

**Open Report on behalf of Richard Wills,
Director for Environment and Economy**

Report to:	Highways and Transport Scrutiny Committee
Date:	23 April 2018
Subject:	Winter Maintenance End-of-Year Report

Summary:

This item invites the Highways and Transport Scrutiny Committee to consider a report regarding the Performance of the Winter Maintenance Service.

Actions Required:

Members of the Highways and Transport Scrutiny Committee are invited to consider and comment on the Winter Maintenance End-of-Year report and highlight any changes or actions to the Executive Member for Highways, Transport and IT.

1. Introduction

- 1.1. This report outlines the operational results generated throughout the Winter Season. This year's winter has proven to be one of the most severe winters in recent years and this report will reflect that increased strain on our service.
- 1.2. The Winter Service is undertaken by our Network Resilience Team, which also manages all day-to-day emergency responses and acts as the coordinating hub for all incidents around the County regarding the Highways network.
- 1.3. It should be noted that the report on Winter Maintenance – Preparations for Winter 2018/19 would be brought to the meeting of the Committee on September 2018, and so the Committee would need to start thinking now if there were any changes it wanted to make to the Winter Maintenance Plan.
- 1.4. Consideration will be taken on whether to alter the Winter Maintenance Plan into a more overarching Resilient Network plan, following the changes suggested by the "Well Managed Highway Infrastructure – A Code of Practice" document published in October 2016. This document, commissioned by the Department for Transport, provides local authorities with guidance on how to develop a highways maintenance policy based on best practice.

2. Winter Service details

- 2.1. So far the Authority has utilised 37,311 tonnes of salt this winter (Figures middle of March, expected to have increased when this report has been published) with our current salt stock standing at 7,336 tonnes. With the end-of-season fast approaching 10,000 tonnes of salt delivery has been scheduled to put us back above the minimum requirements of 15,000 tonnes to manage any unexpected events, in line with policy. The salt stocks are kept under cover within our local highways depots, and levels are outlined within Appendix A.
- 2.2. At this moment in time, the Authority has carried out 104 precautionary salting runs (gritters deployed to 'run' their designated routes) with 4 snow days occurring within the season, leading to 13 plough runs within that time. As a comparison, last season the Authority carried out 55 precautionary runs, and utilised 13,374 tonnes of salt. During the 2015/2016 season, 55 precautionary runs were also carried out, but only 10,010 tonnes of salt was used. In the 2014/2015 season, 91 precautionary runs were undertaken and 24,009 tonnes of salt was used, due to the presence of 2 snow days within that season.
- 2.3. The quantity of salt was monitored throughout the winter season. Of the 117 runs undertaken, 5% of all runs spread 10g/m^2 of salt on our road network. 31 % of our runs consisted of salting at 15g/m^2 . Finally, 64% of our runs were undertaken by salting 20g/m^2 on our road network.
- 2.4. This report further looks at the use of Pre-wetting. Pre-wet treatment involves spraying the salt with a Brine solution before being spread onto the road. This causes a reaction which facilitates de-icing, and happens whilst the salt is being spread from the gritter. This winter season, our precautionary run data shows that the pre-wetting system was utilised for 65% of all runs and 35% of our runs were undertaken with dry rock salt.
- 2.5. As stated previously, the Authority has the capability of calling upon 43 gritters strategically placed around the county, with 4 spare gritters utilised as back-ups. In terms of resilience of the network, during its worst point the Resilient Network team was unable to count on 10 gritters for its runs due to maintenance issues. Therefore they were only able to send out 33 of the main gritters and 4 of the back-up gritters, amounting to 37 runs in total. The overall pattern shows that the vehicles are reaching the end of their lifecycle. This could represent an opportune moment to procure new vehicles and move away from lease agreements.
- 2.6. The 'Beast from the East' represented a significant challenge to our service. In total 4884 tonnes of salt was used between 26/02/18 – 04/3/18, which amounts to a total cost of around £270,000 of salt. 612 routes were salted within this timescale, over roughly 14 runs. The whole fleet was not always out at the same time when targeting specific areas in the County. The gritter drivers worked continuously to help plough snow with many undertaking multiple shifts throughout the event. It is true that day-time crew numbers

were not always at full strength, but due to the severity of the event this may have been expected. Overall, over 165 people were involved, including drivers, plough mates, Kier supervisors, Network Resilience staff and additional Local Team volunteers.

