



Weathering the storm II

Improving UK resilience to severe winter weather

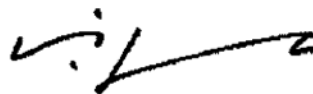
Foreword

The harsh winter that persisted across much of the UK from December 2009 until March 2010 once again tested the ability of the country's transport networks, public services and local economies to operate under a prolonged period of exceptionally cold weather and significant snowfall.

Following the winter of 2009, the Local Government Association report *Weathering the storm – Dealing with adverse winter weather in the UK*, made recommendations on how we, as a country, can be better prepared for winter weather. Many of those recommendations have already been taken on board by councils and all remain valid and relevant as we look to future winters. But in line with local government's commitment to continually improve the services we provide to our communities, we have again reviewed the impact of events and sought to learn further lessons on how we as a country can improve our resilience to extreme winter weather.

In doing so, we have drawn on the numerous lessons learned and processes that councils across the country have been engaged with. We have had feedback from individual councils and taken evidence from other service delivery partners, transport operators, salt suppliers and the business community. I'd like to thank all those who gave their time on two very hot days in May and June to recount their experiences of much chillier times.

The recommendations in this report include actions for government, salt suppliers, councils and their partners. We have looked at how to improve local planning resilience in the salt supply chains as well as mutual aid arrangements and the co-ordination of re-supply. All these actions will ensure our transport networks, local economies and essential services are not at risk of grinding to a halt when unusual weather happens.



Cllr David Sparks, OBE

Chair of Local Government Association
Regeneration and Transport board

Executive summary

Following their experience of the cold winter of 2008/09, most councils had reviewed their winter service plans and revised their stock holding and treatment practices. Generally, authorities felt that they had robust plans in place and performed well given the difficult circumstances they faced, but were forced to compromise on normal standards due to the salt supply issues.

Expectations and responsibility

Business, service providers, transport operators and individuals say they would like councils to engage more with them on where the local priorities for gritting are to ensure that they know what to expect and can make appropriate arrangements, including taking on responsibility for clearing roads or footways themselves.

Recommendations

1. Councils, local transport operators, service providers and businesses should work together to review winter resilience plans to ensure that they reflect priority needs locally. This should include co-ordination of policies and plans across administrative borders to ensure consistency in the way that road networks are treated and services are delivered.
2. Councils should provide clear information to the public and local partners on the levels of service they can expect in the

event of severe winter weather, both in advance of the winter and during periods of exceptionally cold weather.

3. Service providers and businesses should also review their contingency plans to ensure that they can respond effectively in the event of reduced road networks and suspension of services.
4. The government should issue clear and unequivocal advice to individuals and organisations that they will not be at risk of litigation should they clear footways themselves. If, as we saw last winter, government lawyers feel unable to advise Ministers to give such guidance, the government should bring forward legislation to clarify the position.

Need for more resilience in the supply chain

Councils had significantly increased the amount of salt held in stocks, but the duration and severity of the winter far exceeded reasonable stock levels in many areas. It is therefore inevitable that during hard winters, there will continue to be significant demand for additional supplies to replenish stocks, unless stock levels are always held at levels vastly higher than has ever been the case in the past. That would not represent value for money or prudent planning.

The UK salt supply chain is not sufficiently resilient to respond to a sudden increase in demand. The supplier base is very small and there is a perception that the main firms concerned do not have the managerial or mechanical capacity to expand production at times of high demand. Furthermore, salt suppliers find it logistically difficult to follow delivery advice from Salt Cell and to get “just in time” deliveries to those that need them.

Recommendations

5. The government should recognise that salt supply is a strategic resilience issue, make it clear to the firms involved that that is the government’s view, and liaise with suppliers during the spring and summer to ensure that the suppliers have business continuity plans in place for the prospect of a winter of high demand.
6. Salt suppliers should improve communications with their customer base to ensure that even in times of high demand or when Salt Cell is in operation, they can provide accurate information about the size and timing of deliveries to councils. This is essential in assisting councils in making mutual aid arrangements and improving the possibility of joining up orders and deliveries to groups of councils in an area.
7. The government should secure an agreed way of working with the salt suppliers in emergency situations, which clearly defines how they will use the information provided by Salt Cell and how they will communicate with the customer. Government should reserve the right to intervene and provide logistical and communications support to the suppliers if they fail to keep to these commitments, and should hold a contingency plan for how it will do so.
8. Before next winter, the Department for Transport (DfT) should review the Salt Cell process and publish clear terms of reference, the framework for operation and trigger conditions in case Salt Cell process should be required in future.



Partnership working to improve resilience

In many areas of the country, councils used mutual aid and partnership working with each other and the Highways Agency to ensure that no area ran out of salt. In some areas, notably London, councils built on mutual aid arrangements to co-ordinate stocks and supplies on a sub-regional basis. As a result, the London boroughs were less vulnerable to supply shortages and were able to direct stocks where they were needed throughout the capital.

Given the difficulty suppliers have with getting supplies to where they are needed across the country, local areas should consider the case for holding strategic stocks at the sub-regional or regional level to smooth distribution and supply problems in future winters. In-season re-supply would still be required, however it would be logistically easier to supply a smaller number of partnerships, leaving councils within the region or sub-region to decide how to prioritise the strategic stockpile.

Such partnerships could also be used to coordinate treatment of road networks and allow joining up of services across council boundaries and between delivery partners to achieve more consistency in treatment of roads and usage of salt as well as better coverage of services.

Recommendation

9. Groups of councils, supported by the government as appropriate should make arrangements for strategic reserves of salt held at sub-regional or regional level to be used to smooth distribution and supply problems during times of high demand. The geographical coverage and size of these reserves should be decided by the councils within the constituent area and arrangements for its use made locally.

Preparing for winter 2010/11

The Department for Transport has asked highways authorities to inform them of their re-stocking requirements in advance of the 2010/11 winter. DfT will use this information to ascertain whether UK salt suppliers are able to meet expected demand and to make alternative arrangements for additional supplies if necessary. Most councils have already submitted this information, others have been revising stock holding policies as part of local reviews of winter service plans.

Recommendation

10. Where they have not already done so, councils should let DfT know of their salt re-stocking requirements as soon as possible to ensure we enter next winter as well prepared as possible.

Introduction

The winter of 2009/10 was the most severe many areas of the country had seen in nearly thirty years. The fact that it followed on from a harsh winter in 2008/09 has highlighted the importance of ensuring that the country is more resilient to such weather events, even if they prove to be relatively uncommon in future.

