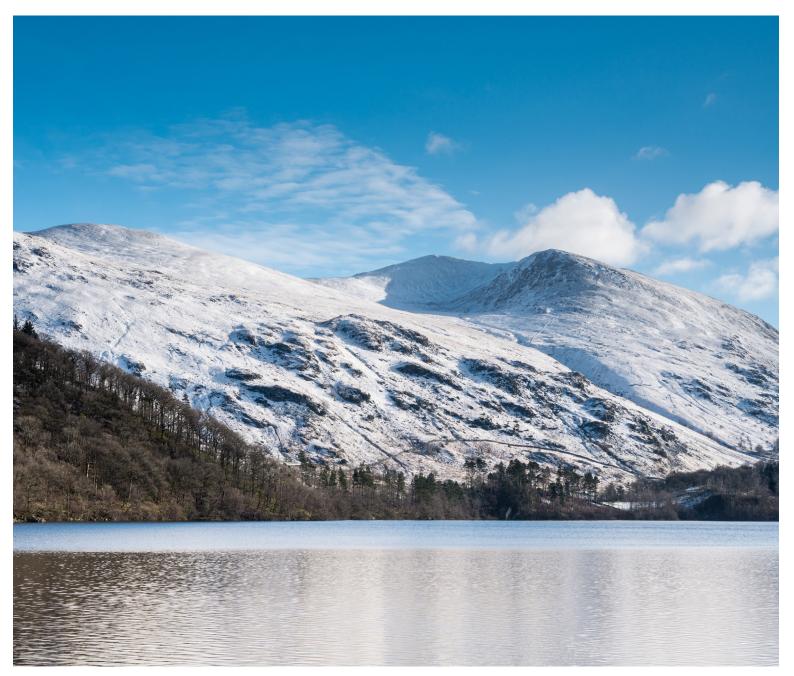
2018 freeze-thaw

Lessons learned and action plan





Contents

About this document	3
Executive summary	4
Planning and preparation	8
Approach to and management of the incident	10
Communication and support	12
Vulnerable customers	14
Compensation	16
Additional information and our longer term plans	18





About this document

This document responds to the findings and issues raised by Ofwat's review of water supply issues that followed the 'Beast from the East', the name given to the period of cold weather in late February and early March 2018.

Ofwat findings for the sector

Ofwat set out its industry wide findings in the report "Out in the cold", published on its website at:

www.ofwat.gov.uk/wp-content/uploads/2018/06/Thaw-report-FINAL.pdf

Specific findings for United Utilities

Ofwat sent individual letters to all companies setting out its view of that company's performance during the incident. Its letter to United Utilities is available on the Ofwat website: www.ofwat.gov.uk/publication/letter-united-utilities-water-review-freeze-thaw-incident

United Utilities' performance during the event

We provided detailed responses and supporting data to an initial Ofwat questionnaire, setting out how we had planned for, managed and supported customers before, during and after the event. Our response, and those of other water companies, is published on Ofwat's website: <u>www.ofwat.gov.uk/out-in-the-cold</u>

This document

This document summarises the findings and conclusions from our earlier publications. It sets out how we have responded to, and learned lessons from, the event to ensure that we, and the sector more widely, will be better prepared to handle similar, or more extreme, events in the future.

The document contains an executive summary followed by specific reviews in five categories:

- Planning and preparation
- Approach to and management of the incident
- Communication and support
- Vulnerable customers
- Compensation

The information in this document should be read alongside the other publications mentioned on this page.

Executive summary

Impact and management of the event

The thaw that followed the 'Beast from the East' – the name given to the period of cold weather in late February and early March 2018 – left over 200,000 customers in England and Wales without water for more than four hours and over 60,000 customers without supply for more than 12 hours. Some customers were without water for a week.

Ofwat's review of the event confirmed that the cold weather affected the whole of England and Wales, with the Met Office issuing at least amber weather warnings with amber likelihood for all areas of the country. It also concluded that the way companies prepared for, and operated during, the event resulted in different customer impact and experience across the country.

