 + 11,050 - (11,035 + 3,385)}{100,559}$$

100,559 Constant Flow Advice Letters Issues

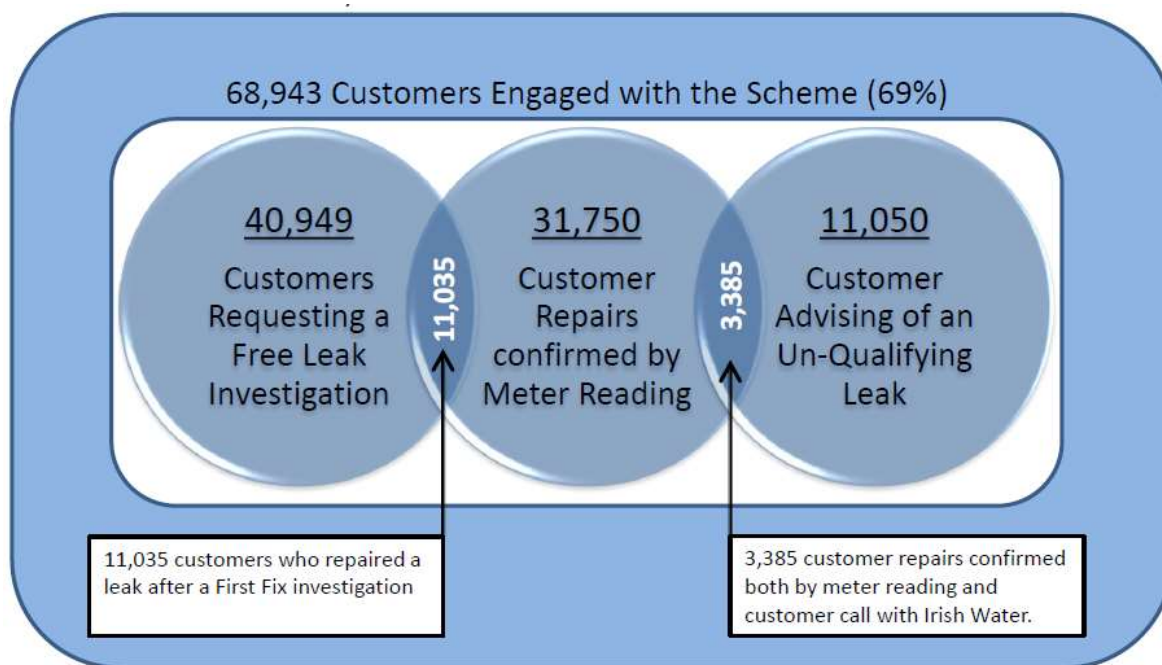


Chart 1. Summary of Customer Engagement with the Scheme

4.2. Leak Investigations

A total of 40,949 customers contacted Irish Water to avail of the free leak investigation under the scheme. A total of 42,772 investigations were requested, which include repeat visits where customers installed an Internal Stop Valve (ISV) after an initial leak investigation visit.

Irish Water 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 42,350 leak investigations had been undertaken by the end of Q1 2017. The remaining customers that had requested a leak investigation to the end of Q1 2017, either had appointments scheduled or were in the process of having appointments scheduled.

From the 42,350 completed leak investigations 9,080 leaks on external supply pipes were identified. Irish Water has offered these customers with leaks on their external supply pipe a free leak repair under the scheme. The remaining 33,270 leak investigations identified non-qualifying leaks.

There were three main reasons why these leaks were non-qualifying:

- 1) A total of 9,358 properties surveyed did not have an operational Internal Stop Valve (ISV) and the survey could not be progressed. In many cases, the ISV was present but not operational. Customers are advised of the need to have a working ISV installed in order for the leak investigation to be completed.
- 2) In addition, a total of 672 properties have been identified through the First Fix process where the property does not qualify or the survey could not progress as it is served through a shared or backyard service.
- 3) The remaining leak investigations identified internal plumbing and other issues, which come under the remit of the home owner. 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.