The local government sector, in its ongoing quest to improve public services, is again seeking to learn from the experience of the last two winters. Councils across the country have been reviewing the way they prepare for and react to winter weather. The Local Government Association's review has been informed by evidence from local authorities and key stakeholders including salt suppliers, public transport bodies, business, the National Association of Head Teachers, Association of Directors of Adult Social Services and Government Office regional resilience teams. Our aim has been to help councils improve their policy and practice in dealing with winter weather and to address issues of resilience in the salt supply chain. The experience of the last two winters has also highlighted the importance of looking at the wider resilience of public services and business and public expectations of service continuity.

We have therefore looked at where the responsibility for resilience to severe winter weather lies and where it should lie between local authorities, other service

providers, businesses and individuals. Our recommendations include proposals for improvements in local resilience planning, and strengthening resilience in the salt supply chain and on how co-ordination arrangements for resupply and mutual aid can work more effectively.

1. Councils' response to severe winter weather

How well had councils' prepared for the winter 2009/10?

Following their experience of the cold winter of 2008/09, most councils had reviewed their Winter Service operations taking on board the recommendations of the UK Roads Liaison Group (UKRLG) review. Feedback from councils was that the *Well-maintained Highways Code of Practice*, which was updated in the light of the UKRLG recommendations, provides an excellent source of guidance, advice and good practice. Some areas had not had time to complete all recommendations in advance of 2010/11 winter. Nevertheless, our evidence suggests that the vast majority of councils had revised plans and increased their stock levels, many held stocks far in excess of the six days supply recommended by the UKRLG's review.

Total stock held at the beginning of the season was in excess of 750,000 tons, as compared to 490,000 tons in 2008/09

(figures do not include information for London or the North East as we were unable to access these for both 2008/9 and 2009/10). On average, the cost of treating the roads in 2009/10 was 49 per cent higher than the bill in 2007/08.¹

In their evidence to the Local Government Association, salt suppliers, motorist organisations and business all agreed that a single minimum standard for salt stocks would not provide an effective solution to the problems councils experienced during the last two winters. Factors such as distance from the source of supply, weather predictions and local topography as well as capacity to store salt will have a bearing on appropriate levels of stock.

A survey carried out for the Local Government Association review attached as Annex C shows that even though councils had considerably increased their stocks, the need for re-supply was inevitable given the length of time councils had to treat the roads. The cold period affected large parts of the country from the middle of December until the beginning of March. The coldest period lasted for four weeks from 17th December to 15th January. On average, councils were required to grit for 73 days this winter.

¹ Local Government Association survey of Highways Authorities May 2010

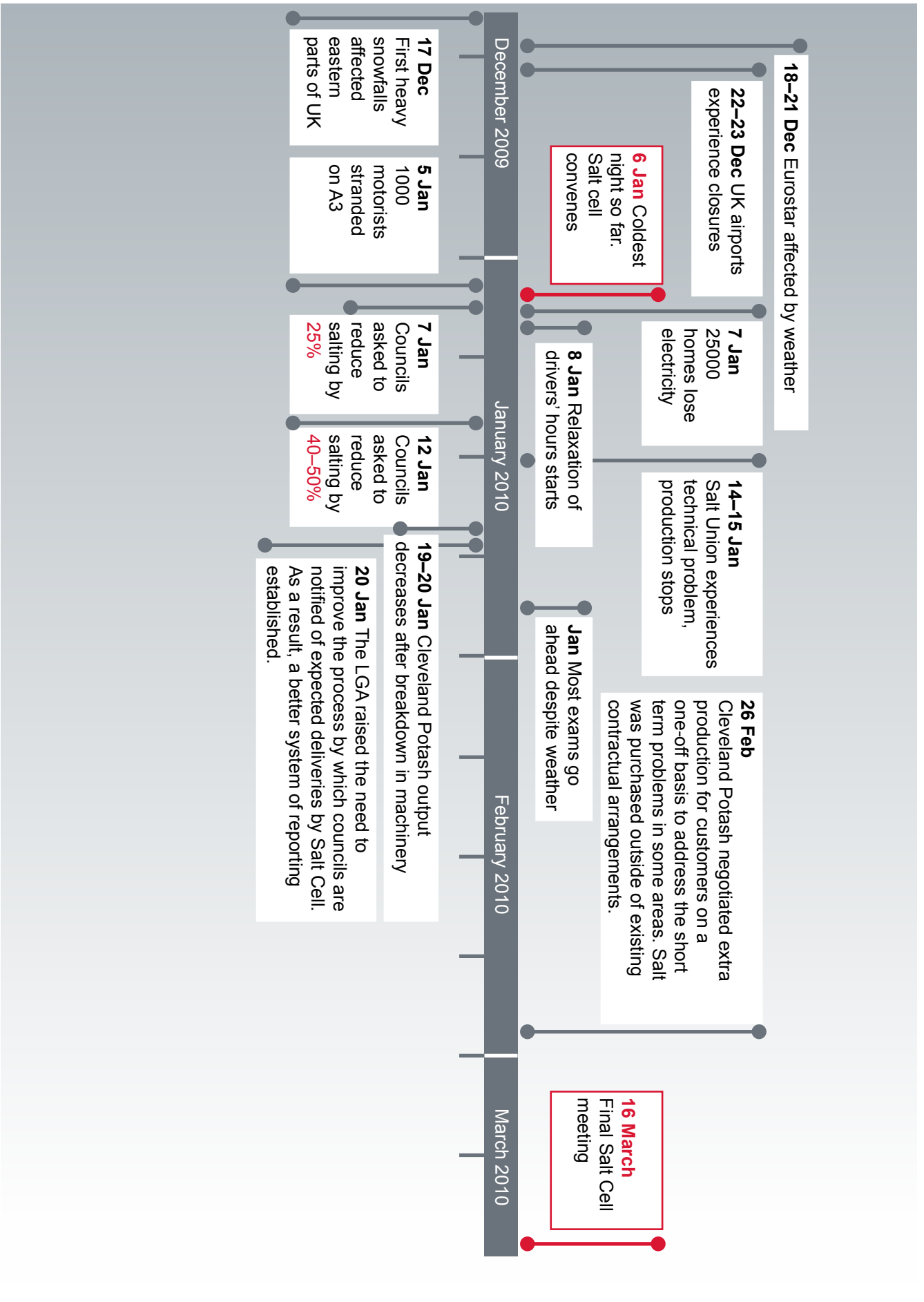
Councils began to experience difficulties in obtaining salt from suppliers in the lead up to the Christmas holidays. By the beginning of January, many areas were facing extreme shortages of salt. Salt suppliers were unable to keep up with orders for re-supply and government took the decision on 6th January to convene the 'Salt Cell' in order to prioritise deliveries.