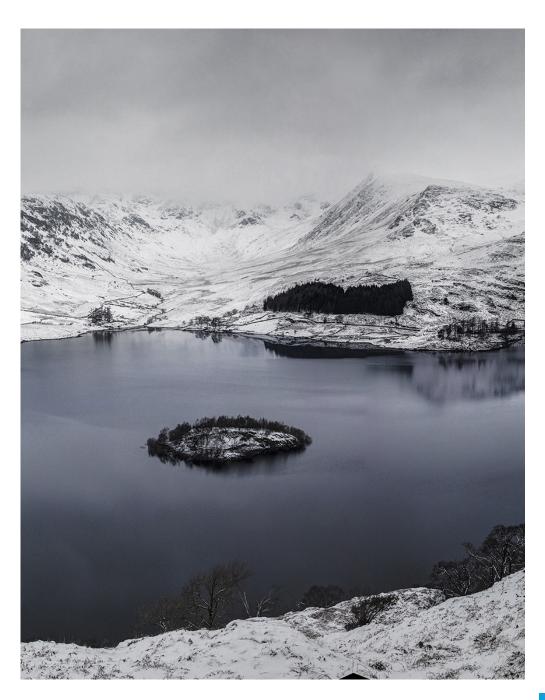
We welcome Ofwat's overall assessment of our performance and that the company *"performed well and largely met its customers' expectations. Nevertheless, there is still room for improvement"*. As a result of the way we managed the event, the impact on customers in the North West was less pronounced than in many other regions, with 2,191 customers without water for more than four hours and 142 without supply for more than 12 hours.

Responding to, learning and sharing lessons from the event

Ofwat's objective of its review was to "establish what happened during the period and set out clear actions and recommendations for improvement". One of the key actions it recommended was that "We expect all companies to work together to improve co-ordination and share best practice in key areas highlighted in this review".

We fully support this objective and recognise the value of undertaking detailed reviews and learning and sharing lessons, where issues do occur. Following a water quality incident at a Lancashire treatment works in 2015 we undertook a detailed review with the Drinking Water Inspectorate and agreed a series of actions which have led to significant improvements in the resilience of our asset base. Our review was led by a non-executive board Director with lessons learned openly shared across the sector (see additional information section of this report).

The conclusions from the freeze-thaw review have already been shared across the company, including the board. This report sets out some of the lessons we have learned and outlines how we are working with Water UK and other companies to ensure the sector as a whole is better able to provide reliable, resilient water supplies, whatever the weather.





Summary of our performance during the event

The following table summarises Ofwat's findings on each component of our performance, as set out within its <u>company specific letter</u>.

Planning and preparation

"Despite severe weather conditions in the region, leading to increased bursts on the network, the effectiveness of United Utilities' preparations and the nature of the company's response meant that it was able maintain relatively normal levels of service to customers (and the majority of those that did experience supply interruptions had supply restored with a 4 hour period)".

Incident response

"United Utilities' incident management appears to have worked well with clear timelines on the implementation of the company's response plan and clear structures, responsibilities demonstrated and evidence that staff were aware of, and had been given adequate training, in relation to that plan".

Communication and support

"It is encouraging to see that United Utilities was proactive in communications with customers and used a range of different channels to raise awareness, provide advice on preparing for the expected cold weather and to update customers during the incident".

"Engagement with business customers and retailers has also been identified as an area for improvement across the sector ... given the scale of the leaks on business premises that many companies experienced, all companies need to consider whether their current communications strategy is appropriately targeted".

Vulnerable customers

"We are encouraged by the steps that United Utilities has already taken to identify customers that may need additional assistance and as a result has succeeded in increasing take-up of the service by 140 per cent and now has more than 50,000 customers on its Priority Service Register".

Compensation

"United Utilities made a number of GSS payments as a result of the incident ... These payments were in excess of statutory GSS payments and were made direct to the customer's bank account; via auto cheque or via a credit for customers' whose accounts were in debt".



