

Section A: Factual details of freeze/thaw events

It is important that we understand the factual details and timeline of what occurred for your network and customers.

- A1. Provide details of the impacts of events on your network / customers using the **attached tables** (please complete both sheets). We are requesting information from the period 14 February 2018 to 14 March 2018. Please specify on which dates your company considered it was managing events rather than business as usual (the end date should be no earlier than all customers being back on supply). If you consider it appropriate, you may extend the date range (eg to the start of February) and explain why additional dates are relevant. You may not reduce the date range.

The period of 3 – 5 March (inclusive) represents the timescale over which we were operating outside what we would consider as ‘business as usual’. This coincides with the thaw and its immediate after-effects.

During this period, we saw demand (in the form of distribution input) initially increase by 25%, then drop to within 5% of the pre-thaw levels. Similarly, leakage initially increased by 80% before dropping to within 11% of the pre-thaw levels. Incoming customer contact followed a less pronounced, but not dissimilar pattern.

Outside these dates, the mix and level of operational activity was very much in-line with expectations for winter weather.

- A2. Beyond the issues highlighted in Tables 1 and 2, please provide details of any further impacts your network or customers (by customer type) experienced that your company had to respond to?

We do not consider there to be further impacts on our network or our customers beyond those highlighted in Tables 1 & 2.

- A3. Details of how responding to the incident impacted on your wider business’s “business as usual” operations during the incident period. Where possible provide an indication of the scale and nature of these impacts.

In the earlier stages of the freezing weather, we were unable to conduct some planned jobs owing to access difficulties caused by the snowfall and ice – this caused some short-term delays in responses to operational issues within our network. We deployed 4x4 vehicles for certain business-critical activities and where necessary, to ferry staff into our head office for customer-facing activities, where these couldn’t be undertaken remotely.

Teams were pre-emptively deployed over the weekend to deal with customer enquiries – both from an operational contact centre (OCC) perspective, and also

in the field. There was an Executive director presence at our Control Centre on both 3 and 4 March as part of the pre-mobilisation phase of any future declaration of an event.

During the peak activity period (3 – 5 March) some staff were pre-emptively and temporarily reallocated onto essential customer-facing work. This encompassed both field- and office-based activities and resulted in some lower priority planned work being rescheduled for the days that followed 5 March.

- A4. What have you judged to be the cause of the issues, particularly water supply interruptions, for your customers (by customer type) during this period? What factors were relevant?

The vast majority of supply interruptions were caused by the freezing of customers' service and internal pipework, either causing a temporary loss or restriction of supply, or a burst following the thaw overnight on 3 March. We advised a large number of customers regarding these issues and attended a number of reported bursts at unattended residential and commercial properties and customers considered vulnerable to isolate supplies temporarily to mitigate ongoing property damage and reduce demand.

We believe the five days of sub-zero temperatures (followed by a comparatively rapid thaw) impacted exposed pipework, where a lack of freeze protection such as insulation or maintaining adequate levels of heat in buildings made customers' pipes susceptible to damage.

We based this judgement on the rapid increase and return to 'business as usual' levels of both distribution input and operational leakage over a period where we conducted only minimal interventions – leak and burst main repairs – on our distribution and supply network.

Section B: Planning and preparation

We want to understand what steps companies took prior to the incident period to prepare in order to minimise the impact on customers.

- B1. How did your established processes for gathering intelligence and insight into the potential effects of forecast bad weather on your network help you to prepare for this event? Did they highlight any particular risks and what did you do to mitigate these? (eg network preparation, communications with customers, increased engineering or call centre resources) Did you share insights with other utilities/services?

We have a robust winter contingency plan (WCP) that is reviewed in September of each year and implemented between 1 November and 31 March. The plan sets

out in detail the mitigations to be put in place if winter event triggers are forecast. Assessments of whether event triggers will be hit are conducted on a regular basis throughout the period. Mitigations include sourcing of additional repair materials, preparations for supply of alternative water, increased customer communications, ensuring staff mobility to-and-from work, safety-related gritting requirements and the setting-up of a clearly defined event team should triggers be hit. During the same period, water and air temperatures are monitored daily. The WCP details activities to be undertaken based on the cold weather modelling triggers being hit, supported by a clear customer communications strategy.