Number of days on which it was necessary to treat all or part of the road network in the winter season 2009/10	
	Days
Normal (eg to deal with frost)	ranges from 13 to 100 with an average of 55
Heavy (eg to deal with heavy snow)	ranges from 0 to 96 with an average of 16
Total	ranges from 18 to 161 with an average of 73

Source Local Government Association survey of Local Highways Authorities May 2010

Winter weather timeline January – March 2010



On 8th January, the Secretary of State asked councils and the Highways Agency to reduce their salt usage by 25 per cent in order to conserve salt. On the 12th January, this was increased to a 40 – 50 per cent reduction. Information fed back to Salt Cell demonstrated that the vast majority of councils cooperated with this request. They did this by reducing spread rates, mixing more grit in with the salt and further reducing the networks they treated. These efficiencies were greater than those managed by the Highways Agency who reduced their salt usage by 35 per cent. Councils were helped by the valuable advice on how to conserve salt stocks produced by ADEPT². The experience has also led to many areas re-thinking practices for road treatment which they plan to take on board on a permanent basis.

Mutual aid and partnership working

Mutual aid between councils and between councils and the Highways Agency played an important part in ensuring that no area ran out of salt. For those areas with some available stocks, willingness to enter into mutual aid was tempered by uncertainty about when they might receive further supplies themselves, particularly, as happened in a number of cases, when promised deliveries failed to materialise when expected due to logistical issues with the suppliers. In addition, councils were keen to ensure that all possible measures to reduce salt usage and conserve stocks were in place in areas applying for mutual aid before making stocks available. A number of areas are now seeking to put in place frameworks for mutual aid with surrounding authorities which include agreements on

² ADEPT is the Association of Directors of Environment, Planning and Transport, formerly known as CSS

conservation of stocks in times of supply shortages. Councils have suggested that this be incorporated into the *Well-maintained Highways Code of Practice* to encourage all areas to put similar arrangements in place.

Partnership working in London

Following their experience in February 2009, London has established London-wide arrangements for responding to severe weather conditions. The London Local Authority Co-ordination Centre (LLACC) linked key local authority winter service and emergency planning staff with professional partners in the emergency services and transport sector. In particular, Transport for London's London Streets Traffic Control Centre which played a key part in keeping London moving. Originally established for response to high-impact, spontaneous incidents, it is recognised that the LLACC fulfilled a broadening role in regional severe weather co-ordination by facilitating mutual aid sharing, compiling daily reports, producing stock projections to inform allocations, and maintaining the regional picture through effective information-sharing.

Impact on wider services

Councils' faced many challenges during the recent winter weather, not only in keeping the road transport system going but also in delivering vital services. There were several areas in which business continuity arrangements were particularly tested. These included the delivery of adult social care, difficulties with bin collections, and closure of day centres, schools and other services. However, most councils noted that the preparations made for swine flu stood them in good stead and helped communication with providers and the ability to identify

vulnerable people. A number of areas used text messaging services to inform parents of school closures for example.

The importance of schools remaining open became particularly apparent during the cold weather. Schools closures due to staffing, transport and the condition of school grounds meant parents were unable to go to work which impacted heavily on businesses. Councils, schools and businesses suggested that contingency arrangements could be made between schools in a local area so that when travel is disrupted, teachers could be re-directed to their nearest school to help deal with staffing shortages, helping to keep schools open.

There was some public perception that schools were taking the decision to close because of fear of low attendance negatively impacting on Ofsted targets. Whether there is any truth in this perception is unclear, but we would argue that in the case of extreme events, Ofsted and other regulatory targets should be suspended to enable the most appropriate response to be taken locally.

Though it is difficult to quantify, undoubtedly icy pavements led to an increase in falls and broken limbs increasing pressure on the NHS, and anecdotal evidence of more insurance claims.

Further details of how services were affected and councils' response are given in Annex B of this paper.

2. Expectations and responsibilities

Public expectations

Local Government Association polling on 16th January revealed that in general, the public understood that councils need to prioritise treatment of roads during severe winter weather.

Local Government Association poll on attitudes to winter weather

The Local Government Association commissioned a ComRes poll to look into people's attitudes about the winter weather experienced in 2009/2010. They interviewed 1004 UK adults by telephone between 15th and 17th January 2010.

The results of the survey are as follows:

- 61 per cent do not want to pay more council tax to pay for larger stockpiles of salt and grit
- 45 per cent do not want other council services to receive less money to pay for larger stockpiles of salt and grit
- 57 per cent agree that Britain rarely sees winters as severe as the current one and that it would be inappropriate to spend more money preparing
- 68 per cent think businesses should have better plans in place to help people work from home during severe weather
- 66 per cent think the priority during bad weather is to keep priority routes open, compared to 11 per cent for motorways
- 59 per cent would support a law to require people to clear snow outside their home
- 73 per cent also support a separate law to protect people from any subsequent litigation from people who slip over
- 80 per cent thinks the government is too reliant on the existing salt suppliers, and
- 87 per cent believe a wider range of suppliers should be invested in.



Nevertheless, media coverage and feedback we have had from service providers demonstrates that in many places expectations exceeded councils' ability to keep roads and footways clear.

The Local Government Association survey shows that people are reluctant to pay additional taxes or divert resources from other services to hold large stockpiles of salt. This is supported by feedback from councils and others who gave evidence to the Local Government Association, which demonstrates that for the most part, people understand that during the severe weather it is necessary for councils to prioritise parts of their road network to treat.

This view was one shared in principle by different departments within government during the crisis and by those sectors we spoke to in our evidence sessions. However, when it came to the identifying priorities, each service area or sectoral interest believed that they should be given priority – eg access to stations, bus depots,

access routes to schools, hospitals, industrial parks, retail facilities. It is clear that the right priorities can only be identified at the local level. Councils will need to work closely with local partners (schools, health and social care services, transport operators and local businesses) to agree priorities for winter maintenance.