Summary of how we continue to enhance our capabilities

Planning and preparation	• We have updated our emergency plans to accommodate lessons learned from this review and are integrating these into local resilience forums.
	• We have shared our experience and best practice related to the freeze-thaw with other companies and with Water UK.
	• We have provided data on our mains type, age and failure rates to UKWIR to help better understand asset health and failure risks.
Incident response	• We have further enhanced our network logging and automated pressure management capability.
	 We have refined our alternative supplies policy to account for the most extreme events and enhanced our approach to operational contingency planning for similar events.
	• We have centralised the management and operation of our alternative supply vehicle fleet, introduced a new 24/7 logistics capability and trained additional personnel to operate these vehicles.
Communication and support	• We are joining up messaging with other water companies. Already, we have produced a dry weather leaflet which has been shared across the sector and are working to co-ordinate seasonal messaging.
	 We are reviewing our incident response procedures for providing proactive communications with retailers and non-household customers.
	• We are enhancing our interactive tools and dashboards that are used to identify the impact of water sufficiency events on sensitive non-household customers.
Vulnerable customers	 We have been sharing data with Electricity North West and have changed our weather-related incident procedures to provide both a joint response and support where we can.
	• We have made further enhancements to our approach to collaboration with third sector partners.
Compensation	• We have invested in a solution to enable us to pay compensation to bank accounts allowing us to refund large volumes of customers immediately. 71% of customers have direct debit so we are able to
	pay compensation immediately.





Detailed reviews and lessons learned



Planning and preparation

Our preparation and planning – which was informed by lessons learned from the 2010/11 freeze-thaw and other recent events – proved to be effective.

How we performed during the freeze-thaw

- We had developed a range of detailed contingency plans, designed to cope with various events including the impacts from a freeze-thaw equivalent to the 2010/11 event. These are updated regularly.
- Our 'Winterisation of Assets' plan was already active, learning from the 2010/11 freeze-thaw event.
- Our annual proactive winter readiness communication campaign was already running (started November 2017).
- We increased stocks of bottled water and ensured suppliers increased their resources prior to the incident.
- We stopped all non-essential work to ensure key assets would be fully operable.
- We were able to actively monitor and manage our networks in real time as and when incidents arose, with additional stocks of water produced in anticipation.
- We had additional contact centre and field staff in place to deal with expected peak in calls.
- We increased manning of our alternative supply vehicles to enable water to be pumped directly into the network.
- We were able to identify, communicate and support customers, in particular Priority Services customers.
- We had effective governance and escalation routes through the company and to key external stakeholders.

- Despite severe weather conditions in the region, leading to increased bursts on the network, the effectiveness of United Utilities' preparations and the nature of the company's response meant that it was able maintain relatively normal levels of service to customers (and the majority of those that did experience supply interruptions had supply restored with a 4 hour period).
- It is also evident that United Utilities' planning ahead of the event (based on learning from previous events) meant that the company had built up sufficient reserves of water to deal with the anticipated spike in demand and additional field staff and call centre staff were in place to maintain both customer contact and mains repair response times at levels comparable to normal operations. We also note that the company had taken steps to increase the manning of the company's Alternative Supply Vehicles to enable water to be pumped directly into the network and had increased the availability of bottled water to over 80,000 bottles in case of a large scale interruption.
- Other features of United Utilities' planning and response that were noteworthy were the use of technology and telemetry to monitor the performance of the network and quickly identify any problems; the company's proactive winter readiness campaign to try to prevent customer side bursts and; the efforts taken to identify customers in a vulnerable situation before, and during, the incident



Planning and preparation

Following this freeze-thaw event we have updated our contingency and emergency plans to accommodate lessons learned from this review, reflecting feedback both internally and from Ofwat, Water UK and other companies. The event has led us to review how we approach incident management training and this is planned to be rolled out in late 2018 and through 2019.

We are undertaking a review of our overall incident management procedures. This includes how we assess and classify incidents and clarification of the advice and guidance given to different responding personnel. We have also commenced a review of our severe weather guidance which will take a department-by-department approach to planning and response to different weather scenarios. We will continue to integrate our plans with local resilience forums and other partners.