Our assessment predicted the potential for our event triggers to be hit over the weekend of 3 and 4 March. As such, preparations commenced on 1 March to declare an event. This involved the mobilisation of our event management facility, briefing of key staff and initial allocation of event roles. Incident status (a Level 1 event) would be enacted, and if necessary escalated, should triggers be breached.

As part of the planning and initial event preparation outlined above, we also assessed the possible impact of the freeze and predicted thaw based on what we saw in a similar freeze/thaw event in January 2009. During this incident, we saw a 16% increase in demand and a 40% increase in leakage following five days of sub-zero temperatures averaging -2°C (with an average max/min temperature spread of $2^{\circ}\text{C}/-5^{\circ}\text{C}$). This compared to -3°C for the 2018 incident (with an average max/min temperature spread of $0^{\circ}\text{C}/-5^{\circ}\text{C}$). Both demand and leakage dropped significantly in the 48-hours following the thaw, and customer impact during this incident was minimal.

Furthermore, we also ensured that our production sites were fully operational and able to increase output, and that service reservoir levels were healthy, in order to meet the predicted rise in demand caused by the thaw.

This pre-emptive contingency planning has been developed by us over a number of years and has been extended based upon learning we have taken from other utilities' approaches and plans. As a result, we did not share these specific plans with other utilities.

B2. What impact, if any, did your preparation have on your ability to handle this event?

Our WCP is an essential part of our operational planning and preparations. Our focus on event triggers, alongside real-time comparisons with similar previous events allowed us to accurately predict the impact of the thaw and take proportionate steps in advance of it to minimise the impact to our customers.

What role did your Executive take in preparing for these severe events?

Our Executive chair bi-annual event planning meetings – attended by a wide range of managers trained in event management across the business, to ensure that all

relevant staff take part in reviews of recent events – both internal and external to the business. Training needs, audit findings and emergency preparedness are also standing agenda items.

Representatives from our Executive attend our weekly operational planning meetings, and chair our performance meetings throughout the year. During these sessions, open discussion takes place regarding a broad range of subjects deemed relevant to this freeze/thaw event including water resources, treatment works availability and reliability, leakage reduction, burst rates, mains replacement progress and resourcing both across the business and within our supply chain. In all cases, and as required, issues are discussed and action plans put in place to ensure ongoing resilience in our operation.

- B3. What emergency plans were in place and were they adequate to cope with the problems? Were those emergency plans appropriately enacted? If so, when?

Our management processes currently set out three tiers of event management, dependent upon severity and impact: Level 1 (Incident), Level 2 (Emergency) and Level 3 (Crisis). A 'Level 0' event would be considered as 'business as usual' or the pre-mobilisation phase prior to a predicted declaration of a Level 1 event.

Our event management processes for emergencies were rigorously tested last year as a result of the temporary loss of one of our main treatment works which supplies roughly 20% of our customer base. This event, spanning several days required the preparation and initial mobilisation of bottled water deployment to vulnerable customers, significant network re-zoning, liaison with a wide-range of local and national stakeholders, and co-ordination of emergency services. The event passed without any customers losing supply.

During this freeze/thaw event, our Level 1 event management procedures were implemented (as described above). Over Level 2 (Emergency) plans were not enacted as they were not required on the basis of the predicted and actual scale of this event. We are confident that these emergency procedures, were they required, would have been robust based upon recent testing in a live environment.

We set out in Annex 1 a summary of the event management framework that was put in place between 1 – 6 March.

- B4. What training have your staff had for responding to severe weather events, particularly freeze/thaw incidents?

Whilst not specific to freeze/thaw events, our staff are regularly trained on event management using an external training provider. This training uses proven methods to ensure learnings are built into our procedures and approaches – notably simulations of credible real-world situations impacting customer service and/or water supply.

We ensure that we have adequate staff numbers trained in these procedures, and a familiarisation of the same amongst a wider cross-section of our staff to respond to and manage events accordingly.