Councils also highlighted the importance of ensuring that winter weather resilience plans both draw on and inform wider emergency and resilience planning undertaken by councils, their delivery partners and local businesses. Councils reported that contingency plans for swine flu were useful in responding to the winter weather. Equally, the contingency plans in response to reduced road networks will be pertinent to dealing with flooding as much as for snow and ice.

In reviewing the winter service plans, councils and their partners should also examine their consistency with wider policies to ensure that as far as possible, road clearance practices reflect broader policy objectives. For example, active travel (walking and cycling) and access to public transport have become core components of transport policy and given major emphasis not only for transport but also for health and social inclusion reasons, tackling the obesity epidemic, assisting the elderly to lead an active life. Closure of paths, pavements, cycle-ways and access to public transport in periods of severe weather risks undermining the priority policies that councils put significant efforts into during the rest of the year. A more joined up approach to snow clearance that encourages local organisations and individuals to take a more active role would help to ensure more footways and cycle-ways are kept clear.

A further issue, highlighted by bus operators and by Government Offices in particular, is

that councils need to work together to ensure consistency in the way in which roads that cross local authority boundaries are treated. Feedback from councils suggests that this did take place in many areas, but it should be a consideration in the review of winter service plans and will require councils to work with neighbouring authorities and the Highways Agency to co-ordinate information on treatment and condition of road networks that cross borders.

Responsibility for snow clearance

Though priority routes were, for the larger part kept open, given the prolonged period of extreme weather and the shortage of salt, many minor roads and pavements remained untreated for the duration of the cold weather. Public service providers and businesses see responsibility for snow clearance as resting for the most part with the local authority. On average, councils treat about 45 per cent of their network under normal conditions and in prolonged severe weather conditions this will have to be reduced. There needs to be greater understanding on the part of the public that councils are not able to treat all roads and footways, and greater mobilisation of community resources and self-help is needed to keep more footways in particular, clear.

This should include engaging voluntary and community resources, making use of parish councils, individual householders, farmers and local businesses to clear snow and ice and ensure the resilience of the local community. Councils have suggested that the *Well-maintained Highways Code of Practice* should include advice on how other responsible authorities such as district councils, NHS bodies and transport

operators could take responsibility for car parks and access roads to ensure safe access to facilities. Arrangements could also include re-deploying staff from other services to help clear snow and ice, for example when refuse collection is suspended due to bad weather, staff could be trained to clear roads and footways that would not otherwise be treated.

The impact of severe weather on the delivery of other services, notably health, social care and education has led providers in some areas to take on more responsibility for ensuring the council can meet their service needs, to avoid dealing with the costs of the impact down the line, as the example below from Durham shows.

County Durham partnership working for winter maintenance

Following the winter of 2008/09, Durham County Council conducted a review of their winter service plan in consultation with the public and partner organisations including Durham Constabulary, County Durham and Darlington Fire and Rescue Service, County Durham NHS (PCT), town and parish councils, and both the Voluntary and Private sectors. The review resulted in an Action Plan for improvements to winter service, with the PCT contributing £1m over 2009/10 and 2010/11 to cover the revenue costs and capital costs of treating additional routes.

A significant barrier to self-help highlighted by the media during the winter period is the fear of litigation should an injury or accident occur after an individual or organisation has cleared snow and ice from an area. The Local Government Association's opinion poll showed a very high level of support (73 per cent) among the public for a law to protect people from prosecution if they clear

pavements. During the severe weather, the Local Government Association and others asked the government to make a clear statement on the legal position to provide reassurance to the public, however this was not forthcoming. This should be addressed before next winter.

Business representatives from the Federation of Small Businesses did not feel that businesses would be willing to take on more responsibility, or contribute to the costs of clearing access to industrial estates or shopping areas as they expect to get this service in return for taxes. They recognised that not all parts of the network could be treated, but wanted to be consulted in greater detail about local business needs and priorities. Business representatives also recognised that more could be done to ensure that access to their own premises (footways outside shops for example) was cleared (again, reassurance that they would not be liable to litigation would help with this).

Transport operators for the most part indicated a willingness to play a greater role in keeping access roads to stations and bus depots free of ice and snow with rail and train operators often holding their own salt stocks already. Many of them experienced similar difficulties in accessing salt supplies to carry out their usual clearance practices, due to shortages which limited their ability to clear access roads and footways. They also highlighted the importance of clarity about which routes would/would not be cleared by the local authority to assist them in prioritising their own treatment.

Communications

All those we consulted agreed that good communication, both about community needs to inform prioritisation and about what would be/would not be treated, was key to allowing individuals and organisations to treat particular areas themselves, and improve their own continuity planning.

It is clear that in many areas, such discussions between councils, other service providers, local businesses and the public do take place. Many councils had also reviewed their communications plans and produced information for businesses and the public including information on which parts of the network would be treated and the level of service they should expect. County Durham, for example, produced a *Guide to Winter Services* which was sent to residents in advance of the winter season, and continually updated on their website throughout the cold period³.

Recommendations

1. Councils, local transport operators, service providers and businesses should work together to review winter resilience plans to ensure they reflect priority needs locally. This should include coordination of policies and plans across administrative borders to ensure consistency in the way that road networks are treated and services are delivered.
2. Councils should provide clear information to the public and local partners on the levels of service they can expect in the event of severe winter weather both in advance of the winter and during periods of exceptionally cold weather.

³ See www.durham.gov.uk/Pages/Service.aspx?ServiceId=561.

3. Service providers and businesses should also review their contingency plans to ensure they can respond effectively in the event of reduced road networks and suspension of services.
4. The government should issue clear and unequivocal advice to individuals and organisations that they will not be at risk of litigation should they clear footways themselves. If, as we saw last winter, government lawyers feel unable to advise Ministers to give such guidance, the government should bring forward legislation to clarify the position.

3. The supply chain

The UK relies on three main salt suppliers, with the two largest, Salt Union and Cleveland Potash supplying 85–90 per cent of the UK market. During the winter of 2008/09 it became evident that the supply chain was insufficiently resilient to cope with sudden increases in demand for salt. Part of the problem is the suppliers' inability to increase mining capacity to meet their call off arrangements with local authorities. There is a perception that the salt producers do not have the technical or managerial capacity to expand production at times of high demand. The other significant issue is a logistical one – the difficulties of accessing sufficient haulage capacity to move supplies to where they need to be. Winter 2009/10 saw a repeat of the problems experienced the previous year. Salt suppliers were again reliant on advice from the Salt Cell to prioritise deliveries according to needs.

