

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.

Our executive summary of the event is as follows:

On Saturday 3rd March 2018, at 16:08 hours the Company informed the Inspectorate that a number of operational challenges including the rapid thaw following a period of cold weather has led to the depletion of stocks in a number of strategic Water Service Reservoirs. This led to the loss of supply to customers.

The week leading up to the notification of this event was a nationwide cold weather event. This period of cold weather was reported widely in national media and “Yellow” and “Amber” weather warnings were issued intermittently by the Met Office from the 26th February 2018 to the 3rd March 2018. This period of cold weather was followed by a rapid increase in temperature which began around 3rd March 2018. This has become known as the “freeze/thaw event”.

The Company considers that under normal operations the Water Supply Works have sufficient capacity to ensure that customer demand can be met. Over the course of the event demand (as a function of deployable output) rose by around 20% from approximately 549.42 MI/d to a maximum of 657.73 MI/d recorded on 6th March.

Operational Leakage from the Company’s network is estimated to have contributed to approximately 20.31 MI/d (18.75%) of the overall increase in DI. It is concluded that the remaining increase in DI was generated from increased customer demands, likely from customer side leakage.

The Company was furthermore experiencing the following operational challenges:

- The loss of supply from the majority of Water Supply Works at the Medway and Thanet areas, including strategic sites at Burham and Eastling WSW, due to an external (National Grid) “brownout” early on Saturday 3rd March 2018 which reduced output by 90%. Restarting the works required staff attendance to carry

out a water quality check which was hampered by travel problems in the poor weather conditions.

- Whilst a programme of improvement works is being carried out at Weirwood WSW the WSW is out of service. During these improvements Turners Hill WSR, supplying Crawley, is filled using Hardham WSW and Tennants Hill WSR via Buchan Hill WSR. This mode of operation reduced the flow of water reaching Turners Hill WSR.
- Operational issues at Brede and Beauport WSWs prior to the event led to a drop in the volume of storage available in the Company's network and reduced ability to keep up with demand caused by the freeze/thaw event.
- Two mains bursts were located and multiple leaks experienced in the Fairlight area causing the reservoir levels in both Fairlight reservoirs to drop to even lower levels. This in turn led to Warren WSR running empty due to limited availability of water supplied from Fairlight WSRs.

The company increased resources available in the control centre and in the field prior to the thaw. During the event a Gold command was set up to direct the company's activities to reduce the impact of the increase in demand. Information was provided to customers.

In addition to the provision of alternative supplies the Company has promptly provided compensation payments and services including grants for schools affected at a level above that specified in the Guaranteed Standards Scheme.

A1. Provide details of the impacts of events on your network / customers using the **attached tables** (please complete both sheets).

We have completed the data tables where possible with the available information, where this has not been possible in all cases explanations are provided in the comments field in the data table – please see enclosed file.

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).

We were managing operational challenges associated with the thaw region-wide from Saturday 3 March until 8th March

We carried out a risk assessment on Sunday 4 December of the total number of properties potentially at risk of loss of supply within 24-48 hour period. This was shared with DEFRA at 01.22 am on 5 March. The total estimate of properties at risk at that time was over 195,000. Management of the event reduced the customers who suffered service lost to approximately 5% of this.

Whilst the risk to service was managed successfully in the majority of areas we experienced loss of supply to customers more specifically in the following areas.

Sittingbourne, Kent: 03/03/18 to 08/03/18.

Crawley, West Sussex: 04/03/18 to 07/03/18.

Hastings, East Sussex: 03/03/18 to 07/03/18.

In addition, there was a brief, overnight, take out of service of a mains for repair on the Isle of Wight. This was contemporaneous with the other recovery activity ongoing regionally. The out of service was due to the need for repair work.

We consider this to be part of our business as usual rather than a specific event.

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.

We have not expanded the data range.

- 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 any additional impacts that we had to respond to.

- 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.

Proactive leakage detections was decreased during the event due to the deployment of leakage teams on to reactive repair work. Leakage levels have not yet returned to the seasonal norm.

- 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?

There was one common root cause to all three incidents, which was that the Company was experiencing an increase in customer demand of approximately 20% due to the freeze/thaw event. This is common across all customer types and locations.

In addition there were additional contributory factors in each of the three areas that experienced loss of supply as set out below:

For Sittingbourne, in addition to the increase in demand, another factor contributing to the loss of water supply to customers was the loss of production at the majority of Water Supply Works in the Medway and Thanet area. This included strategic sites at Burham and Eastling WSW and was due to a power loss early on Saturday the 3rd March 2018. Restoration of water production required site visits to review the water quality shutdown control system and enable restart.

