



Briefing 10/44 August 2010

Interim Report from Winter Resilience Review of England

To: All contacts in England,

For information: All contacts in Scotland, Wales and Northern Ireland

Key issues

Winter of 2009-10 coldest for 30 years with significant challenges for council services.

Winter Resilience Review Interim Report issued in July 2010.

Recommendations to identify quick wins and improving resilience in time for winter 2010/11

1. APSE's evidence to the review

As part of the last APSE State of the Market Survey for Highways, Street Lighting and Winter Maintenance, the Great Salt Debate at the Roads and Highways Seminar and through other meetings and contact APSE has had with our members, views were collected regarding councils responses to the severe weather and the problems which arose. This was provided as evidence to the Winter Resilience Review on behalf of APSE members and is detailed in briefing 10/32.

The evidence gathered by APSE found that the main factors impacting on councils' ability to deliver services were

- the supply of salt
- driver hour's legislation
- the duration of the bad weather and
- communications and the need to keep interested parties updated on weather conditions.

APSE welcomes the fact that this evidence was incorporated into the interim report and that each of these issues was addressed to some degree in the interim report and it is expected that reference will be made to them in the final report.

The Winter Resilience report can be found at

<http://transportwinterresilience.independent.gov.uk/docs/interim-report/wrr-interim-report-2010-07-26.pdf>

2. Introduction

The Review, titled 'The Resilience of England's Transport Systems in Winter', has produced an interim report focussing on the Panel's remit in the Review's first phase, to identify quick wins aimed at improving resilience in preparation for winter 2010/11 looking at planning and execution of winter maintenance and the production, deployment and distribution of salt stock for the road network; assessing public expectations, weather forecasting, the different approaches of highway authorities to winter maintenance, self-help by the public in clearing snow and ice and the case for national regulations and powers over salt supply and stocking.

The Panel's Final Report will be published in the autumn of 2010 and will take a view on the remaining issues of England's preparedness for severe winter weather in future years and the resilience of the rail and aviation industries, an assessment of how the salt supply chain might be improved in the longer term, communications with the public and the economics of winter resilience. Progress against the Panel's recommendations will also be noted.

While the Review's focus is England, it takes account of the wider UK context. The Review has taken evidence from the Scottish and Welsh administrations and representatives of their highway authorities. The Review outcomes and recommendations apply to England, and it will be for the Scottish and Welsh administrations to consider their relevance and what action might be taken in those countries.

The report is comprehensive with 91 pages of text with a further 32 pages of appendices. This briefing will highlight the main points explained in the executive summary including the recommendations.

3. Highways authorities

The report notes that generally local highway authorities did a good job last winter, given the problems of salt supply. Representatives of small businesses, of freight and passenger transport operators and of road users generally have said that local highway authorities needed to consult more widely at the planning stage on the networks they proposed to treat. While the review team had evidence of excellent initiatives by local authorities, there was room for improving in both communication of their plans and real-time updating through broadcast and electronic media of their road conditions when severe weather came. The report notes that such attention to effective consultation and communication is the best way to manage public expectations of what the winter response will be (especially when there is persistent snow), a concern expressed by several witnesses.

The Highways Agency was thought to have done a good job of keeping England's strategic roads open. To help conserve salt supplies, reduce cost and improve effectiveness, the HA – following technical research – are moving to a system of salt treatment called 'pre-wet' and reducing specified spread rates.

Market research suggests that the public at large take a realistic view of how much it is worth investing to achieve resilience for winter conditions, given the relatively infrequency of severe winter weather.

There is more scope for sharing best practice and the fruits of research in technology, equipment and treatment methods for road salting. Witnesses suggested that there is significant room for improving salt utilisation, which would reduce both costs and dependence on a potentially vulnerable supply chain for salt. In the view of the review team the means by which research and development takes place seems fragmented and uncoordinated, with no strategic oversight of priorities nor of the dissemination of best practice, and they recommend action in this area.

4. Salt and the supply chain

The report stated that the activities by Salt Cell to collect data on salt stocks, monitor stock movements and disseminate the information were regarded by all witnesses as highly valuable, whether or not Salt Cell was operating in 'allocation' mode. The need to keep a watch on the building and movement of salt stocks well before the winter season was stressed – as has been happening during the course of the Review.

The review team and many witnesses, believe that there should be continuous year-round monitoring of salt stocks, led by Government, to give early warning of potential problems and to be able to make strategic assessments, and a Recommendation is made to this effect. The assessments made in this Review, and the other Recommendations regarding planning for next

winter based upon them, would not have been possible without the current monitoring data collected by DfT this summer.

The report observes that the salt supply chain as currently configured is fundamentally vulnerable and lacks resilience. There are supply chains in other sectors of the economy – such as fertilisers and agrochemicals, as well as seasonal foods – which exhibit similar characteristics of unpredictable seasonal demand coupled with highly constrained, year-round production. What is different about salt is that a) a significant shortage has profound public policy implications; and b) the market has failed to organise the provision of buffer stocks (the absence of which would be most unusual in other sectors). The review teams preferred approach would be to recommend the minimum highly targeted intervention while enabling the market to function as usual.