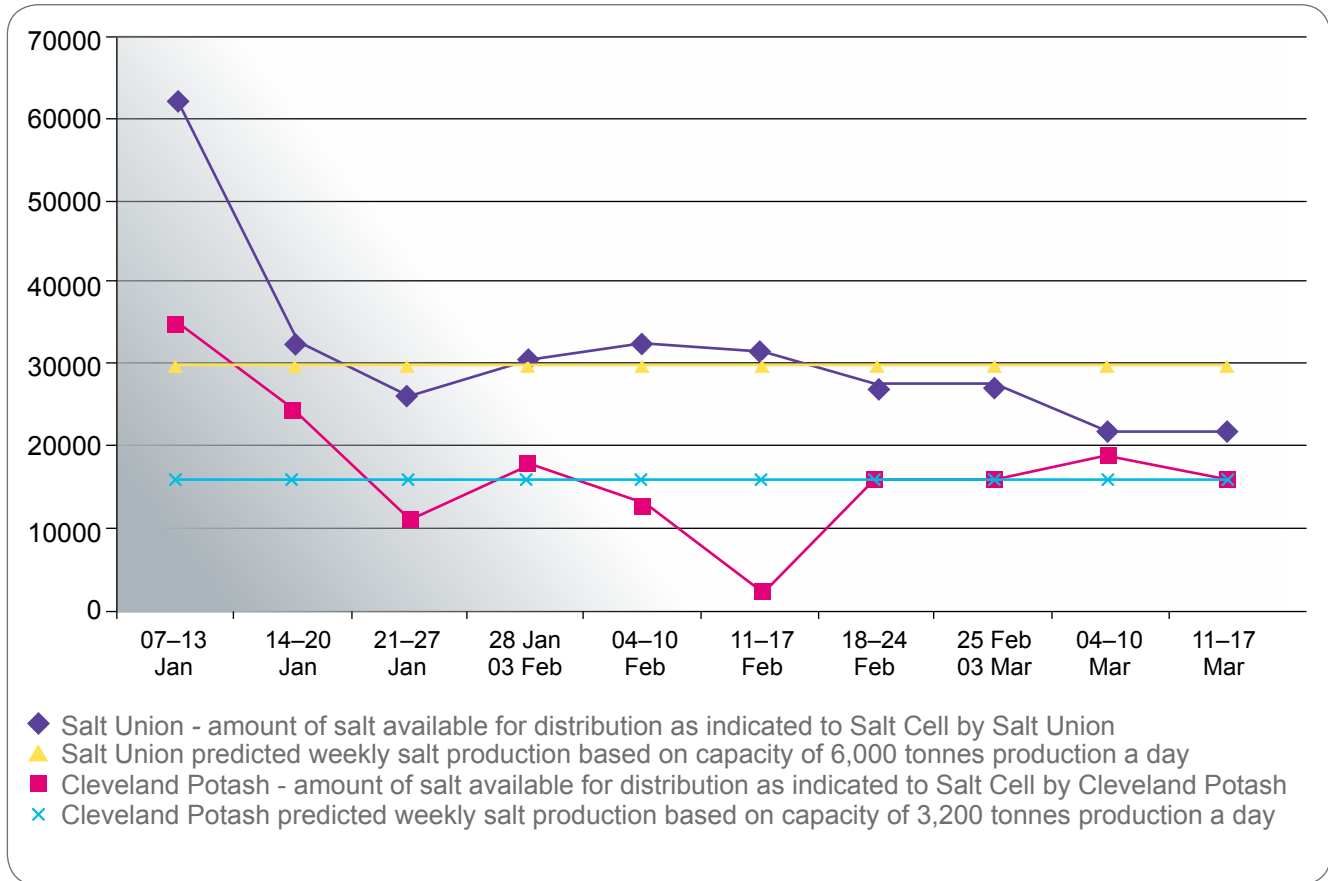


What happened to supply?

According to information provided by the Salt Cell, Salt Union can produce up to 6,000 tons of salt per day. Cleveland Potash usually produces around 3,200 tons per day, though production is less even as it is complicated by the requirement to produce potash as well as salt and they have less flexibility about scheduling sea transport for deliveries.

It has not proved possible to get accurate information about exactly how much salt was produced during the winter. The graph on page 14 is based on the advice given by Salt Cell to the suppliers, but comprehensive information from suppliers about what was produced and delivered on a day to day basis is not available from Salt Cell records. We recognise that salt suppliers are private companies and as such, provision of some information is circumscribed by commercial confidentiality. However we believe there is a need for more clarity and transparency about supplier operations and how they responded to advice from Salt Cell.

Salt availability during Winter 2010



The graph does illustrate that expected supply levels fluctuated significantly and were affected by the amount of salt the suppliers had stockpiled, mechanical problems at the mines and ability to access necessary transportation.

There were a number of mechanical problems and breakdowns at the two main suppliers during the winter period. These disruptions included an essential repair to the Salt Union ventilation system halted production for a day on 15th January. Production at the Cleveland Potash mine was affected on 19th January as a result of a 48 hour breakdown in machinery and a burst water pipe under a rail line used for distribution. In their evidence to the Local Government Association, Salt Union described these incidents as mechanical rather than major issues, and that full operations were resumed within 24 hours.

Another difficulty cited by the suppliers, was a logistical one of getting sufficient lorries to deliver salt to the parts of the country that needed it most urgently. Cleveland Potash said that logistical transport issues were the major reason they were unable to follow advice from Salt Cell on how they should prioritise deliveries. These issues were also obviously of concern to the DfT as they commissioned an assessment of the suppliers' delivery information process to shed light on where the breakdowns have been between the setting of advisory priorities at Salt Cell and councils receiving salt deliveries. The consultants' report left some big issues unanswered, for example, on whether one of the suppliers used the advisory lists to amend delivery plans, the report concluded that, "the extent to which this is done remains unclear".

Neither did the report address suppliers' communications with councils. This was a significant issue raised by councils who reported that expected deliveries did not turn up on the day promised or that they received less stock than they had been told to expect without communication or explanation from the suppliers.