We used some of these lessons during the recent extended dry spell. This was managed as an incident with our integrated control centre leading the facilitation of cross-business working. Production planning and network teams reviewed water production plans and models to ensure sufficiency of supply throughout the region. We ramped up our focus on leakage, running a sustained customer communications campaign on using water efficiently and increasing the number of detection and repair gangs. Data analysis enabled us to identify areas of critical risk and so maximise available resources, including work on customer leaks.

Collaboration

We have shared our experience of all aspects of the freeze-thaw and are learning from other companies and Water UK. We will be participating in workshops to share best practice with a number of southern water companies and have continued to be active participants in specialist forums such as the leakage network meeting.

We have shared detailed technical data about asset failure rates which is designed to enable companies to quantify risk and plan more effectively. We have collaborated with UKWIR, providing data on our mains type, age and failure rates. This information is held in a central database, to be shared with companies participating in the project, and provides a larger data source to better understand asset health.

We are working with Thames Water, which has set up a lab to investigate techniques for establishing the cause of main

failures. We are supplying samples of burst water mains to support testing of the efficacy of different techniques.

We are also working on a similar industry open data group, although this is still at a relatively early stage of development and as yet no data has been shared.



Approach to, and management of, the incident

We were effective in implementing our plans and ensuring that the impact on customers was minimised.

How we performed during the freeze-thaw

- We escalated to a 'type 3' incident several days prior to the change in the weather to provide additional time to implement our contingency plans and to prepare for the event.
- We implemented a well-rehearsed plan that reflected lessons learned from recent incidents.
- The plan was led by the Central Operations Director, with twice daily update meetings held for the duration of the incident, including communications with key stakeholders
- The focus of the contingency plan was on:
 - increasing water production and storage volumes;
 - managing supplies within the network and between storage facilities;
 - communicating with customers and third parties; and
 - deploying alternative supply vehicles to pump water directly into the network and maintain supplies.
- We operated key processes on a 24/7 basis and organised additional resources through existing contracts with key third parties.
- We placed additional operational staff on standby and utilised additional resources from other team to handle the increase in customer enquiries, work planning and alarm management.
- We were able to monitor network performance in real time, which meant that sources of leaks could be identified and responded to quickly. Our "Respond, Restore and Repair" strategy was used to minimise customer impact.
- Business continuity plans enabled the safe evacuation of the Whitehaven call centre, with transfer of services to Warrington, with no impact to customer service.

- United Utilities' incident management appears to have worked well with clear timelines on the implementation of the company's response plan and clear structures, responsibilities demonstrated and evidence that staff were aware of, and had been given adequate training, in relation to that plan.
- We note that the decision to declare a Type 3 incident was taken on 28th of February to
 enable the company to implement plans to deal with a forecast spike in demand on the 1st
 of March. It is also evident that the previous measures taken by the company meant that
 it had sufficient resources in place to minimise the level of interruptions experienced
 by customers and had good visibility of the performance of the network to enable the
 company to identify, and respond quickly to, any problems.
- The company's 'Respond, Restore and Repair' approach to supply interruptions appears to have been successful with no service reservoir running empty and water production being maintained throughout the incident. In addition, whilst a significant number of the leaks experienced were due to leaks on customer pipework or within business premises, United Utilities' ability to monitor the network and its access to real time information on network performance, enabled it to identify the sources of leaks and respond and complete repairs quickly.

Incident identification and management

We have enhanced the way that we: prepare for and engage with our local resilience forum partners; transition from business as usual to an incident footing; and how we forecast severe weather events, in particular how we utilise Met Office data. We are currently working with the Met Office on the possible impact of El Nino on this winter's weather.

Since the event, and partially in response to the extended period of dry weather during 2018, we have made further tactical investment in network connectivity schemes.

Data and Systems

As part of our 'Systems Thinking' approach we established processes to give clear ownership and accountability of data to underpin our operations, analysis and reporting. An integral part of this is ongoing improvement to both the quality and availability of our data. Current focus areas include domestic and commercial metering and leakage data to identify consumption trends and areas of risk, together with GIS asset rules to improve linear asset data quality.