For Crawley, in addition to the increase in demand, the loss of water supply to customers in the Turners Hill WSZ was due to the following factors:

- Weirwood WSW being out of service due to capital works to deliver a programme of improvement actions.
- Whilst Weirwood WSW is out of service, Turners Hill WSR is supported by Hardham WSW and Tennants Hill WSR via Buchan Hill WSR. This mode of operation is subject to flow restrictions which reduced the pace at which the increase in supply reaching Turners Hill WSR can be achieved.

For Hastings, in addition to the increase in demand, the loss of water supply to customers in the Fairlight Supply Zones was due to:

- Operational challenges at Brede and Beauport WSWs prior to the event which lead to a drop in the volume of storage available in the Company's network and reduced ability to keep up with demand caused by the freeze/thaw event.
- Two mains bursts and multiple leaks experienced in the Fairlight area causing the levels in both Fairlight reservoirs to drop further. This in turn led to Warren WSR running empty due to limited availability of water supplied from Fairlight WSRs.

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?

The company has in place a contract with Meteogroup to provide weather intelligence and insight. Direct contact was made by the Duty Manager each day running up to the event (20th, 21st, 22nd and 23rd February) to obtain detailed forecasts on potential snow accumulation across the companies areas and shared with relevant Operational Managers.

Social media was updated with advice to customers on how to protect their pipes from freezing, how to report leaks and a reminder of the supply pipe 'free repair' policy which had been implemented in December 2017.

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)

This service highlighted the risks of significant snow accumulation and led to the activation or conformation of already activated cold weather business continuity plans. This led to preparedness at our sites in terms of ensuring that stockpiles of chemicals (including chlorine gas) was sufficient, resources such as 4x4 vehicles were correctly allocated and there was a common understanding of operative availability between areas and the centre.

Additional field and supply chain staff were made available for the weekend.

We also made available and mobilised snow ploughs to ensure that strategic sites could be accessed in case of sites stopping.

A meeting of the members of the Hampshire Local Resilience Forum was held on the 26th of February to discuss possible impacts upon mobility of the predicted heavy snow fall.

We regularly communicate with Water Direct to obtain assurance that they had sufficient bottled water stocks and the ability to deliver these to the company's area. This is a normal activity if there is a risk of a potential issues.

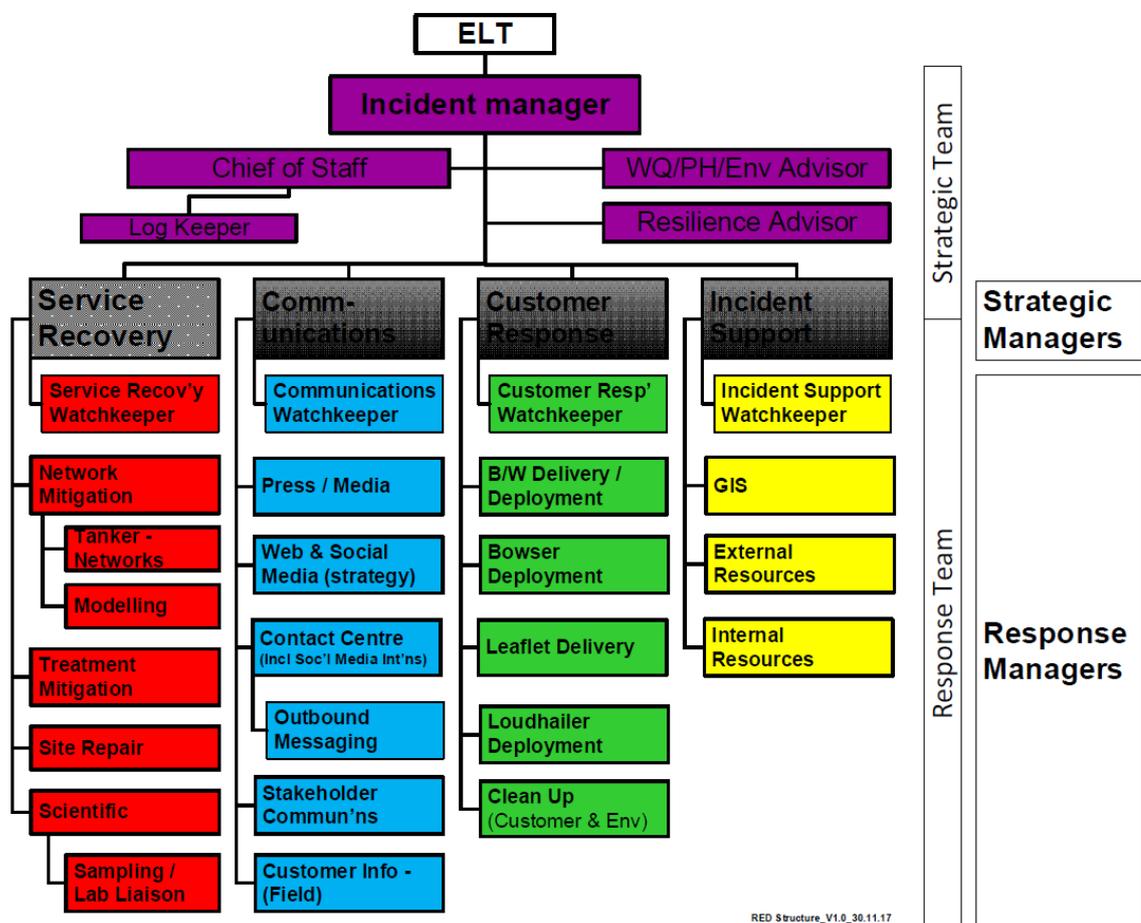
Did you share insights with other utilities/services?