Failure to deliver supplies according to Salt Cell advice meant that areas most in need of salt did not get the necessary resupplies, and hampered mutual aid agreements (because councils could not rely on replenishing stocks). It also represented a risk to the credibility of the Salt Cell, particularly when DfT negotiated a deal with one of the suppliers to provide additional supplies at a premium to customers who had been on Salt Cell advisory lists, but had not received deliveries.

In their evidence to the Local Government Association, the suppliers told us that they see themselves as a critical part of the national infrastructure required to deal effectively with severe winter weather events. Salt Union also shared with us the actions they propose to take to avoid problems of the last two winters, which include improving communications with their customers and investing in mining capacity. This is a welcome response and one which we hope will be followed by other suppliers. However, central government also needs to recognise that salt supply is a strategic resilience issue. As such they should ensure that salt suppliers have contingency plans in place for periods of exceptionally high demand. This would help provide clarity to inform councils and other customers' contingency planning.

Recommendations

5. The government should recognise that salt supply is a strategic resilience issue; make it clear to the firms involved that that is the government's view; and liaise with suppliers during the spring and summer to ensure that the suppliers have business continuity plans in place for the prospect of a winter of high demand.
6. Salt suppliers should improve communications with their customer base to ensure that even in times of high demand or when Salt Cell is in operation, they can provide accurate information about the size and timing of deliveries to councils. This is essential in assisting councils in making mutual aid arrangements and improving the possibility of joining up orders and deliveries to groups of councils in an area.
7. The government should secure an agreed way of working with the salt suppliers in emergency situations which clearly defines how they will use the information provided by Salt Cell and how they will communicate with customer. Government should reserve the right to intervene and provide logistical and communications support to the suppliers if they fail to keep to these commitments; and should hold a contingency plan for how it will do so.

Central Coordination – the Salt Cell

Following the events of February 2009, there was a general consensus that every possible action should be taken to avoid a situation where a central prioritisation process was necessary in future. The Local Government Association and others also recommended that the government set out a process for the triggering, membership and operation of Salt Cell in the event that it should be required as a measure of last resort. Though for the large part, Salt Cell operated more effectively than it had done the previous year, councils again had concerns about clarity of roles and operations, transparency of decision making and communications. No clear criteria had been set for triggering Salt Cell and a number of councils thought it should have been triggered earlier. As discussed above, there were some perceptions that suppliers were using advice from Salt Cell to secure a higher price for salt. Decisions about procuring additional supplies from overseas took a long time to materialise.

Recommendation

8. Before next winter, DfT should review the Salt Cell process and publish a clear terms of reference, framework for operation and trigger conditions in case Salt Cell process should be required in future.

A more resilient supply chain through strategic stock holding

As discussed previously, in many areas of the country, councils used mutual aid and partnership working with each other and the Highways Agency to ensure that no area ran out of salt. In some areas, notably London, councils built on mutual aid arrangements to coordinate stocks and supplies on a sub-regional basis. As a result, the London boroughs were less vulnerable to supply shortages and were able to direct stocks where they were needed throughout the capital. They were also able to coordinate services and emergency response to make most effective use of accessible resources.

Given the difficulty suppliers have with getting supplies to where they are needed across the country, local areas should consider the case for holding reserve strategic stocks at the sub-regional or regional level to smooth distribution and supply problems in future winters. In-season re-supply would still be required. However it would be logistically easier to supply a smaller number of partnerships. In addition, it would make requirement for a central Salt Cell process less likely, leaving councils within the region or sub-region to make arrangements for how the reserve stocks could be used in times of high demand.

A number of areas across the country are already exploring the possibility of holding joint reserves and potentially joint procurement of salt. Such partnerships could also be used to coordinate treatment of road networks and allow joining up of services across council boundaries and between delivery partners to achieve more consistency in treatment of roads and usage of salt as well as better coverage of services.

Recommendation

9. Groups of councils, supported by the government as appropriate should make arrangements for strategic reserves of salt held at sub-regional or regional level to be used to smooth distribution and supply problems during times of high demand. The geographical coverage and size of these reserves should be decided by the councils within the constituent area and arrangements for its use made locally.

Preparing for winter 2010/11

The Department for Transport has asked highways authorities to inform them of their re-stocking requirements in advance of the 2010/11 winter. DfT will use this information to ascertain whether UK salt suppliers are able to meet expected demand and to make alternative arrangements for additional supplies if necessary. Most councils have already submitted this information, others have been revising stock holding policies as part of local reviews of winter service plans.

Recommendation

10. Where they have not already done so, councils should let DfT know of their salt re-stocking requirements as soon as possible to ensure we enter next winter as well prepared as possible.



Annex A

Summary of recommendations

1. Councils, local transport operators, service providers and businesses should work together to review winter resilience plans to ensure they reflect priority needs locally. This should include coordination of policies and plans across administrative borders to ensure consistency in the way that road networks are treated and services are delivered.
2. Councils should provide clear information to the public and local partners on the levels of service they can expect in the event of severe winter weather both in advance of the winter and during periods of exceptionally cold weather.
3. Service providers and businesses should also review their contingency plans to ensure they can respond effectively in the event of reduced road networks and suspension of services.
4. The government should issue clear and unequivocal advice to individuals and organisations that they will not be at risk of litigation should they clear footways themselves. If, as we saw last winter, government lawyers feel unable to advise Ministers to give such guidance, the government should bring forward legislation to clarify the position.
5. The government should recognise that salt supply is a strategic resilience issue; make it clear to the firms involved that that is the government's view; and liaise with suppliers during the spring and summer to ensure that the suppliers have business continuity plans in place for the prospect of a winter of high demand.
6. Salt suppliers should improve communications with their customer base to ensure that even in times of high demand or when Salt Cell is in operation, they can provide accurate information about the size and timing of deliveries to councils. This is essential in assisting councils in making mutual aid arrangements and improving the possibility of joining up orders and deliveries to groups of councils in an area.
7. The government should secure an agreed way of working with the salt suppliers in emergency situations which clearly defines how they will use the information provided by Salt Cell and how they will communicate with customer. Government should reserve the right to intervene and provide logistical and communications support to the suppliers if they fail to keep to these commitments; and should hold a contingency plan for how it will do so.
8. Before next winter, DfT should review the Salt Cell process and publish a clear terms of reference, framework for operation and trigger conditions in case Salt Cell process should be required in future.