4.3. Leak Repairs

Customers are asked to review the terms and conditions of the leak repair offer and sign the offer documentation after which Irish Water will contact the customer to schedule the leak repair at a suitable time. On receipt of the documentation Irish Water contacts customers within 10 working days to arrange a convenient time for an appointment to carry out the free leak repair at a property. At the end of Q1 2017 Irish Water had completed 7,864 free leak repairs under the First Fix Leak Repair scheme. Of the remaining 1,216 customers to whom Irish Water offered a free leak repair, 764 no longer qualified for repair (e.g. repaired by the customer or found to be non-qualifying after further detailed investigation) 452 had yet to accept the leak repair offer.

4.4. Customer Repairs

From the data collected through meter reading we know that 31,750 customers have repaired leaks on their property after receiving a constant flow advice letter. Irish Water would like to thank all customers who repaired leaks on their property which have made a significant contribution to water conservation.

4.5. Water Savings

The issuance of constant flow advice letters has targeted the largest leaks first and the result of this can be seen from the estimated savings of 97.948 million litres of water per day achieved to the end of Q1 2017. A cumulative estimated total of 47.953 million litres per day has been saved through First Fix repairs and a further estimated 49.995 million litres from customer repairs. Savings are calculated from a comparison of meter data collected prior to and after the repair work being undertaken. For customer repairs, the constant flow alert is no longer active and the meter data shows a supporting drop in water usage over two read periods.

4.6. Project Expenditure

The project expenditure is reported quarterly in arrears. The cumulative total expenditure up to the end of Q1 2017 (end of March 2017) is €20,812,796 consisting of €9,708,034 for leak investigations, €7,638,812 for repairs and €3,465,950 for additional costs.

5. Next Steps

Irish Water will continue to implement the First Fix Leak Repair scheme through the interim contract and will issue the next quarterly report, for Q2 2017, to the CER at the end of Q3 2017.

Table 2: Overall Project Summary (last four quarters shown)