We discussed the situation in Hampshire with the other utilities/services who are members of the Hampshire Local Resilience Forum.

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

Our preparation enable us to handle the potential for interruption to deliveries of essential chemicals to sites and to assist in ensuring that staff were able to access remote sites during the heavy snow fall phase.

The new structure we will be implementing is as follows:



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

Our internal procedures were followed which (i) require the involvement of Heads of Function up to amber status and (ii) upon the instigation of a major incident the involvement of Directors.

Readiness output reviews were sent to the Director of Wholesale Water in advance of the event.

B3. What emergency plans were in place and were they adequate to cope with the problems?

We had our bronze, silver, gold emergency plans in place and used elements of our the new plan which whilst all relevant people had been trained upon this in Feb 2018 we had not formal rolled out due to the formal rota not having been implemented.

The scale of the risk and challenges experienced was not predicted, in particular the power loss which reduced disrupted production capacity for the Kent area.

Were those emergency plans appropriately enacted?

Yes, based on our understanding of the likely severity of the impact of the heavy snow fall. However, we are currently undertaking our post event lessons learnt which will, amongst other things, consider whether the plans were appropriately enacted as well as identify opportunities for further improvement.

If so, when?

Plans went into operation on Sat 3rd at the following timings:

The Incident Manager was called at ~4am.

Relevant Heads of Function called at ~5am due to severity of the events.

The Director of Wholesale Water Services was made aware at 7am, and the issue was formally escalated at 10.45am.

A major incident was declared at 17:00 which triggered the formal creation of gold command at our headquarters in Durrington and silver commands in our affected regions.

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

As part of our development of our new incident management procedures, 130 individuals allocated a role in incident management had received training in our new process in February 2018.

On Friday 9th February 2018, we ran a bottled water site deployment training and exercise from our offices in Falmer. We had realised from previous events that we needed to be more organised and ensure that any employees or contractors manning bottled water sites needed to have better training, briefings and equipment in order to be able to run these effectively. The aim of the session was to run the attendees through the standards that we have created, give them a scenario and watch them run through it in order to learn exactly where we needed to improve.

The first hour was spent at our offices in Falmer running the group through the standards for organising and running bottled water sites, after which each were assigned roles and the exercise was ran, with Falmer being the HQ for the management team and the AMEX stadium being used as the remote site. We also had managers from different areas of the business have the role of observer so that we could get their feedback on areas for improvement.

We had a number of key learning points which we took away, the main ones being:

- People manning such sites need to have the right equipment easily and quickly available, this resulted in a number of site grab boxes being created which contain a number of key items such as PPE, clipboards, pens and forms
- More in depth training on best practices and different roles within this area would make us more effective at running these sites, this has been added as a point for action in our emergency planning and response programme

The company undertook major incident in 2017 (based on a simulated storm surge event) the aims of this exercise were to:

- To test the capability of SW to organise and respond strategically to a major emergency.
- To test the effectiveness of the command and control framework, and communications in SW between the Gold (Strategic Management) Team (SMT) and the Silver (Incident Management) Team (IMT).
- To identify key external/internal communication issues with press, media, other opinion formers and internal stakeholders.
- To simulate external visibility of the Exercise by using role-play to involve interventions from an external Local Authority Gold Team.
- Review Health & Safety procedures and expose any areas of concern or potential weakness in the existing Plans and Procedures and to capture lessons learnt and improvements to be made.
- To ensure that lessons have been learnt from the last Exercise Review.

