



Safely undercover: Leicester City Council, Calderdale MBC and Lincolnshire CC have all come to realise the benefits of using the SaltSaver product

# A 'sheet' in time, saves..?

The UK, having made great progress in expanding its salt supplies, must now tackle the – sometimes expensive – problem of storing it. **Charles Robertson** discovers one less-costly option

The severity of past winters remains fresh in the memory. They have been well documented, debated and reviewed, resulting in much change across the winter maintenance community.

The amount of de-icing salt currently being stored by local authorities and the strategic salt stocks held by the Department for Transport and Highways Agency, Transport for Scotland and the Welsh Assembly have been widely discussed.

Local authority stocks have increased two fold, in some instances, three fold. That, plus about 600,000 tonnes of strategic stock, and we could assume the UK is sinking under the weight of de-icing salt!

This increased resilience was clearly required, and there is no

doubt the UK is now ready for whatever Mother Nature decides to deliver this winter.

After an arguably-average winter during 2010/11, the question has been raised, should we experience a series of average or mild winters, what happens to these de-icing salt stocks? Certainly, for salt stored in domes or barns, this will remain in the condition the day it was delivered, ready to be used. Whether that is this year, next year or five years from now.

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But for the remainder not benefiting from covered storage, these open salt piles will be subject to

the effects of the elements. This will result in volume material loss through rain water leaching about six to 10% a year.

Problems in achieving target spread rates, because of high moisture content, and Environment Agency worries over the risk of pollution to rivers and groundwaters through wash-off releasing chlorides into the environment are not ideal after significant investment has been made to put these stocks in place.

Clearly, the best scenario is to have all de-icing salt stored in domes or barn structures, but this

requires sizable financial investment and time to achieve planning consents.

However, there are alternatives available for winter practitioners. The sheeting of salt piles has proved to be an excellent alternative, offering many of the benefits of a building but at a fraction of the cost.

Early sheeting systems involved cumbersome agricultural tarpaulins, weighted down with old tyres, neither fit for purpose and certainly not ideal in terms of health and safety requirements.

Thankfully, these practices have ceased after new systems were introduced to the market. These utilised much lighter material, incorporating integral salt bags as ballast. But, by their nature, these were disposable, and therefore required annual expenditure to

replace, install and be disposed of. In these times of austerity and budget constraints, a solution was required which provided 'best value', and now local authority supplier, Winter Service Solutions, has developed SaltSaver.

SaltSaver is a reusable, modular sheeting system designed to protect open salt piles from the elements, maintaining salt in optimum condition.

Manufactured from high-quality, highly-durable structural tensile fabric, the product is PVC coated, providing resistance to UV light degradation.

SaltSaver has been designed to offer multiple years of life, providing excellent value for money.

David Davies, principal maintenance engineer for Lincolnshire CC, takes up the story.

'The county council operates one of the largest gritting networks in the UK, in a region which frequently gets some of the most severe winter weather.

'We have spread an average of 27,500 tonnes of white marine salt over the last four seasons. Historically, this has been stored in six barns and two outside piles across the county. As with other authorities, we have responded to recom-

mendations from the winter resilience reviews and increased our stock holding by 50%.

'This presented an initial challenge as existing storage facilities weren't large enough to hold the extra salt. To overcome this, we utilised SaltSaver, two winters ago.

'So, as an interim measure, we have been able to protect our additional salt stocks without the need to invest in two new barns or extend existing ones. As a reusable system, the initial cost of SaltSaver is easily recovered, based on the

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savings gained by reducing loss of material through leaching.'

Dave Newton, group engineer for Calderdale MBC adds: 'The recent winters have been very challenging and like many other authorities, we have increased our salt stocks in line with guidance notes.

'We now hold almost 18,000 tonnes of salt – a substantial increase from previous years. Hopefully, we won't have to use it, but

it's there, ready, as in recent seasons we have used up to 16,000 tonnes of salt.

'Calderdale has a number of open piles, and we have had these sheeted before, but I was very keen to look at an alternative and reduce the council's annual spend on re-sheeting and disposal costs.

'One of our strategic salt piles is stored at an unmanned depot in Hebden Bridge, about 2,000 tonnes of which was sheeted with SaltSaver this summer.

'I wanted a system that could be easily and quickly removed. As SaltSaver is tailored to our salt pile, it allows us to open one sheet section at a time, then reuse next season, with the remainder of the pile securely covered.'

Ideal for loose, free-standing piles, SaltSaver has also developed a ground-operated system for salt piles stored within concrete bays.

Tom Vesty, winter lead for Leicester City Council, explains: 'We store 3,000 tonnes of salt

within a concrete clamp bay. The salt has been sheeted in previous seasons and we have been exploring procuring a dome or barn-type building.

'Unfortunately, the cost is prohibitive at the moment. Therefore, this summer, we decided to look at alternatives. We were aware of the SaltSaver system and discussed what options would be available in terms of a sheeting system that could be removed from the ground.

'Winter Service Solutions took on board our design criteria and provided us with a unique system. The sheets are secured through a ratchet system, resin-anchored into the concrete walls.'

The UK winter maintenance community has worked tirelessly to improve its resilience and be in a position to deal with the 'big winter' when it strikes again. Much time and financial investment has been put into increased salt stocks, both within local authorities and on a national level with the strategic salt stocks. Let's hope that when the time comes to utilise these stocks, they are in a condition to do so.

• **Charles Robertson** is director at Winter Service Solutions