1	Number of Continuous Flow Alarms Detected	Total	Q2 2016			Q3 2016			Q4 2016			Q1 2017		
			52,723			51,950			53,837			60,545		
2	Number of Customer Notifications Issued (Cumulative)	Period	Q2 2016			Q3 2016			Q4 2016			Q1 2017		
		Region	2016-01	2016-02	2016-03	2016-07	2016-08	2016-09	2016-10	2016-11	2016-12	2017-01	2017-02	2017-03
		East and Midlands	35,728	38,735	39,479	40,908	42,816	43,138	43,143	43,172	43,174	43,174	43,174	43,174
		North and West	13,100	14,847	15,390	16,098	16,927	17,104	17,107	17,117	17,117	17,117	17,117	17,117
		Southern	29,925	34,272	36,073	37,911	39,991	40,237	40,252	40,267	40,268	40,268	40,268	40,268
		Grand Total	78,753	87,854	90,942	94,917	99,734	100,479	100,502	100,556	100,559	100,559	100,559	100,559
A total of 100,559 constant flow advice letters issued to the end of Q4 2016. No constant flow advice letters were issued in Q1 2017. These customers will be notified in Q3 2017.														
3	Customer Responses requesting a Free Leak Investigation (Cumulative)	Period	Q2 2016			Q3 2016			Q4 2016			Q1 2017		
		Region	2016-01	2016-02	2016-03	2016-07	2016-08	2016-09	2016-10	2016-11	2016-12	2017-01	2017-02	2017-03
		East and Midlands	15,076	15,840	16,559	17,004	17,590	18,076	18,292	18,495	18,594	18,630	18,639	18,652
		North and West	4,856	5,241	5,705	5,987	6,244	6,433	6,493	6,560	6,598	6,603	6,603	6,604
		Southern	11,781	12,553	13,500	14,157	14,822	15,271	15,432	15,587	15,673	15,689	15,692	15,693
		Grand Total	31,713	33,634	35,764	37,148	38,656	39,780	40,217	40,642	40,865	40,922	40,934	40,949
40,949 customers contacted Irish Water to request a free leak investigation. A total of 42,772 leak investigations have been raised to the end of Q1 2017 (second leak investigation where a customer installs an ISV after advice from first leak investigation survey).														
4	Leak Investigations Completed (Cumulative)	Period	Q2 2016			Q3 2016			Q4 2016			Q1 2017		
		Region	2016-01	2016-02	2016-03	2016-07	2016-08	2016-09	2016-10	2016-11	2016-12	2017-01	2017-02	2017-03
		East and Midlands	13,778	14,989	15,957	16,450	17,030	17,360	17,799	18,335	18,580	18,736	18,795	18,808
		North and West	4,638	5,092	5,565	5,962	6,352	6,551	6,669	6,781	6,854	6,885	6,938	6,939
		Southern	11,063	12,060	13,091	14,116	14,985	15,600	16,000	16,286	16,444	16,482	16,602	16,603
		Grand Total	29,479	32,141	34,613	36,528	38,367	39,511	40,468	41,402	41,878	42,103	42,335	42,350
42,350 leak investigations were carried out to the end of Q1 2017.														
4a	Leak Repairs Created (Cumulative)	Period	Q2 2016			Q3 2016			Q4 2016			Q1 2017		
		Region	2016-01	2016-02	2016-03	2016-07	2016-08	2016-09	2016-10	2016-11	2016-12	2017-01	2017-02	2017-03
		East and Midlands	3,523	3,733	3,913	3,985	4,098	4,157	4,237	4,345	4,408	4,458	4,477	4,489
		North and West	871	937	1,016	1,086	1,149	1,188	1,201	1,230	1,251	1,258	1,262	1,262
		Southern	2,286	2,465	2,657	2,867	3,050	3,157	3,218	3,275	3,306	3,319	3,326	3,329
		Grand Total	6,680	7,135	7,586	7,938	8,297	8,502	8,656	8,850	8,965	9,035	9,065	9,080
Of the 42,350 completed leak investigations carried out at the end of Q1 2017, 9,080 were found to be on the external supply pipe.														
5	Leak Repairs Completed (Cumulative)	Period	Q2 2016			Q3 2016			Q4 2016			Q1 2017		
		Region	2016-01	2016-02	2016-03	2016-07	2016-08	2016-09	2016-10	2016-11	2016-12	2017-01	2017-02	2017-03
		East and Midlands	2,633	2,906	3,120	3,278	3,394	3,518	3,616	3,709	3,770	3,938	3,961	3,972
		North and West	505	588	695	734	765	810	864	911	940	1,010	1,017	1,017
		Southern	1,619	1,752	1,921	2,081	2,165	2,338	2,539	2,640	2,734	2,871	2,872	2,875
		Grand Total	4,757	5,246	5,736	6,093	6,324	6,666	7,019	7,260	7,444	7,819	7,850	7,864
In respect of the 9,080 qualifying leaks, 7,864 free leak repairs were carried out. For the remaining 1,216 leaks, 764 no longer qualify for repair (e.g repaired or found to be non-qualifying after further detailed investigation)														

Table 2: Overall Project Summary (continued)