9. Groups of councils, supported by the government as appropriate should make arrangements for strategic reserves of salt held at sub-regional or regional level to be used to smooth distribution and supply problems during times of high demand. The geographical coverage and size of these reserves should be decided by the councils within the constituent area and arrangements for its use made locally.
10. Where they have not already done so, councils should let DfT know of their salt re-stocking requirements as soon as possible to ensure we enter next winter as well prepared as possible.

Annex B

Examples of impact on wider services and councils' response

Adult Social Care

For adult social care departments, bad weather brought additional demands for care (ie the active elderly who were not usually vulnerable), but this was matched by a reduction in councils' ability to deliver their adult social care commitments, experiencing problems with staff shortages, day centres closing and a reduction in non-essential services.

What did councils do?

Most councils kept their critical services open and running, despite the adversity of the weather conditions. Business continuity plans were activated in all local authorities, helping councils to reach the most vulnerable people. Actions taken by councils and their partners included:

- making 4x4s available to assist domiciliary care provisions
- many councils set up emergency helplines and actively contacted vulnerable people (such as those who lived alone, were over 65 or were blue-badge holders)
- out of hours arrangements were strengthened and extended
- coordination of services and visits by social care, police and health services meant fewer individual visits were needed

- local press teams encouraged people to check on their older neighbours or those with mobility problems who would not necessarily receive a social care service.

Closure of Services

Councils had to close many non-essential services to prioritise services for those who were most vulnerable in the winter weather. In most areas, museums, libraries and leisure centres were closed as business continuity plans were implemented. Many councils also lost key suppliers/contractors.

What did councils do?

Staff absences were dealt with in most places by IT systems which had been put in place after last year's winter weather to enable staff to work from home. Most staff made a huge effort to get into work and deliver services. Also many services joined up to help reach those who were most vulnerable. For example, in some areas the Fire & Rescue service helped NHS staff get around, in others Environment Service 4x4s were used to support the police response in outlying areas and deliver Meals on Wheels.

Schools

At some point in the period of bad weather this winter, most schools were closed and school transport cancelled. There were several issues schools had to take into account, whether school routes had been gritted, school transport was running, sufficient staff could get in, likelihood of further bad weather during the day, safety of school grounds due to ice and snow and exams in the January period.

What did schools do?

Schools cannot formally close for long periods of time, due the potential impact on learning, so decisions are made on a day by day basis. However, alternative systems of learning have been put in place to allow children to continue their schooling from home computers in emergency situations. Schools developed these emergency procedures originally in response to the swine flu pandemic, but have found them equally effective for the winter-weather.

The Snowday website **www.snowday.co.uk/ScheduledMaintenance.asp** is another tool which schools have created to help strengthen communications between teachers and parents in times of, as the name suggests, extreme winter weather. During the examination period, councils worked extra-hard to keep routes to school open, and secondary schools were prioritised.

Waste Collection

Waste collection was suspended in most parts of the country, and was continually in a process of catch-up over the winter weather period. The snow caused the process to slow down due to many vehicle breakdowns and residential non-priority routes were inaccessible.

What did councils do?

At critical times, some councils cancelled waste deliveries and diverted those who would have worked on waste collection to the gritting teams.

When refuse vehicles could not access residential streets, additional crews were assigned to remove sacks and excess waste from around communal refuse bins. Staff were redeployed from task force duties and special uplift duties to work on uplifting excess waste from around communal bins, and also to manually clear waste from the top layers of communal bins until they can safely be accessed by refuse vehicles.

Annex C

Winter weather survey

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Background

In the winter season of 2009/10 there were a number of spells of heavy snow and ice, requiring local authorities to grit local roads and pavements. Local authorities are responsible for local roads but are not responsible for motorways and trunk roads (defined as the most strategic roads in the country). Transport for London looks after London's major roads. This survey sought to explore the quantity and frequency of gritting required from councils, how this compares to previous winters, and the financial implications of this weather.

Respondents and response rate

An online survey was sent to 174 local authorities in England and Wales with responsibilities for highways. 59 authorities responded giving a response rate of 34 per cent. Respondents were from a range of authority types and regions, as outlined in the tables opposite.

Frequency of treatment runs

Respondents were asked on how many days it was necessary to treat all or part of the road network in their authority in the winter season 2009/10. The number of days of normal gritting (ie that required to deal with frost) ranged from 13 to 100 days, with an average of 55 days (median average of 53 days). The number of days of heavy gritting (ie that required to deal with heavy snow) ranged from 0 to 96 days, with an average