- B5. What did you learn from previous incident management events, including through working with other water companies, local / regional partners, emergency services or other service providers, and how is this reflected in your current processes?

Our procedures are continually updated and refined based on both our own (real-world and simulated) and others' experiences. We achieve this through 'wash-up' reviews of events, our bi-annual event planning meetings and ongoing liaison with other water companies (e.g. the recent Franklaw seminars hosted by United Utilities) and local resilience forums.

Section C: Incident response

We want to understand how companies responded to the incident, including how it prioritised action and how the Board and Executive were involved in the process.

- C1. Provide details of your established processes for responding to issues during severe weather events, particularly late winter freeze/thaw incidents (e.g. operational, governance, communications, working arrangements with other authorities through local / regional partnerships). Were these processes effective during this incident? In your response, make clear the role of your Executive in any decision making within these processes.

We refer in part to the content of our response provided under sections A and B in answering this question.

Our procedures are not specifically aligned to severe weather events. We prepare for a wide range of events that may impact our organisation – be that loss/restriction in water supply or otherwise – and many of the event management arrangements we have in place are common to a range of scenarios.

We only enacted these event procedures in full – following a period or pre-mobilisation over the preceding two days – and declared a Level 1 event (Incident), on 5 March, closing it down on 6 March. This decision was taken on the basis of receiving two reports in relatively quick succession of burst mains – one of which temporarily impacted around 300 customers for a period of around one hour with low pressure. We believe that this approach was proportionate to the relatively minor nature of the impact of this event on our customers and this business, and is in-line with trigger levels set out in our WCP.

The Executive remained in close contact with the operational teams in the run up to the thaw and had oversight of the event team throughout the period of 2 – 6 March. Key decision points regarding ongoing event status included the Executive for verification. Representation from our Executive attended the control centre on an out-of-hours basis on both 3 and 4 March. Additionally, they were available on call on an out-of-hours basis throughout the period as part of the pre-mobilisation of the event team.

The Board of Directors were updated of the event status on both 5 and 6 March, throughout the period that the Incident status (the Level 1 event) was declared.

- C2. For this incident, please describe how your company went about deploying the resources required to respond to the incident. In responding, please detail the scale of resource deployed and from which parts of the business and/or external resources (eg supply chain, local / regional partners, business retailers) they were drawn.

The focus of this event was for the business to deploy adequate resources into two specific functions: Customer contact centres to handle increasing incoming calls from customers suffering a partial or total loss of supply due to frozen or burst pipes, and field-based resource to attend customers' premises to help establish the cause of issues impacting their supply of water.

In the case of the former, two of our retail customer agents were reallocated to our operations contact centre (OCC). This was for two reasons: Firstly, snow and ice had prevented a member of staff from our OCC from getting into work, and secondly, an increased number of incoming calls relating to frozen pipes was negatively impacting call handling times.

In the case of field-based resource, the business reallocated around eight staff and contractors from non-time critical planned works (such as meter installations and exchanges) to emergency work (attendance at customers' properties responding to bursts and frozen pipes) where customers struggled to resolve their supply-side issues themselves.

Over the weekend of 3 and 4 March, our OCC reopened during peak hours to take customer calls. Additionally, our direct labour leak detection crews (4 in total) were reallocated to emergency work on an out-of-hours basis. Our external leak detection crews were not reallocated during the event.

Preparations had also been made such that from 3 March through to 6 March, our direct labour repair and maintenance crews were available to be reallocated to deal with any increase in burst mains or increased leakage resulting from the thaw. This was achieved by temporarily deferring work which had been planned for the weekend and the early part of the following week. In practice, this was not required

as the increase in burst rate and significant leaks – both in the run up to and after the thaw – was minimal.

- C3. Provide details of how your company assessed the operational implications and prioritised its responses during the incident period.

The operational implications during the period of 2 – 6 March were continually being assessed, firstly via the operational teams, then the control centre (both as part of the event pre-mobilisation phase), and finally, the Level 1 event (Incident) management team.