6	Estimated Water Savings from First Fix Repairs (ML/day - Cumulative)	Period	Q2 2016			Q3 2016			Q4 2016			Q1 2017		
		Region	2016-01	2016-02	2016-03	2016-07	2016-08	2016-09	2016-10	2016-11	2016-12	2017-01	2017-02	2017-03
		East and Midlands	16.65	18.03	18.84	19.68	20.19	20.55	21.38	21.93	22.45	23.24	23.46	23.50
		North and West	3.76	4.15	4.57	4.83	5.11	5.31	5.64	5.89	6.12	6.52	6.56	6.56
		Southern	11.16	11.98	12.64	13.50	13.98	14.96	15.86	16.50	17.13	17.83	17.83	17.90
		Grand Total	31.57	34.16	36.06	38.01	39.27	40.81	42.89	44.31	45.70	47.59	47.85	47.95
		A cumulative estimated total of 47.95 million litres per day has been saved through First Fix Scheme repairs. Savings are calculated from a comparison of meter data collected prior to and after the repair work being undertaken.												
7	Customer Repairs Completed (Cumulative)	Period	Q2 2016			Q3 2016			Q4 2016			Q1 2017		
		Region	2016-01	2016-02	2016-03	2016-07	2016-08	2016-09	2016-10	2016-11	2016-12	2017-01	2017-02	2017-03
		East and Midlands	8,846	9,784	10,681	11,555	12,377	13,336	13,864	14,184	14,456	14,586	14,638	14,653
		North and West	2,496	2,882	3,175	3,511	3,904	4,258	4,456	4,580	4,690	4,750	4,765	4,776
		Southern	6,648	7,618	8,371	9,170	10,150	11,105	11,598	11,897	12,139	12,278	12,310	12,321
		Grand Total	17,990	20,284	22,227	24,236	26,431	28,699	29,918	30,661	31,285	31,614	31,713	31,750
		Customer repairs are those repairs arranged by the customer for leaks occurring within their property. The customer repair is counted only when two confirmed meter readings are collected after the repair. 31,750 of these repairs were undertaken by customers following a First Fix notification.												
8	Estimated Savings from Customer Repairs (Cumulative)	Period	Q2 2016			Q3 2016			Q4 2016			Q1 2017		
		Region	2016-01	2016-02	2016-03	2016-07	2016-08	2016-09	2016-10	2016-11	2016-12	2017-01	2017-02	2017-03
		East and Midlands	16.29	17.29	18.26	19.38	20.38	21.66	22.26	22.86	23.24	23.38	23.47	23.51
		North and West	4.35	4.74	5.12	5.57	6.17	6.67	7.06	7.17	7.36	7.43	7.43	7.50
		Southern	11.83	12.82	13.70	14.75	15.95	17.04	17.79	18.22	18.74	18.94	18.95	18.98
		Grand Total	32.47	34.85	37.08	39.70	42.50	45.37	47.12	48.25	49.34	49.74	49.85	49.99
		An estimated 49.99 million litres of water per day has been saved from customer repairs. Savings are calculated from a comparison of meter data collected prior to and after the repair work being undertaken. The completion of a repair is indicated when the leak alarm is no longer active, with a supporting drop in water usage. The estimated savings from customer repairs are confirmed once two meter readings are collected after the repair.												
9	Known Properties Without an Operational ISV (Cumulative)	Period	Q2 2016			Q3 2016			Q4 2016			Q1 2017		
		Region	2016-01	2016-02	2016-03	2016-07	2016-08	2016-09	2016-10	2016-11	2016-12	2017-01	2017-02	2017-03
		East and Midlands	2,732	2,857	3,008	3,129	3,217	3,270	3,334	3,426	3,468	3,477	3,484	3,484
		North and West	1,066	1,143	1,270	1,368	1,455	1,487	1,513	1,526	1,544	1,551	1,553	1,553
		Southern	3,232	3,403	3,628	3,849	4,024	4,148	4,219	4,280	4,315	4,319	4,321	4,321
		Grand Total	7,030	7,403	7,906	8,346	8,696	8,905	9,066	9,232	9,327	9,347	9,358	9,358
		A total of 9,358 properties did not have an operational Internal Stop Valve (ISV) and the leak investigation could not be progressed. In many cases the ISV was present but not operational.												
10	Number of Non-Qualifying Properties Served Through a Shared or Backyard Pipe (Cumulative)	Total	Q2 2016			Q3 2016			Q4 2016			Q1 2017		
			560			634			666			672		
		672 properties were identified as not qualifying for the scheme as they are served through a shared or backyard pipe and cannot have their supply isolated.												
11	Counties in Each Region	East and Midlands	Dublin City, County Dublin, Kildare, Laois, Longford, Louth, Meath, Offaly, Westmeath, Wicklow											
		North and West	Cavan, Donegal, Galway, Leitrim, Mayo, Monaghan, Roscommon, Sligo											
		Southern	Carlow, Clare, Cork, Kerry, Kilkenny, Limerick, Tipperary, Waterford, Wexford											

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 month is expected to increase in the next report as more confirmed readings are collected.