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?

The company had already recognised the need to improve its incident management processes and was part way through implementing new procedures developed by a sector expert when these incidents occurred.

The main improvements/changes are:

- A change of our incident management structure, moving from Gold, Silver, Bronze to Control and Command, giving us a clearer and more structured incident response process and team based upon disciplines.
- Introduction of specific roles within this structure with procedures and training for each role, which we are currently in the process of delivering.
- More specific scenario testing of the different streams/roles within the new structure to ensure the new approach is fully embedded. This is to ensure that people are trained to the right level and that we continuously improvement and innovate.

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.

Our event management process sets out an escalation process from local management, through the senior management and then to the highest level of the executive leadership team.

Neither the Board nor the CEO are actively involved in incident or operational management. The CEO as the board representative was available to provide advice and support and ensure that the Board were kept fully aware. They were kept informed of the event as follows:

The CEO made the Board aware on the 4th March – informing them that the company was experiencing difficulty in maintaining supply in a number of areas. The CEO made sure the Board were kept up to date on progress with issues throughout the event, up to three times a day.

The Board were updated during a telephone call on the 6th of March and at the routine Board meeting on the 9th of March.

The customer compensation proposals were discussed with and supported by board members in discussions on the 7th and 8th March.

The executive leadership team are part of event management for those declared as major event management, otherwise referred to as 'gold' their involvement of the ELT active event management is as follows:

Saturday 3 March: operational challenges notified to Director of Wholesale Water Services at ~07.00 and formally escalated at ~10.30am.

The Director of Wholesale Water Services arrived at HQ to support event management by 13.30.

CEO informed of operational challenges at 13.36.

The Director of Compliance and Asset Resilience was informed afternoon 3 March and agreed DWI should be notified.

The Director of Wholesale Water Services declared a major incident at 17:00 on 3 March. She agreed with Director of Wastewater Wholesale Services that they would

take gold command morning on Sunday 4 March. The Director of Wholesale Water services returned to gold command afternoon Sunday 4 March pm.

The Director of Compliance and Asset Resilience also attended HQ in person on Sunday 4 March to give additional support to event management resources and to prepare and be ready for any media requirements.

Monday 5 March to Thursday 8 March ELT members were undertaking rota for gold command which included regular updates from the senior managers managing area based 'silver' command; emergency planning and customer communications, and supporting DEFRA updates. The CEO was regularly updated throughout.

The Director of Compliance and Asset Resilience undertook multiple local radio and TV interviews from Monday 5 March to Weds 7 March, in addition the company recorded communication clips for social media, company website and use by media outlets who did not have live interviews.

Formal 'gold' level active command by ELT was stood down on Thursday 8 March - from then on ELT continued to be updated on recovery progress.

A rota of senior managers at 'silver' level from operations, compliance and asset resilience, customer services, communications, and engineering and construction was used to lead elements of the event management throughout the event. This was further supported by local operational managers managing field based activity.

Additional resources from the supply chain and a wider support network of specialists such as customer services, water quality, media and procurement were all involved in the event management support and operation.

- 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.

Emergency plans are based around a loss of supply incident. Our business continuity plans include cold weather plans. We had heightened readiness in place in the week before the event due to the weather warnings including checks of available equipment, cancelling of non-essential works, and increased resources being made available throughout the period.

Incident response teams were formed to manage the incidents operational activities, communications, alternative supplies, and resilience across the region. These teams were on rolling shift patterns to ensure 24/7 coverage where required throughout the events.

The Executive Leadership Team were leading Gold level calls, engaging with LRF strategic forums, Defra and other key stakeholders. This was being mirrored at a tactical level by the emergency planning manager or deputy.

These processes were effective in managing the response, however this event reinforced the learning from our ongoing review. We have an implementation plan in place for delivering the review outputs and are making sure any additional learning from these event is fed in to that implementation plan.

- 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.

People deployment

The Company had already been increased the number of leak detection resources deployed onto proactive leakage detection by 20% in December 2017.

