

**North Yorkshire County Council**  
**Business and Environmental Services**

**Executive Members**

**25 September 2020**

**Proposed change to the Winter Service operational procedures - reductions in the salt spreading rates and a rewording the policy to clarify our snow clearance procedures**

**Report of the Assistant Director – Highways and Transportation**

**1.0 Purpose of Report**

- 1.1 To enable the Corporate Director of Business and Environmental Services (BES), in consultation with the BES Executive Members, to approve:
- i. A reduction in some of the minimum salt spreading rates for future winter operational periods.
  - ii. A clarification and rewording of the policy around snowploughing to remove the current ambiguity.

**2.0 Background**

- 2.1 Over the past few years improvements in salt storage facilities have allowed the Authority to move from minimum spread rates of 23g/m<sup>2</sup> down to 10g/m<sup>2</sup>. This has resulted in significant cost savings which have, over the years, contributed to easing the pressure on revenue budgets across the County Council.
- 2.2 The current Winter Service Policy is attached in Appendix A and on page 3 it mentions the typical spread rates for pre-salting to be 10g/m<sup>2</sup> to 20g/m<sup>2</sup>. These spread rates were in line with the national guidance issued at that time.
- 2.3 Attached in Appendix B is the operational guide used by Officers for determining the appropriate salt spread rates for a number of road surface and weather combinations. This document gives salt spreading rates of 10g/m<sup>2</sup> for road surface temperatures above -2°, and 15g/m<sup>2</sup> for when the road surface temperature is between -2° and -5° and the road is dry or damp.
- 2.4 Recently revised guidance has been issued by the UK Roads Liaison Group, namely the Winter Service Guidance for Local Authority Practitioners – Recommended Precautionary Treatments and Post Treatments including Revised Salt Spread Rates.
- 2.5 In Section 4 of the above guidance, which replaces the current Well Maintained Highways – Appendix H – Section H8 it details the recommended target spread rates of salt for precautionary treatments. The revised table for gritters with reasonable spreading capability is shown in Appendix C.

- 2.6 The revised guidance takes advantage of the improvements made in the accuracy of gritter spreading capabilities and has reduced the minimum spread rate of salt down to 8 g/m<sup>2</sup>. The guidance also recommends reducing our current 15g/m<sup>2</sup> down to 12g/m<sup>2</sup>.
- 2.7 With regard to snow clearance, the current Winter Service policy outlines our planned response on page 2 of the policy in Appendix A. However on page 3 of the Winter Service policy under Snowploughing, it says: "No policy has been approved for snowploughing operations". Clearly this is incorrect and needs to be amended.

### **3.0 Proposal**

- 3.1 Recent improvements in the ability of gritters to spread more accurately, and the reduction in the average age of the County Council's gritting fleet had resulted in your officers being confident in recommending moving towards the new, lower, minimum salt spread rates as outlined in the UK Roads Liaison Group's guidance.
- 3.2 The guidance recommends that any reduction in spread rates should be done incrementally and that the performance of the spreaders monitored. Therefore it is proposed that we change our operational procedures to reduce the minimum spread rate to 9g/m<sup>2</sup> and reduce our current 15g/m<sup>2</sup> down to 13g/m<sup>2</sup> and then monitor the impacts of this. However, the actual spread rates used will be an operational decision and will be based on the prevailing road and weather conditions at the time.
- 3.3 The reduction in the minimum salt spread rate will result in a financial saving and this saving is part of our MTFS for this financial year.
- 3.4 Whilst no two winters will be the same, an analysis of all the salting runs undertaken in the 2018/19 winter season show that had the option to salt at 9g/m<sup>2</sup> and 13g/m<sup>2</sup> been available it would have resulted in a saving of over 3,300 tonnes of salt. This equates to a financial saving of around £120,000.
- 3.5 If the move to 9g/m<sup>2</sup> and 13g/m<sup>2</sup> during the 2020/21 season proves successful, and our confidence in the accuracy in the gritting fleet remains high, then it will be our intention to change our operational procedures again and lower the minimum salting spread rate to 8g/m<sup>2</sup> and the rate for road surface temperatures between -2° and -5° on damp roads to 12g/m<sup>2</sup> for the 2021/22 winter season. This reduction for the 2021/22 winter season should result in a further financial saving of around £75k.
- 3.6 The Winter Service Decision Matrix will also be changed to reflect the lower spread rates of 9g/m<sup>2</sup> and 13g/m<sup>2</sup> for the 2020/21 season, and the changed again to show the 8g/m<sup>2</sup> and 12g/m<sup>2</sup> spread rates if we move to them for the 2021/22 winter season.
- 3.7 With regard to snow clearance and the wording of the policy, it is proposed under the section entitled Snowploughing, to remove the references to national guidance and replace it with the following text which draws together other parts of the policy document:
- Snowploughing will commence when the depth of settled snow is at least 30mm deep and will be undertaken within timescales detailed above.*
- 3.8 The references to national guidance will be moved into the Winter Service operational procedures.

#### **4.0 Equalities Implications**

- 4.1 Consideration has been given to the potential for any adverse equality impacts on people with Protected Characteristics, arising from the recommendation. The results of the impact assessment has been set out in a completed 'decision not to undertake an Equalities Impact Assessment' form. This is attached at Appendix D and it shows that there are no negative impacts on any of the groups with protected characteristics.