We have further enhanced several capabilities including network logging, automated pressure management and data driven service reservoir (SR) monitoring through the deployment of improved SR level analysis tools. These were developed during the extended period of dry weather in 2018, although the functionality is relevant for any high demand situation. We plan to further improve our systems to obtain an enhanced view of real time operational issues and more comprehensively incorporate customer impacts.

Operations

Our alternative supplies policy has been refined to account for the most extreme events and we have developed an enhanced approach to operational contingency planning for these events. The revised approach to providing customers with alternative supplies includes the use of smaller overland supply vehicles, bowsers and bottled water. We have also purchased a further 500 Arlington Combo tanks and 40,000 "camping" Arlington water carriers, enabling us to have a flexible approach to different customer requirements.

We have centralised the management and operation of our alternative supply vehicles (ASV) fleet, introduced a new 24/7 logistics capability and trained additional personnel to operate them. We have purchased more ASVs and plan to have a fleet of c40 vehicles to provide greater flexibility and coverage to pump large volumes of water into our network to maintain supplies.

These enhanced processes were used very effectively in the recent dry spell where ground movement caused a major burst in Preston affecting 78,000 properties. We were able to restore supplies fully within 45 minutes. We also significantly ramped up our proactive customer side leak repairs during the recent dry spell to help to maintain the integrity of the network.

Third party working

Whilst our supply chain and procurement arrangements worked well during the freeze-thaw, we plan to renegotiate our contracts with key third party suppliers to ensure all our suppliers can respond effectively in an incident when required.

Longer term plans (see additional information)

In our 2020-2025 business plan, we have set out the approach to risk assess and develop plans to provide resilient supplies to customers. These proposals are set out in detail in chapter four of our business plan (securing long term resilience).

In this plan, we have described how we can further improve the capability of our Systems Thinking approach. We have proposed an innovative performance commitment, designed to allow us to transform the way that we operate and provide a step change in our performance.

Systems Thinking recognises that our business is not a collection of independent components which deliver discrete services to customers. Instead, the business is managed

and operated as a single end-to-end system, whereby the dependencies and interactions between its sub-components, both internal and external, are better understood and used to unlock a step change in benefits for customers, both in terms of better service and lower cost. Systems Thinking is a long-term strategy, requiring substantial investment in business change.

Full details of our proposed approach to Systems Thinking and the supporting performance commitment are set out in chapter five of our 2020-2025 business plan.

• Performance commitment E06-CF: Systems Thinking capability – the measure will assess the extent of advancements in our System Thinking capability, which will deliver significant future benefits for customers across many areas of service.



Communication and support

Our established plans allowed us to communicate effectively to, and receive communications from, customers via a range of channels. Sector wide areas for improvement exist with non-household customers and retailers.

How we performed during the freeze-thaw

- We had already activated our 'Winterwise' information and advice campaign in November 2017. This campaign included:
 - 'how to' advice on our website, with interactive content suitable for use across social media channels;
 - material to use with other organisations supporting some of our more vulnerable customers; and
 - an on-going radio advertising schedule and 'pop-up' shop events at key towns across the North West.
- We mobilised our customer incident team, which uses GIS data, to provide real-time updates to customers impacted by the events using a number of channels.
- We communicated with local resilience forums, councils and the emergency services before, during, and after the incident, to ensure that they were able to prepare for, and minimise, the impact of disruption.
- We used proactive and targeted messaging for different customer segments and stakeholders, including non-household customers, taking lessons learned from previous incidents.
- We mobilised additional resources from across the business to handle the increase in customer enquiries.

Non-household customers

- All sensitive non-household customers (schools, hospitals prisons etc.) were flagged on our GIS system.
- We have a dedicated portal and support team to communicate with retailers. In a recent Water Retail Magazine survey we came out on top for dealing with emergencies.