During the events, leak detection resources were deployed by monitored flow and pressure data on corporate systems, at a Water Supply Zone, Service Reservoir and District Metered Area (DMA) level. Customer contacts recorded on CSMS were reviewed to gauge reactive responses to leaks and bursts on the distribution network and private customer supply pipes. Existing burst and leaks promoted on Ellipse (Work Management system) were also monitored.

Over the weekend we increase our numbers of leakage staff to 140, compared to our normal weekend number of 30. On Monday we had our normal deployment of 440 staff.

We had a maximum of 19 people deployed in our control centre on Saturday and Sunday, rising to 23/24 on Monday, Tuesday and Wednesday.

We deployed an additional 15 people into our technical call centre on top of the normal staffing of 25 people.

We deployed 10 people from our meter reading contractors to assist in the delivery of bottle water to customers.

We developed a roster of 47 volunteers from the wider company who could be deployed to bottled water distribution points as needed.

Resource deployment

Water Direct hold 208 pallets for the Company. These were available for the event. Mutual Aid was not fully available during the event due to the regional scale of the challenges however we sourced 300 pallets of bottled water from Water Direct and 178 pallets from Wincanton. We deployed three tankers from Water Direct to priority institutions. In addition we had 36 bowers available.

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

The company has limited interconnectivity between its different supply systems, which means that assessments of operation implications and prioritisation needs to be taken at regional / sub regional level.

Incident commanders then use this information and expert knowledge to prioritise and direct the company's response.

We determined where to place bottled water distribution points in discussion with the local authorities and/or based on local knowledge of accessibility.

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

We faced a number of challenges/barriers as detailed below:

Majority of leakage occurring at customers properties

The most significant barrier we faced was that the majority (approximately 80% according to our calculations) of leakage was coming from customer demand, most likely from leakage. This level of leakage is roughly equivalent to 1 in 100 properties having a fully open tap for 24 hours.

This type of leakage is a significant challenging for us to detect and repair.

In order to determine whether leaks were on our distribution network, we employed our contractor to walk the lengths of mains in a number of areas

It is possible that on the Isle of Wight, the proactive support provided by the local resilience forum resulted in increased customer awareness of the problem (including at properties managed by the LRF members, such as council buildings and schools) resulting in customers rapidly fixing leakage on their properties and hence reducing distribution input back to normal more rapidly than in other areas.

Working with LRFs

The initially invite to the LRF in Sussex was sent to an individual's email address and not picked up early enough. We subsequently attended meetings and deployed an individual to work in the same building as the LRF.

The Hampshire and Isle of Wight LRF was convened at our request.

We had contact with the Kent LRF, specifically around the potential loss of supply to Sittingbourne hospital, however we weren't asked to attend the LRF.

Ability of Water Direct to provide bottled water

The Company distributed bottled water using the standing contract with Water Direct until Monday 5th March when the Company was notified that Water Direct was unable to provide water above the 300 pallets already supplied due to the calls being made on mutual aid stocks by other companies. The Company believes that this was due to the widespread nature of the event and its impact on neighbouring water companies.

The Company looked to find other sources of bottled water and first contact was made to Wincanton at approximately 10:30 hours on 5th March. Following the appraisal of water quality and bottled water service available the Company confirmed an order with Wincanton at 18:11 hours on 5th March and first delivery was made on Tuesday the 6th March. 178 pallets were delivered by 7 HVGs (2 using FLT vehicles).

Communications with other water companies

The Company was in regular communication with South East Water and Portsmouth Water to discuss the effects of the events occurring in the three companies areas upon the bulk supplies to and from the Company.

Identifying vulnerable customers

We experienced some difficulty in matching different lists of vulnerable customers from different LRF partners due to them using different formats.

C5. Provide details of how your company identified customers in vulnerable circumstances before, during and after the incident.

We have a priority service customer list which is live updated by our customer contact centre. This is used in an incident (by post code matching) to identify vulnerable customers at risk.

Before an event, vulnerable customers self-identify themselves to the company.

During the event we pull the list from our customer contact teams. We also add to the list if customer self-declare that they are vulnerable. Additionally we contacted those who had self-declared as vulnerable on social media and included them on our vulnerable customers list.

The IoW list was cross checked with other lists from other members of the LRF

The Sussex list was not cross checked until Tue 6th due to less experienced staff having been involved in the initial meetings of the Sussex LRF.

What support was offered to these customers and how was this delivered?

Alternative supplies were mobilised as consumers lost water. Priority was given to vulnerable consumers (including hospital and prisons) and doorstep deliveries to vulnerable customers were put in place where possible.

In addition bottled water sites were set up.