Implications of any issues emerging were prioritised on the basis of service reservoir levels and network stability (and hence continuing ability to supply) at a district metered area (DMA) level (of which we have around 300 in total – each supplying around 1,000 properties). Where DMAs were unstable or where we already had information from customers to allow us to pinpoint problems, we deployed staff to assess key leaks or bursts, isolate and, where possible, repair.

Throughout the event, we were able to deploy adequate resources to each operational issue encountered and minimise the impact on customers. Whilst some prioritisation did need to take place during peak periods of customer contact, this was generally the exception rather than the rule.

In such cases, our prioritisation followed a general rule: Maintaining adequate supply and pressure to each DMA, minimise property and other asset damage from leaks or bursts and assist customers considered as vulnerable.

In the sole case where we were unable to maintain supply to four customers, we were deployed in a single DMA throughout the day and evening of 5 March attempting to locate a burst or major leak which was causing loss of water to the four properties. This leak was eventually found at around 8pm on a single customer property, at which unprotected pipework supplying water troughs in fields holding livestock had frozen and split, causing a single leg of a DMA to effectively depressurise.

- C4. What challenges/barriers did your company face in resolving problems that customers experienced? How did you overcome them?

Based on the scale of response required by our business to customer issues, we experienced comparatively few challenges or barriers to resolving problems faced by customers. There were two issues that were comparatively noteworthy:

1. The availability of domestic plumbers that we were able to refer customers to. This was picked up via feedback from customers based on their attempts to get plumbers to visit their properties. This was a nationwide problem. As an organisation, we provided direct assistance in a number of cases, based on a

combination of resource availability and assessed customer vulnerability, attending a number of domestic properties to fix customer-side leaks and bursts.

2. Access to business owners over the weekend in order to verify burst locations on private land or inside buildings. Where bursts were identified as existing somewhere on the private property and business owners could not be contacted, supplies were isolated at the primary stopcock. This action was taken in around five cases.

- C5. Provide details of how your company identified customers in vulnerable circumstances before, during and after the incident. What support was offered to these customers and how was this delivered?

As part of our event management procedures, and as with other organisations, our business maintains a database of vulnerable customers.

Owing to the minimal impact of this event, no action was required to be taken for vulnerable customers as supply was maintained throughout the period.

In the sole case that four customers could not be supplied for around 30 hours owing to the local leak in an adjoining equestrian property, we deployed bottled water and a water bowser (to provide supply for local livestock) for a short period of time whilst supplies were restored.

Section D: Communication and support

Regular and informative communications are especially important during major incidents. We want to understand how water companies communicated with customers and wider stakeholders during the incident.

- D1. How effective were your communication processes before, during and after this incident for each of the below:

- a. Customers? (residential and business);

As part of the WCP, communications were planned and implemented through our 'wrap up for winter' campaign from November 2017. This included: updated website messaging, social media and updated customer advice leaflet available for download and given out by customer-facing employees, e.g. network inspectors. We also included advice in our 'Every Drop Counts' e-newsletter which goes to 2,500 subscribers every quarter.

On 3 March we spoke to other water companies who at that point were discussing a more joined-up regional message, focussed on the

operational issues and asking customers to use as little water as possible. We decided against being part of this messaging as our predictions indicated that we would not need to, nor did we have an equivalent level of network disruption as others over the weekend.

On 5 March we updated our proactive messaging, focussed on customer-side leakage. We did the following:

- Emergency message on the front of the website, linking to a page on customer-side leakage which was updated with a step-by-step guide on how to find and fix leaks on your property. Included information on WaterSafe:
<http://www.waterplc.com/pages/home/noticed-a-problem/leaks/>
- Recorded voice message on main phone line saying that we did not have widespread issues but asking customers to check for leaks on their properties
- As we did not have significant network issues we saw no need to amplify our messages through the media and instead targeted information directly to customers, as above. However, we did prepare a reactive media statement in case we were asked
- Social media messaging – Twitter and Facebook – linked to the website page
- Follow-up email to retailers through the Wholesale Service Desk

On 6 March we updated all the messaging on our channels to thank customers for their response and for checking and fixing leaks as soon as possible.

On 7 March we removed all the messaging. We had considered targeted communications via social media to customers in the three DMAs indicating the highest sustained increase in leakage. However, this was abandoned prior to enacting as the leakage levels further reduced as a result of customer intervention.