- It is encouraging to see that United Utilities was proactive in communications with customers and used a range of different channels to raise awareness, provide advice on preparing for the expected cold weather and to update customers during the incident.
- The company appears to have taken on board lessons learned from other incidents and from research with different segments of affected customers to understand their expectations and what went well and what the company could do better to meet their needs. This has resulted in a number of improvements in the way the company communicates with its customers and other stakeholders to ensure that messaging is targeted for different customer segments.
- Engagement with business customers and retailers has also been identified as an area for improvement across the sector. We understand that United Utilities has specific processes in place for communicating with retailers, with a dedicated support team and portal, but the process did not need to be triggered for this incident. Nevertheless, given the scale of the leaks on business premises that many companies experienced, all companies need to consider whether their current communications strategy is appropriately targeted.
- Early and ongoing engagement and collaboration with Local Resilience Forums (LRFs), local councils, NHS Cumbria etc, formed an essential part of United Utilities' planning for, and response to, the incident.

Proactive communications

United Utilities

Preparations for our annual 'Winterwise' information and advice campaign are well developed, incorporating the lessons learned from the 2018 freeze-thaw.

This year there will be a greater focus on multi-agency public awareness raising events to encourage personal preparedness throughout the winter. The first of these events is due to take place in Bolton in October.

Collaborating with other companies

We recognise fully the value of undertaking detailed reviews and learning and sharing lessons when events do occur. Our established post incident review process ensures that we review our current ways of working and, where possible, identify further enhancements. Following the Lancashire water quality incident in 2015, we held a number of lessons learned seminars for the wider industry. These highlighted the importance of sharing best practice with other water companies.

Following the 'Beast from the East' event, discussions have already taken place between us, other water companies and Water UK to co-ordinate seasonal messaging and to share messaging. For example, we have produced a dry weather leaflet for businesses which has been proactively shared with others across the sector.

Non-household customers

Whilst we already have processes and procedures in place for managing communications with non-household customers in both normal and emergency situations, we recognise that communication with these customers and retailers is something the sector needs to focus on.

Proactive communications with non-household customers and retailers is embedded within our incident response procedures. Feedback from retailers during the extended period of dry weather in 2018 was that our communications were good.

We already have interactive tools and dashboards to identify the impact of a water sufficiency event on sensitive non-household customers. A data quality review has been undertaken since the freeze-thaw and we have subsequently improved the classification of premises. We have also collected emergency contact details for all tier 1 to tier 4 sensitive non-household customers so we can contact them directly in future.

Following Ofwat's recent decision to approve CPW010 "Sharing of NHH Customer Contact Details in Emergency or Unplanned Events" we are defining our approach to collecting emergency contact details for all non-household customers. We are taking learning from other wholesalers to ensure that we communicate proactively with retailers to provide reassurance that an issue or incident will not adversely impact their customers. A template for developing bilateral contingency plans with retailers has been agreed.

Longer term plans

In our 2020-2025 business plan, we have recognised the importance of improving service and experience for both household and non-household customers and retailers.

We have defined two performance commitments which relate directly to the non-household market. Full details of our proposed approach to operating effectively in the non-household retail market and the supporting performance commitments are set out in chapter five the business plan. They are summarised below:

"Outcome E: We will improve the way we work to keep bills down and improve services for you and future customers"

- E05-HH: Gap sites (retail) this measure has been developed to ensure that we actively manage connected properties which are not on the billing system and bill service users wherever possible, thereby supporting the lowest possible household bills for all customers.
- E03-CF: Non-household vacancy incentive scheme it is in both customers' and our interest for premises incorrectly recorded as vacant to be identified as occupied and for wholesale charges to be recovered for these premises. This ensures fair recovery of costs for all services and will ensure that tariffs remain as low as possible.



Vulnerable customers

We had significantly increased the number of customers on our Priority Services register. We communicated proactively with these customers throughout the event and supported them when required.