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:
- Customers? (residential and business);
 - Customers in vulnerable circumstances and business customers for whom a water supply is critical (eg hospitals, schools)?;
 - Water retail businesses?; and
 - Wider stakeholders? (eg local authorities, other agencies, Government, Ofwat)

We have not been able to analyse the effectiveness of our communications, however we have analysed the tone of the coverage which was 6% of it was positive, 56% neutral and 38% negative.

Between 3rd and 6th March:

- Southern Water was mentioned in 3066 new articles
- We pro-actively tweeted over the height of the crisis 316 times this had twitter impressions of 676 k (times it appeared in a newsfeed).
- Facebook was updated 51 times.
- The website was updated 24 times.
- More than 350,000 text messages and over 65,000 emails were sent to customers.

The proactive communication during the event enable vulnerable customers who were not on our register to get in touch with us, to enable us to provide individual support.

Local resilience forums were liaised with through the gold and silver command.

We had regular communications with CCWater, Defra, DWI and the EA. In particular the EA liaison enabled a flexible approach to abstraction to be approved to support the event.

- 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)

Our communication with customers was on all available channels: twitter, Facebook, website, broadcast media, regional newspapers and via local resilience forums.

Hospitals and schools were contacted individually to help plan their water supply needs.

D3. What were your key messages at each stage? Please provide examples of your communications material with your submission.

From 21 February messages about taking care in the freezing weather were put on social media and the website.

During the event we communicated on the supply situation in areas, the scale of the problem, what we were doing to rectify the situation, where bottled water was available, where further information could be found, issued apologies to customers and thanked customers for their patience.

After the event we thanked customers for their assistance in locating bursts, informed them of their compensation rights and the STEM focused community grant to schools and reminded them of our one free supply pipe burst repair policy. .

Example of our messages are given in Appendix A.

D4. How did you proactively engage with customers (by customer type) before, during and after the event?

Customers in vulnerable circumstances were identified through the vulnerable customer list and messages were put on the website and social media asking for customers to report any customers who may be in need of help. The Gold command organised door to door teams to visit vulnerable customers.

Regular email updates were sent out to stakeholders in all the parts of the impacted service area. Distribution lists incorporating the following:

- Local MP / MPs
- Unitary / County Council leader / Chief Executive
- Relevant senior councillors (e.g. cabinet members) and executive officers Unitary
- County councillors for area(s) affected District
- Borough Council leaders
- Chief Executives
- relevant senior councillors (e.g. cabinet members) and executive officers
- District / Borough councillors for area(s) affected
- Local business contacts e.g. business partnerships
- representative bodies Parish council(s)

Each incident area stakeholder briefing distribution list was made of representatives from the stakeholder list. All identified stakeholders were sent a series of updates over the course of several days. These written briefings ranged from operational updates (providing the latest information and asking for stakeholders' help in raising awareness among customers), to sharing details of compensation for customers,

local water distribution point and teams visiting customers on our priority needs register.

Outside of impacted incident areas, further briefing to stakeholders in the affected locations, as well as more broadly across our region was in place for the incident period.

The Company shared a short film which explains the background to the issues and what we were doing to resolve. Available via our website, along with a Q&A setting out key information and advice.

Pro-active videos in the situation room were filmed with Director of Compliance and Asset Resilience. These were put on our websites and social media and were updated regularly throughout the freeze/thaw incidents.

We also provided updates through the website www.southernwater.co.uk and social media channels, including Twitter, for service updates and proactively contacted customers in vulnerable circumstances to offer our support.

We pro-actively sought to use different messaging throughout the incident on social media for different customer segments, including families, mums with young babies. Other non-digital customers were reached via local resilience forums and traditional media radio/TV/newspapers.

- D5. 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 leakage teams are able to seek a warrant to enter a vacant premise, however this wasn't used during these events, however this may not be practicable during an event of this nature.

- D6. What ongoing support after the incidents have you put in place, in particular for customers in vulnerable circumstances?

As part of the work undertaken by the Sussex LRF, East and West Sussex Country Councils contacted all individuals on their vulnerable customers lists (in the affected areas in Crawley and Hasting) on Monday 4th and Tuesday 5th.

We will be sending all affected schools a £2000 grant (with the intention that this is spent upon STEM related activities) and offering them a STEM related educational visit from a member of our staff.

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.

As a precautionary measure, we identified these connections by postcodes that fell within DMAs where we had experience low pressure or loss of supply. This means that a greater number of connections have been identified for compensation than have actual lost supply. We are undertaking additional verification and cross checks and should any additional connections be identified these will also be compensated.