In terms of effectiveness, our winter communications were assessed through the rate of leakage reduction and customer call numbers and waiting times. There was an increase in customer contact but this was appropriately and sensitively managed.

- b. Customers in vulnerable circumstances and business customers for whom a water supply is critical (eg hospitals, schools)?;

Pre-emptive contact was made to business retailers regarding the impending thaw. See below.

We had no further need to make contact with customers in vulnerable circumstances or business customers during or after the event.

c. Water retail businesses?; and

We believe we have strong and direct communication routes into the retail businesses that operate within our supply area. Pre-emptive contact was made with retailers prior to the thaw on 3 March.

d. Wider stakeholders? (eg local authorities, other agencies, Government, Ofwat)

We believe we have strong and direct communication routes into wider stakeholders on the basis of both day-to-day business contact and having tested these links in live event situations within the last 18 months.

We ensured that the Chair of our Customer Scrutiny Panel (CSP) remained informed on the situation during the event. We have also since briefed the wider panel at a subsequent full CSP meeting.

We joined the Defra calls on 5 and 6 March, and the call with Therese Coffey on 6 March. We also took part in Local Resilience Forum calls with Kent and Surrey on 5 and 6 March.

We completed the daily data request as required by Water UK but this was discontinued after the first one.

Finally, we briefed the Environment Unit at London City Hall to clarify there were no impacts on the Greater London area from our operation.

D2. What channels did you use for communication with customers and key stakeholders before, during and after the event? (eg local, regional or national news media, social media, e-mail, SMS, hard copy letter) What were your key messages at each stage? Please provide examples of your communications material with your submission.

Please see our response to D1, above.

D3. How did you proactively engage with customers (by customer type) before, during and after the event?

Please see our response to D1, above.

- D4. What processes do you have in place for managing properties that are vacant, void or difficult to access (eg businesses that are closed at weekends) in the event of a major incident?

Our CRM system captures whether a property is vacant, void or non-household. Any work raised in the field will identify these attributes to the property. The management of these properties in an event depends upon its nature.

In the case of a major loss of supply event, the vacant and void properties would not be contacted by us. Retailers supplying non-household properties would be made aware of a major event by e-mail within two hours. In the event of field staff identifying a significant leak on a vacant, void or a non-household property, direct contact will be attempted before the principle stock cock is isolated. Where no direct contact can be made, we will leave a postcard at the property informing the owner of the principle stock cock isolation.

- D5. What ongoing support after the incidents have you put in place, in particular for customers in vulnerable circumstances?

Due to the limited impact on our customers, we have not put in place any ongoing support, other than what we would class as 'business as usual'. We have a vulnerable customer database, but in addition, we 'triage' our contacts to see if there is anything additional (i.e. provision of alternative supplies, personal visit from a network inspector) we can provide to ensure that any customer making contact whom we have identified as potentially being vulnerable receives the service required in such situations. They are then added to the database for referral next time.

Section E: Impact on customers and compensation arrangements

We want to understand how water companies expect to provide customers with appropriate compensation for the disruption that they experienced.

- E1. Provide details of how you will identify which customers (by customer type) are entitled to compensation.

We have conducted detailed assessments of the data from our DMAs during the event to ascertain whether any suffered from material (or repeated) pressure loss resulting in the complete or partial loss of supply to customers – both domestic and businesses. We have cross-referenced these data with customer and retailer contacts received during the period in question.

As set-out earlier in our answer to C3, the disruption seen by our customers as a result of this event was minimal. Our assessment is that a total of four customers

went without water for around 30 hours. All were impacted by the same customer-side issue of a fifth customer, where insufficiently protected pipework system feeding field troughs became damaged in the freeze/thaw.

- E2. Provide details of the automatic GSS payments, including any payment penalties, you expect to pay (or already have paid) to customers (by customer type) as a result of the incident period and the total value associated to these payments.

We have made automatic GSS payments to four domestic customers in the Box Hill area of Surrey as a result of being without water for up-to 36 hours. In total, we paid £120 (£30 to each customer).