The report states that the UK salt production supplied to England's highway authorities between March 2009 and March 2010 was some 0.45m short of the demand, and was fulfilled by reducing stocks (held by highway authorities and suppliers) by some 0.3m tonnes and by importing some 0.15m tonnes of salt during the winter season. The analysis of next winter, notes 2 figures one stating that 0.35 m tonnes of imported salt will be needed (including assumptions about actual use with restrictions about spread rates and network coverage) and another stating that 0.75m tonnes of imports will be needed based on underlying demand. This compares with 1.5m tonnes imported last year and is on top of an increase of 0.1m tonnes from suppliers in England.

The review's assessment from the monitoring data recently collected by DfT suggests that most local highway authorities are re-stocking for the forthcoming winter at significantly higher levels even than autumn 2009. The analysis suggests this will exhaust the ability of UK suppliers to meet the pre-season demand at November 2010 by some 0.15m tonnes, and also leave suppliers with no stocks of their own.

Many witnesses said that there seemed to be no impairment to effectiveness during the period of forced salt reduction and reduced spread rates last winter, and said there should be a comprehensive review of current technical standards. The review team agreed and have recommended to this effect and they make a conservative assumption that perhaps 5 or 10% reduction in salt use next winter could result from some authorities adopting reduced rates (they state that the HA is changing specifications for their contractors with this objective).

The review team suggest a pragmatic 2-stage approach in which an initial quantity of (say) 0.25m tonnes should be procured ahead of November 2010 and treated as strategic buffer stock; and then at the end of December 2010, analysis should be updated against the latest forecast for the winter, and a decision made whether further strategic stocks should be imported, and how much.

In terms of options to procure and manage the supply the review team prefer an approach where The HA could be tasked to acquire, store and make available this initial requirement for 0.25m tonnes of salt through import, as reserve stocks for the nation's local highway authorities as well as for its own possible use. This should be done in a formally distinct way and quite separately from its current functions. It should be made available at a premium price which (at least for salt actually used) covers the cost of the salt itself together with storage, handling and onward delivery. In this way local highway authorities are incentivised to continue to build and replenish their salt stocks in line with their normal practice, and to continue to source from the UK commercial suppliers so long as salt continues to be available – rather than to rely on the HA-managed reserve stock until they really need it.

They note the benefits as follows:

- the HA as a Government agency can be tasked by the Secretary of State to do this, if so minded
- the HA, working with its contractors, has all the necessary competence and experience and may have some existing capacity on its operational estate;

- the scale of the HA's own winter operations means that such buffer stocks can be rotated and even absorbed by the Agency
- it covers the whole of England

5. Footways

The report notes that local Authorities and many other witnesses spoke of public concern over the condition of footways (pavements and other pedestrian areas) in the recent severe winter and the reality that very few local authorities prioritise the precautionary treatment of footways. Mention was also made over the confusion which arose last winter as to what steps individual householders and small businesses and shops could take to help themselves and others in tackling snow and ice, as the media had featured pieces relating to the potential legal liability of individuals if someone then had a fall.

The review team recommend that DfT, consulting as necessary with others including experts and local government representatives, should develop and publish as a matter of urgency a simple code of good practice for members of the public and for business owners.

6. Weather forecasting and climate change

Weather forecasting can be considered in three distinct ways – short term forecasts up to five days ahead, which inform the operational decisions of highway authorities and which the report considers accurate; medium term forecasts (up to 30 days) which can inform resourcing decisions and although more problematic are of increasing value to businesses and other organisations; and seasonal and longer term weather prediction to inform policy and strategic planning. This latter category provides challenges whilst the benefits could be significant.

Following discussion with the Met Office and their climate research team the review teams findings are as follows:

- The probability of the next winter being severe is virtually unrelated to the fact of just having experienced two severe winters, and is still about 1 in 20;
- The effect of climate change is to gradually but steadily reduce the probability of severe winters in the UK;
- However, when severe winters come, they could still be extreme in terms of snowfall, wind and storms, though not necessarily in relation to temperature;
- And that consequently there will be higher risk that authorities and the public will be less experienced and capable of handling extreme winter events.

An important consequence of the declining occurrence of severe winters is the loss of knowledge and experience among planning and technical staff in local highway authorities and their contractors, especially if the severe winters have more intense snow events.

7. Summary of recommendations

The report's recommendations are as follows:

Recommendation 1: That for the forthcoming winter the need for a strategic reserve stock of salt for England's highway authorities be recognised, if the resilience to handle the risk of its being as severe as last winter is to be secured, and given the projected shortfall of UK production against the possible demand; and that the HA should be tasked, on behalf of the Secretary of State, to acquire by import, store and make available on terms to be agreed an initial reserve stock of some 0.25m tonnes of salt for 'last resort' use by local highway authorities and for itself; and that the DfT at the end of December should formally lead the consideration and review (using information and forecasts then available) of whether further additional reserve stocks should be secured for the remainder of the winter.