The number of compensated connections is set out below.

Customer Type	Number of customers identified for compensation
Household	15,450
Non-Household	690

- 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.

Due to the exceptional circumstances of this incident the Company has offered an enhanced compensation policy for all connections affected. The payments are:

Table 1: Amount to be paid to Customer					
	Goodwill Payment	GSS 1	GSS 2	GSS 3	Total Payment
If the 'Hours Lost' is LESS than 12:00 hours	£25.00	NONE	NONE	NONE	£25.00
If the 'Hours Lost' is BETWEEN 12:00 and 24:00 hours	£25.00	£25.00	NONE	NONE	£50.00
If the 'Hours Lost' is MORE than 24:00 BUT BETWEEN 24:00 and 48:00 hours	£40.00	£25.00	£10.00	NONE	£75.00

If the 'Hours Lost' is MORE than 48:00 hours	£30.00	£25.00	£10.00	£10.00	£75.00
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Table 2: Amount to be paid to non-household					
	Goodwill Payment	GSS 1	GSS 2	GSS 3	Total Payment
If the 'Hours Lost' is LESS than 12:00 hours	£50.00	NONE	NONE	NONE	£50.00
If the 'Hours Lost' is BETWEEN 12:00 and 24:00 hours	£25.00	£50.00	NONE	NONE	£75.00
If the 'Hours Lost' is MORE than 24:00 BUT BETWEEN 24:00 and 48:00 hours	£50.00	£50.00	NONE	NONE	£100.00
If the 'Hours Lost' is MORE than 48:00 hours	£50.00	£50.00	NONE	NONE	£100.00

Because we identified the issue on the Isle of Wight more than 20 days after the event we have also made a late payment compensation payment of £20 and £50 for businesses, schools and charities.

All identified connections affected have been automatically compensated through either refunding the amount directly to customers and not through crediting customers' water charges or issuing a credit note to the associated retailer for them to pass the credit on to their customer.

In total £651,230* has been paid to 15,450 for household connections.

*Table of payments made until 06/04/18:

Payment Value	East Sussex		West Sussex		Kent		Isle of Wight	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value
£25.00	814	£20,350	4352	£108,800	1296	£32,400	0	£0
£45.00	0	£0	0	£0	0	£0	1,104	£49,680
£50.00	575	£28,750	0	£0	5,477	£273,850	0	£0
£75.00	1,832	£137,400	0	£0	0	£0	0	£0
Total	3221	£186,500	4352	£108,800	6773	£306,250	1,104	£49,680

In total £38,700* has been paid to 690 non-household connections.

*Table of payments made until 06/04/18:

Payment Value	East Sussex		West Sussex		Kent		Isle of Wight	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value
£25.00	0	£0	0	£0	0	£0	0	£0
£50.00	128	£6,400	68	£3,400	333	£16,650	0	£0
£75.00	30	£2,250	0	£0	124	£9,300	0	£0
Total	158	£8,650	68	£3,400	457	£25,950	7	£700

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.

For the enhanced payments to all customers, please see E2.

The company recognises the disruption caused to families and communities by school closures, and therefore in addition to the GSS payments will be making a £2000 community grant to each of the 18 school affected by the interruption, with the intent of the schools using this towards science, technology, engineering and mathematics (STEM) related activities. Cheques & BACs payments have been raised and will be issued Tuesday 10th April 2018. In addition, we are offering STEM talks with our engineers and scientists.

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.

Compensation is being provided automatically, however any customers who believe that they should have been compensated and have not received this payment may contact us directly.

Currently we are undertaking some final verification to ensure that all payments have been paid.

The payment of the STEM grants to school will be made by mid April.

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;
- b) Communicating activities to customers/stakeholders (by customer/stakeholder type);
- c) Identifying and supporting the needs of customers in vulnerable circumstances; and
- d) Having the appropriate governance processes in place.

On the morning of Saturday the 3 March the company saw demand rise from normal winter to summer demand, over the period of a few hours, due to leakage from previously frozen pipes (approximately 20% company pipes, 80% private pipes). Initially a significant proportion of the customer base were assessed to be at risk of loss of supply due to the increase in demand but as the morning went on most risks were mitigated by increasing water treatment works output during the day whilst relying on service reservoir stocks to make up the shortfall.