How we performed during the freeze-thaw

- We had delivered regional partnership working to co-create new support for customers struggling to pay, through the creation of the Independent Affordability and Vulnerability Panel and initiatives such as the North West Affordability Summit.
- As a result of effective promotion and raising awareness, the number of customers on our Priority Services register has more than doubled in recent years to over 50,000.
- Our customer incident team used GIS data to identify Priority Services customers within affected postcodes.
- We communicated proactively to Priority Services customers using the 'Go-Pro' tool to send updates via text, email and voice blasts.
- Responses were tailored to individual needs with rapid assistance when an incident occurred.
- We checked proactively with customers that they were back on supply.
- We were able to maintain our business-as-usual service to these customers, who received bottled water deliveries and two to three phone calls a day to ensure they were satisfied until the situation was back to normal for them.
- We were in active liaison with local resilience forums, councils, local health services and charities to identify and provide assistance to customers.

- We are encouraged by the steps that United Utilities has already taken to identify customers that may need additional assistance and as a result has succeeded in increasing take-up of the service by 140 per cent and now has more than 50,000 customers on its Priority Service Register.
- We also recognise that, during the incident, United Utilities was actively liaising with LRFs, councils, local health services and charities to identify and provide assistance to customers who might need additional support and after the incident, the company was proactive in checking that customers were back on supply.
- The evidence the company has provided, indicates that it has sought to build on lessons learned from previous incidents, to engage with customers to understand and respond to their needs and to improve the company's ability to target its response and provide rapid assistance when an incident occurs.



Working with the electricity sector

We have been actively sharing data with Electricity North West to pool knowledge and share best practice to allow us to minimise customer impact during events.

We have enhanced our incident management procedures, specifically for weather related incidents, to provide a joint response and support where we can. Our response includes the delivery of alternative supplies, customer support hubs and sharing of information between companies if vulnerability is identified.

Working with other partners

We have reviewed our current ways of working as part of our normal post incident review process and made further enhancements:

- The incident emphasised the importance of connecting with the third sector and the effective tailoring of messages. This learning has been applied during the extended period of dry weather in 2018 where we engaged with, and tailored our messages for, the third sector.
- We have set up a dedicated bottled water delivery service to ensure that vulnerable customers can be supported if they are affected by loss of supply events.
- We continue to work with the independent Affordability and Vulnerability Panel to review our proposals and challenge us to improve our services. We will seek to obtain a British Standards Institution Kitemark.

Longer term plans

Our long term approach to affordability and vulnerability is set out in chapter three of our 2020-2025 business plan submission in which we describe two performance commitments targeted at vulnerable customers.

As part of "Outcome D – You're highly satisfied with our service and find it easy to do business with us"

 D03-HH Priority services for customers in vulnerable circumstances – feedback from customer engagement tells us that customers in vulnerable circumstances place great weight on the quality and scope of the Priority Services offering. This measure incentivises identification and registration of those customers in need of support, whilst ensuring that the quality of our Priority Services offering is independently verified by the British Standards Institution. We also track awareness of our Priority Services scheme through our brand tracker and will continue to do so through the next five year period.

As part of "Outcome E: We will improve the way we work to keep bills down and improve services for you and future customers".

• E01-HH: Number of customers lifted out of water poverty – the measure will assess the number of customers who have been lifted out of water poverty due to our actions. To achieve this we need to make a number of tailored interventions to assist customers with specific needs. We will continue to work with community stakeholders, regulators and government to introduce new mechanisms to support customers with affordability issues and under financial stresses.



Compensation

We were effective in identifying customers affected by the freeze-thaw and implemented lessons learned from previous incidents to ensure payments were made in a timely manner.

How we performed during the freeze-thaw

- As a consequence of the effective integration of our integrated control centre and our customer contact centre, we were able to identify accurately properties impacted by water supply interruptions and poor pressure.
- Payments were made quickly and to our enhanced GSS levels, which are in excess of statutory GSS payments.
- Where possible, payments were made directly to customers' bank accounts or credit applied to the account if the customer was in debt.