- E3. Provide details of any further compensation you will be providing to customers beyond automatic GSS payments and how the level of compensation was calculated relative to the disruption customers experienced. In doing so please provide details of the numbers of customers (by customer type) you expect to receive this and the total value associated to these payments.

We have made no further compensation arrangements beyond those set-out in E2.

- E4. Provide details of how long you anticipate the process of compensating all affected customers will take and the methods by which the compensation will be paid (eg automatic, cheque). Will there be an application process for any elements of compensation? If so, please describe the process.

All of the above payments took the form of a credit to the customer's account with the company, as per our standard procedure for GSS payments, and were completed 29 March.

An ongoing and open process for customers who believe their supply was interrupted for more than 12 hours remains open. This will be the case until 4 June. However, based on our detailed analysis of customer contact and network stability during the event, we do not believe any other customers were impacted by the event and therefore envisage that no other customers will come forward and seek compensation.

Section F: Reflection and lessons learnt

We want to understand what lessons water companies will take on board from the events in terms of delivering greater resilience in the round for customers.

F1. Provide details of what you considered to work well and what you considered to need future improvement for your company and why in relation to:

- a) Identifying and repairing supply interruptions and actions taken to prepare the supply and network system;

We believe we have a fundamentally resilient supply network that had previously performed well in January 2009, during weather conditions very similar to those experienced in late February and early March of this year. This was proven again in this event, with minimal impact on our network and all but a handful of our customers continuing to remain in supply.

Moreover, on analysis of burst rates, we have identified that we incurred less than one-third the number of bursts in this event than in the January 2009 freeze/thaw event. Again, this indicates the continuing resilience of our network, attributable to our ongoing programme of mains replacement, along with ever-improving operation and control of our network. These are both aspects we hope to continue to build on in our PR19 business plan.

Clearly, there is always room for improvement, and we were bitterly disappointed that we lost the ability to supply any customers at all during the event. In this case, our work to move towards installing smart metering solutions in smarter networks will help better pinpoint supply interruptions in such instances in the future, making our network more resilient.

- b) Communicating activities to customers/stakeholders (by customer/stakeholder type);

We received a lot of contact about boilers and hot water not working and customers did not understand that this was their issue to resolve, with the help of a plumber as required. Many people thought that no hot water was a water company problem and there is still a comparative lack of awareness of customers' pipework responsibility. We believe that this is an industry-wide issue across the UK, but nonetheless, we need to continue communicating about this.

Finally, our updates to employees via the home page of the intranet were well-received: Many were seeing a lot of media coverage of other companies so where they were not involved directly in the event, they needed to be aware of our current situation throughout the process.

- c) Identifying and supporting the needs of customers in vulnerable circumstances; and

We did well in identifying customers that contacted us and highlighted that they believed they were vulnerable. These contacts have been added to the vulnerable customer database that we hold.

d) Having the appropriate governance processes in place.

We have strong and appropriate governance processes in place within our business which provide a pragmatic balance of oversight and autonomy. Being a small water-only company, we have a comparatively flat management structure, an inclusive and full 'line-of-sight' approach towards our operation and interactions with each other, and a clear, integrated risk management process.

Such an approach facilitates quicker, informed and more accountable decision-making during both 'business and usual' operations, and events.

F2. What were the biggest constraints to your company doing more, faster to respond to issues customers faced?

In this event, we consider that we were not constrained in our ability to respond to issues that our customers faced.

However, had our network, communications processes and people not been as resilient as they proved, or if the event had been on a larger scale, the biggest theoretical constraint that our business would have encountered is our comparative size. As a small water-only company – whilst there are a great number of plus points – our key disadvantage would be the ability to deploy large numbers of staff – both employees and supply partners – onto a particular problem without impacting business as usual.

We have proven to be able to achieve this with beneficial impacts on a number of occasions in the past, but an overriding focus is to continue to deliver on the issues that can sustainably improve our resilience and lessen our exposure to such events in the future.

Annex 1: Summary of event management framework

The following event management framework was deployed between 1 – 6 March, as referenced in responses to questions A1, A3, B1, B3, C1 & C3.