In three areas (Sittingbourne, Crawley and Hastings) additional operational considerations made it difficult to increase supply sufficiently and service reservoir dropped to levels where supplies were lost to customers. The additional operational constraints were:

- A power outage across Kent which caused works to turn off. The company has a policy that works must be attended in person by a member of staff before being restarted in these circumstances to protect water quality, however in this case the number of works that had shut down and the transport difficulties due to the weather made the restart process slow [action: the company will review its resilience to power outages].
- Planned improvement works at Weirwood (that supplies Crawley) meant that the works was off and a transfer from other works was being used to sustain supplies. This transfer was adequate for winter demand but could not cope with the increase.
- Operational constraints on the output at two works supplying Hastings which were caused by the refurbishment of filter and an electrical fault.

None of the above constraints could have been reversed in the short period between the initial bad weather warning and the morning of the 3 March [action: improve dynamic risk assessment of sufficiency and mitigate unacceptable risks].

The company took measures to ensure operational supplies and staff were available to deal with both the bad weather and the thaw effects including quadrupling leakage repair staff numbers over the weekend. The company did not increase stocks of stored treated water prior to the increase in demand. Increasing stock would have reduced the impact in Sittingbourne and Crawley however this would not have been possible in Hastings due to the lack of interconnectivity [actions: improve weather forecasting data provision and response plans].

The company set up a gold command structure, lead by a director, as the severity of the incident became apparent. This allowed the company to pull in all the resources at its disposal. From Monday 5 March to Thursday 8 March ELT members were undertaking rota for gold command which included regular updates from the senior managers managing area based 'silver' command; emergency planning and customer communications, and supporting DEFRA updates. The CEO was regularly updated throughout. The company has been setting up a new improved incident command structure with improved record keeping and this was not used as training had not been completed [action: complete training].

The company worked cooperatively with the EA to allow summer sources to be used outside the normal licence conditions to augment supplies.

Alternative supplies were mobilised as consumers lost water. Priority was given to vulnerable consumers (including hospital and prisons) and doorstep deliveries to vulnerable customers were put in place where possible. Vulnerable customer lists were found to only cover a limited number of the actual vulnerable customers, other vulnerable customers were identified by local authorities and from vulnerable persons contacting the company at the time of the event, it is of concern that vulnerable customers do not let the company know [action: encourage vulnerable customers to let the company know] but the company acknowledges that vulnerable customers may not wish to let the company know and therefore the company should assume the vulnerable customers are around ten times higher than the number on its list and take swift action to identify them at the start of any incident. The company has a contract with water direct to supply bottled water and although supplies were provided these were not adequate for the size of the event and the demand from neighbouring companies. An additional bottled water supplier was found but this caused delays [action: review the supply of additional bottled water].

Communications to customers regarding the situation were both proactive and reactive and included advice as the cold weather started to take measures to avoid freezing / burst pipes. The scale of mainstream and social media interest was high

and across all companies in SE England. Radio and TV coverage was extensive and the company was able to use this to communicate with customers across the region. Social media is still a developing area and several issues were identified [action: improvements are needed to social media communications]. Further working with the sector to improve collective management of regional or national scale events – for example via the extreme drought exercise which is scheduled from 9 April – including use of bulk transfer, system connectivity, mutual aid of resources and skill sets.

The event took place over the weekend and contact with businesses was therefore difficult and leakage in business premises may not have been stopped until Monday, the company could hold records of premises keyholders on a voluntary basis [action: review options to hold keyholder information for non-residential properties]. Interactions with Local Resilience Forums were patchy [action: the company to include LRF in incident exercises and ensure that contacts are kept live]. Wash up meeting with LRF are underway and the outcomes will be incorporated into company plans.

Compensation above the regulatory minimum was paid to customers who suffered loss of supply during the event.

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

The company is currently undertaking a large programme of refurbishment of assets to improve water quality and resilience which the company is committed to improve consumer service. A consequence of these works is a short term reduction in output. The company tries to plan these works at periods of low demand and a sudden increase in demand during the winter caused the outages in Hastings and Crawley.

The company's policy to have a technician attend water treatment works after a shutdown has improved water quality but under the circumstances of this event slowed the response down.

The company acknowledges that the command structure used during the event can be improved and is rolling out a new structure and process. More exercises using the new structure will also improve links with LRF and other key stakeholders.

Lists of vulnerable customers and keyholders for commercial premise could be improved. The company also has to ask for additional vulnerable customers list as soon as an event is identified.

Bottled water provision is reliant on a central hub and further alternative suppliers need to be identified and contracted to supply.