Ofwat's findings

United Utilities made a number of GSS payments as a result of the incident. These included
payments to customers who were impacted by no water for periods of greater than 12
hours and 24 hours respectively, as well as customers whose planned appointments had to
be rescheduled. These payments were in excess of statutory GSS payments and were made
direct to the customer's bank account; via auto cheque or via a credit for customers' whose
accounts were in debt.

Lessons learned and continued improvement

Improving our payment processes

We have already invested in our systems to allow us to make BACS compensation payments directly to bank accounts and refund customers immediately. 71% of customers pay their bills by direct debit meaning we can pay compensation this way, which we believe to be industry leading.

Supporting the review of guaranteed standards

In August 2018 Ofwat published a call for evidence consultation on the water sector, Guaranteed Standards Scheme (GSS). As part of our response to this request we have proposed:

- an increase in GSS payments for supply interruptions;
- a review into the timescales for making GSS payments; and
- a review into formalising GSS payments for multiple shorter term events over a limited period of time.





Additional information



Additional information and our longer term plans

Freeze-thaw publications

<u>Ofwat findings for the sector</u> – Ofwat sets out its industry wide findings in the report "Out in the cold".

<u>Ofwat specific findings for United Utilities</u> – Ofwat sets out its specific findings on United Utilities performance during the incident in a letter.

<u>United Utilities performance during the event</u> – our detailed responses to an Ofwat questionnaire, setting out how we had planned for, managed and supported customers before, during and after the event.

Our longer term plans

United Utilities 2020-2025 business plan - summarising our plans for the 2020-2025 period.

Our plans to manage affordability and vulnerability

Addressing affordability and vulnerability – in chapter three of our plan we set out how we will continue to improve on the industry leading support we provide for customers in vulnerable circumstances, including those facing transient vulnerability, extending our Priority Services offering to more customers, and ensuring we continue to improve the quality and scale of the support we provide to those most in need.

Supplementary documents supporting our approach to affordability and vulnerability <u>S2001 the affordability and vulnerability challenge</u> – focusing on our operational response, this provides information on our affordability and vulnerability capabilities.

Our plans for customer service

<u>Great service to customers</u> – in chapter five of our business plan, we set out our overall strategy for AMP7 and beyond for our outcomes, and how our performance commitments, targets and incentives have been designed to reflect that strategy.

Supplementary documents supporting our approach to customer service <u>S3001 Performance commitments technical document</u> – this provides additional evidence supporting each of our performance commitments and associated outcome delivery incentives.

<u>S3004 Customer research triangulation</u> – this provides full details of the triangulation of customer research.

Our plans to maintain resilience

Securing long-term resilience – in chapter four of our business plan, we describe our leading approach to resilience: how we assess risks; the step change we have made in resilience in recent years; how customer engagement is shaping our plans to deliver resilient services; and summarises how our suite of ODIs protect the resilience of service for customers.

Supplementary documents supporting our approach to resilience

<u>S4001 Asset Health</u> – this describes how we assess asset health, what our models are telling us about how asset health will change over AMP7 and beyond, and why this is sustainable.

S4002 Resilience Track Record – case studies about delivering resilience and learning from our experiences. This includes corporate, financial and operational case studies of our track record for delivering resilience. It also describes the major events of AMP6, lessons learned and improvements delivered.

S4003 Corporate resilience – corporate risk management framework which describes how we have embedded Systems Thinking, our corporate risk framework, the WRAP process, smart resilience solutions, how customers' views are embedded in our risk assessments through valuations and how we manage interdependencies.

S4004 Ecosystem resilience – this describes ecosystem resilience through catchment management, partnership and markets. It includes our approach to the natural environment, recognising the long term benefits of a resilient environment, taking a systematic approach and adopting Natural Capital thinking.

<u>S4006 Financial resilience</u> – assessing and demonstrating financial resilience, this sets out the board's assessment of the financial resilience of United Utilities Water and supports the high quality viability statement provided as part of our AMP7 business plan submission.

<u>S4007 Franklaw lessons learnt</u> – this is a handout provided to attendees at our Lancashire water quality incident dissemination seminars which presents the lessons learned and challenges for other organisations to consider about their resilience.



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