Recommendation 2: A systematic year-round process of collecting data, monitoring salt stocks and movements and disseminating the findings should be put in place by DfT, to give advance warning of any issues affecting prospective salt supplies and availability, and to provide the basis for regular strategic overviews of the salt supply chain and any necessary decisions by them or other parties. This should be independent of any need for the operation of Salt Cell in 'allocation' mode.

Recommendation 3: The vulnerability and lack of resilience of the salt supply chain as currently configured should be recognised; that some targeted intervention needs to be designed which will substantially improve the resilience of the supply chain with minimal impact on the normal functioning of the salt market in the UK; and to note that the development and evaluation of proposals for this is a key part of the Review Panel's stage two work, which will be presented in the Panel's Final Report in the autumn.

Recommendation 4: DfT should consult with the Scottish and Welsh authorities about the implications for them of these short term recommendations for the salt supply chain.

Recommendation 5: Every local highway authority should have a robust winter service plan, and should regularly review the key elements of it, including network coverage, operational procedures and standards and appropriate salt stockholding to meet defined resilience standards, all in line with current best practice.

Recommendation 6: Consultation on treated networks should be broadly drawn to include business representatives, passenger and freight transport operators and local communities, as well as health and education service providers; and to help manage public expectations should be followed by clear and comprehensive communications of winter service plans, supported by good real-time communications through media and on-line when winter conditions arrive.

Recommendation 7: As many local highway authorities already do, authorities should collaborate with and support lower-tier authorities to help ensure that maximum practical winter support can be given in areas and communities beyond the treated networks, including possibly the treatment of key footways and pedestrianised areas.

Recommendation 8: While recognising that research and technical information in this area is relatively fragmented and uncoordinated, and that available evidence needs to be presented more authoritatively, local highway authorities should be aware of the opportunities to improve salt utilisation through adopting lower spread rates and alternative treatment methods, both to reduce cost and to reduce demands on a potentially vulnerable salt supply chain.

Recommendation 9: Professional bodies and the Local Government Association should encourage the more widespread dissemination and adoption of best practice in the preparation and delivery of winter service plans.

Recommendation 10: While recognising that the resilience of salt supply is being addressed as a nationwide issue, local highway authorities can support this and should:

- all participate fully in the year-round systematic information collection and monitoring of salt stocks and movements which we are recommending should be adopted by DfT;
- ensure their own planning of salt stocks and supply is sound and carried out in accordance with best practice, and supported by practical measures to improve salt utilisation;
- put in place (or confirm where existing) mutual aid with neighbouring authorities to help address localised shortages.

Recommendation 11: Local highway authorities should treat their winter service planning as an integral part of wider general resilience planning for civil contingencies, bringing to the

development of winter service plans the benefits of processes and disciplines associated with resilience planning, together with the culture of constructive challenge and validation.

Recommendation 12: The HA should be commended for the research-based measures it has put in place to improve its salt utilisation. It should:

- continue to research and monitor the efficiency of its practices and strive to improve the cost-effectiveness of its winter service operation;
- share best practice, research and knowledge with other highway authorities.

Recommendation 13: There should be a comprehensive, authoritative review of technical standards and guidance relating to both the treatment and the spread rates of salt, based on research and evidence as necessary, leading to the production of practical guidance for practitioners as well as at a policy and planning level. This should be led by the UK Roads Liaison Group (see next recommendation).

Recommendation 14: The valuable initiative and work of the National Winter Service Research Group should be brought under the wing of the UK Roads Liaison Group, who should take responsibility for and set the strategy for its work programme, including its contribution to the comprehensive review of technical standards and methods.

Recommendation 15: The Department for Transport should develop, in collaboration with local government representatives and appropriate experts, a code setting out good practice for members of the public, including business owners, in clearing snow and ice from footways. This should:

- be produced by the end of October 2010 in time for the coming winter;
- be short, along the lines of Westminster's advice to its residents;
- set a standard which, if observed, should guard the public against negligence claims;
- be made available to households by local authorities.

Recommendation 16: We note and commend the generally high quality and accuracy of short term (0–5 days) weather forecasting now available to support the operational decisions of highway authorities and their contractors, and recommend that the weather forecasters continue to develop their capabilities both for 15–30 day forecasting to meet the resource planning needs of highway authorities, and for longer term seasonal forecasting.

Recommendation 17: Given that the probability of next winter being severe continues to be relatively small but that severe winters are still possible despite the warming trend, we recommend that winter resilience planning – and the securing of greater resilience in the supply of salt – should continue on the basis of dealing with winters of a severity similar to that of 2009–2010.

8. APSE Comment

Clearly the issue of severe weather is not limited to an individual local authority – the nature of the problem is such that councils need to act in partnership with other councils, the HA, other public service providers, salt suppliers and the private sector where relevant, to put in place adequate planning and be able to react adequately when needed. Not only does the current economic climate and public spending cuts dictate this but the need to avoid duplication and ensure effective use of resources is also driving the recommendations made here. Furthermore the sector has shown that it can work effectively in this way over the past 2 severe winters.

It will be interesting to see the final report and whether there are significant changes recommended to existing arrangements such as drivers hours and regional salt stores.

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