- 2.7. This number excludes the tendered and untendered farmers, who deserve a special mention due to their tireless work throughout the nights to help clear the roads. We had 31 paid farmers out on-site clearing the snow off the road amounting to an overall cost of £103,292.49 for the Authority, an average of £3,332.02 per farmer. A number of unpaid farmers were also involved who delivered a key community service. One example would be Jack Buck Farms at Moulton Seas End, who spent up to 3 days clearing roads and pulling vehicles out of snow drifts in the South of the County.
- 2.8. The event showed that a Resilient Network would be the right option to integrate within our service. This is a collection of routes that will need to be prioritised at all points to keep available during severe weather events, comprising of A-routes and all routes including key emergency facilities. A 'wash-down' is currently taking place where all stakeholders are included to determine lessons learnt from the event and where the service as a whole could improve. Further modifications to our Incident Response Plan will be taken to ensure improved resilience.
- 2.9. Within the Winter Maintenance Plan, a Route-Based system was proposed. This system uses weather forecasts and measures the predicted impact on the road network, highlighting where the essential needs for salting treatment, if required, are located. This system would provide efficiencies by highlighting specific routes that require gritting, therefore targeting specific areas of need within the County. Overall results show that all routes were gritted 79% of the time, with 21% showing runs within specific areas in the County.
- 2.10. The severity of the winter could be the main reason behind this limited use of Route-Based Forecasting. However, it should be noted that overall use of Route-based forecasting has been disappointing and has not delivered the efficiencies that were hoped for.
- 2.11. It has been highlighted by the Network Resilience Teams that the Forecasting system provided by the MET office has been fairly cautious throughout this winter season, which could be another factor in the limited use of Route-Based Forecasted. Although caution should be commended, it did lead to the Authority undertaking several gritting runs without the eventual road temperature justifying the level of salt spread on our road network. Further work is ongoing with the Forecast Provider and Route-Based Forecasting Technology to ensure maximum efficiency and resilience.

3. Treated Salt

- 3.1. For the new winter season, the salt option of Treated brown salt is being considered to replace our current white salt pre-wet/dry option. This is a new system of brown salt treated in advance with a natural agricultural by-product Safecote, which acts in a similar way to pre-wetting without the brine solution being required. A visit to Norfolk County Council has taken place, where it was clarified that Norfolk has been using the Treated salt product for 8 years, with limited issues and overall positive efficiency results.
- 3.2. On the 23rd November 2017 trials were held with the Treated salt at our Horncastle and Boston Chainbridge Depots. These trials were held to see how the treated salt reacted to Lincolnshire County Councils gritters. To this end it was decided that two gritters would be tested from the fleet – one being an Epoke gritter and the other being a Schmidt gritter so that gritter types in the fleet had been tested with the treated salt product. The results of these trials were considered to be positive with a cost-saving spread-rate without reduced efficiency. A Business Case outlining the cost-benefit analysis is currently under review.

4. Conclusion

The overall move towards a Network Resilience focus has seemingly improved the functionality of the Winter Service. However, a number of challenges continue to exist that require improvements. The upcoming off-season should serve as a key time for the Winter Maintenance team to continue to improve their service and assure the resilience of our road network.

5. Consultation

a) Policy Proofing Actions Required

n/a

6. Appendices

These are listed below and attached at the back of the report	
Appendix A	Winter Performance report

7. Background Papers

No background papers within Section 100D of the Local Government Act 1972 were used in the preparation of this report.

This report was written by Vincent Van Doninck, Policy and Strategic Asset Manager in Highways Commissioning, who can be contacted on 01522550625 or Vincent.Vandoninck@lincolnshire.gov.uk

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