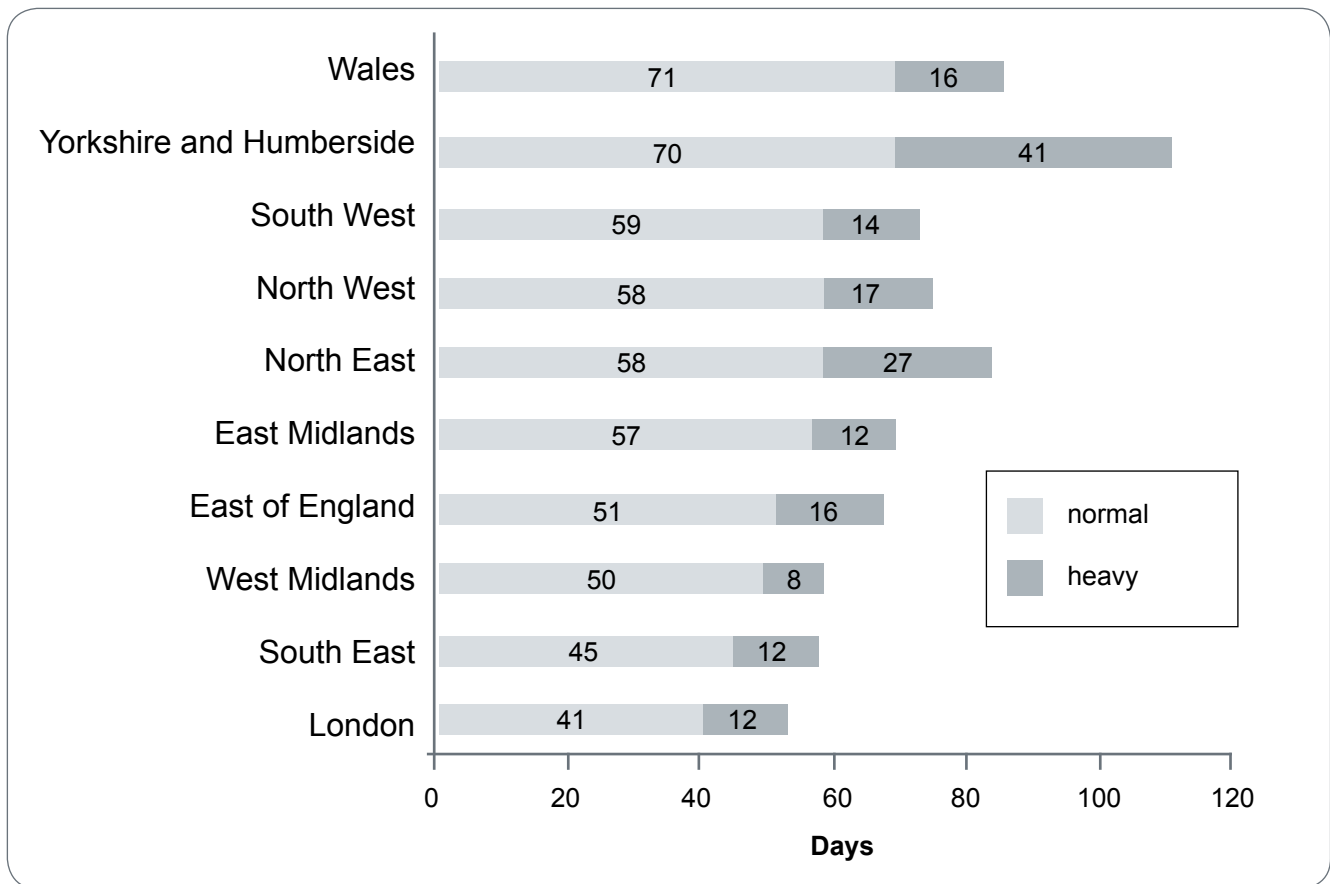
Table 1 Response rate by region			
Region	Respondents	All authorities	Rate
East of England	5	11	45%
East Midlands	3	9	33%
Greater London	10	33	30%
North East	4	12	33%
North West	6	23	26%
South East	6	19	32%
South West	4	16	25%
Wales	9	22	41%
West Midlands	7	14	50%
Yorkshire and Humber	5	15	33%
Total	59	174	34%

Table 2 Response rate by type			
Type	Respondents	All authorities	Rate
County	14	27	52%
London Borough	10	33	30%
Metropolitan District	14	36	39%
Unitary Authority	21	78	27%
Total	59	174	34%

of 16 days (median average of 13 days). This gives a total number of gritting days ranging from 18 to 161 days, with an average of 72 days (median average of 70 days⁴). Authorities in Yorkshire and Humberside reported the largest number of heavy gritting days, and the largest total number of gritting days.

⁴ Note due to averaging and incomplete responses this does not sum exactly

Figure 1 Days of normal and heavy gritting



In the winter season of 2009/10, councils made on average 95 treatment runs (with a median average of 87 treatment runs). It must be noted, however, that around a quarter of respondents indicated that these figures were estimates. The largest number of treatment runs were reported from authorities in the North East, Yorkshire and Humberside, and Wales.

Figure 2 Number of treatment runs



The vast majority of respondents (97 per cent) reported that they conducted more treatment runs than during an average winter. Where respondents indicated treatment runs were more frequent than for an average winter, they were most likely to report that there were Many more treatment runs (More than 50 per cent more runs), with just over a half (51 per cent) of respondents selecting this answer.

Table 3 Comparison of treatment runs with an 'average' winter	
Approximately how many more treatment runs did you have this year, compared to an 'average' winter?	% respondents
Slightly more treatment runs (up to 25% more)	11%
Moderately more treatment runs (26-50% more)	39%
Many more treatment runs (More than 50% more runs)	51%
Base	57

Salt supplies

Respondents were asked if they had bought additional supplies in the winter of 2009/10. The vast majority (95 per cent) of respondents reported that they had. The majority of respondents (71 per cent) acquired additional salt through their existing supplier. More used mutual aid than an overseas supplier.

Table 4 Additional salt supplies	
Please indicate which of the list below best indicates the supplier of your additional salt:	% respondents
existing supplier	71%
alternative UK supplier	7%
overseas supplier	6%
mutual aid	7%
other (please specify)	9%
Base	55

When asked about the price per tonne of salt their authority had paid in the winter season 2009/10, the price ranged from £18 to £50, with an average price in usual seasonal contracts of £29. However, at peak price for additional supplies (outside the normal contract) this increased to an average of £42 per tonne, with prices ranging from £20 to £95. The average ratio of usual:peak prices was 1:1.1, however in some areas peak price was over three times the usual price, with a maximum ratio of 1:3.6. However, again it is important to note that around one in six respondents indicated this price to be an estimate.

Respondents were asked to report in tonnes their authority's total salt usage over the winter season 2009/10. On average authorities used 10,000 tonnes, but usage

ranged from approximately 1,000 tonnes to 41,000 tonnes, with the greatest use being reported in the East of England, Yorkshire and Humberside and North East. However, a third of respondents indicated this was an estimate. Part of the regional variation in quantities of salt usage can be explained by regional variation in the mileage of roads that authorities are responsible for.

Figure 3 Salt usage (tonnes)



Total winter maintenance bill

Respondents were asked for their authorities total winter maintenance bill in 2009/10, both that which was budgeted and the actual bill. The budget ranged from £76,000 to £4,450,000 with an average of £1.1m. The actual spend, however, was significantly⁵ larger, ranging from £86,000 to £6,044,000 with an average of £1.6m. The average ratio of budget:actual spend was 1:1.6, however in some areas actual spend was over three times the budgeted spend, although mostly in areas with a smaller winter maintenance budget.

Respondents were then asked to compare this figure to that in 2007/8. The budgeted

actual winter maintenance bills for 2009/10 were both significantly⁶ higher than 2007/8, with average figures for budget and actual spend in 2007/8 of £1.01m and £997,000 respectively. The average ratio of budget 2007/8:budget 2009/10 spend was 1:1.1, however, the average ratio of actual 2007/8:actual 2009/10 spend was 1:1.8, and in some cases actual spend in 2009/10 was over three times higher than in 2007/8. However, it must be noted that 2007/8 was considered by some respondents to be a comparatively mild winter, with actual spend being less than budgeted spend in over half of authorities to respond.

⁵ As tested through a one sample t-test $p < 0.01$.

⁶ As tested through a one sample t-test $p < 0.01$.

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