#### **5.0 Financial Implications**

- 5.1 These proposals should result in savings of £120,000 in the current financial year, and an additional £75,000 in the 2021/22 financial year.

#### **6.0 Legal Implications**

- 6.1 Section 41(1A) of the Highways Act 1980 states that a highway authority is under a duty to ensure, so far as is reasonably practicable, that safe passage along a highway is not endangered by snow or ice. Reducing our salt spreading rates to bring them into line with national guidance is not thought to weaken our response to that duty.

#### **7.0 Recommendations**

- 7.1 It is recommended that:

- i. The Corporate Director, in consultation with the BES Executive Members agree to these reductions to the minimum salt spreading rates in our operational procedures when implementing the winter service policy.
- ii. The Winter Service Plan and Decision Matrix are duly altered to reflect these changes both now and, if appropriate, before the commencement of the 2021/22 winter season.
- iii. The section of the Winter Service policy document entitled "Snowploughing" is amended as detailed in section 3.7 of this report.

BARRIE MASON

Assistant Director – Business and Environmental Services

Author of Report: Richard Marr

Background Documents: None



## WINTER MAINTENANCE POLICY

### Salt Application

#### Routes

- Priority 1 includes all principal roads and important B Class, C Class and unclassified routes as approved by Members.
- Priority 2 includes the remainder of B Class and appropriate C class and unclassified roads as approved by Members. Note not all remaining C Class roads will be Priority 2.
- Priority 3 the remainder of the network including estate roads.

#### Treatment

Winter Maintenance involves treating the highway to:

- i prevent ice from forming known as "precautionary salting" or "pre-salting";
- ii melt ice and snow already formed, "post-salting".

Priority 1 routes will receive preferential treatment in all conditions. Pre-salting will only be carried out on Priority 1 routes unless the forecast is for extreme winter conditions in which case pre-salting of Priority 2 may be considered. Treatment will be completed within the times stated in this policy.

Pre-salting will normally be completed on an evening except where precipitation is likely to occur overnight. Where an evening pre-salt takes place with no precipitation some Priority 2 post-salting may take place the following morning subject to resources. If precipitation occurs after an evening pre-salt then Priority 1 post-salting will take place the following morning before any Priority 2 treatment is considered.

In widespread freezing and wet conditions Priority 1 and Priority 2 routes will be treated, as resources permit, but with preference to Priority 1 routes.

Priority 3 routes will not normally receive treatment unless freezing conditions persist for more than 72 hours. Treatment of Priority 3 routes in advance of the 72 hour rule in certain weather conditions will be allowed.

#### Timing

The majority of Priority 1 routes should be treated by 07:00 hours with the remainder by 07:30 hours, subject to changes in forecast and/or weather conditions.

In general, treatment will not take place between 23:00 hours and 05:00 hours, however specific conditions may require attention.

Priority 2 and 3 routes will be treated as soon as practicable after Priority 1 routes have been completed.

Priority 2 routes are treated every morning (when the weather requires it) after the Priority 1 routes are completed unless the prevailing conditions and the forecast in the judgment of the Local Area Manager renders further treatment unnecessary.

For guidance this would mean that, in general, Priority 2 routes will be treated unless conditions were improving and any ice/frost would thaw before the treatment of the route is completed.

#### Footways

Category 1 footways will be post salted in exceptional condition before 09:00hrs with the remaining footways and cycling network being treated in priority order subject to available resources. Cycleways, not contiguous with carriageways, will not be treated.

#### Snow Clearance Priority Carriageways

Light snow (up to 25mm) - as pre-salting

Moderate snowfall (25mm to 100mm)

Priority 1 routes passable in three hours

Priority 2 routes will be cleared when conditions allow resources to be freed from Priority 1 routes

Heavy snowfall (over 100mm)

In these circumstances available resources including reserves, contractors and farmers will be mobilised to keep Priority 1 routes passable and to maintain at least one route to all centres of population.

It should be noted that continuous snowfall and strong winds will influence snow clearing operations considerably and will therefore delay completion times.

#### Footways

When conditions and resources permit snow will be cleared from shopping streets, then heavily used footways (main access routes) then other footways in prolonged conditions.

#### Un adopted Roads

The County Council will not carry out winter maintenance on un adopted roads.

However, specific requests from District and Parish Councils may be considered only if resources are available and all relevant costs are paid by them.

#### Target Spread Rates of Salt

- (a) **Precautionary Salting**
  - (i) Salt stored under cover 10g/m<sup>2</sup> - 20g/m<sup>2</sup>
  - (ii) Salt stored in the open 15g/m<sup>2</sup> - 20g/m<sup>2</sup>
- (b) Post Treatment Salting  
All methods of storage

<p>(i) Prior to snowfall, dependent upon forecast conditions 20g-40g/m<sup>2</sup></p> <p>(ii) Snow already on the road - depths in excess of 30mm ploughing and salting (up to 40g/m<sup>2</sup>)</p> <p>(c) Hard Packed Snow and Ice</p> <p>(i) Air temperature above -8C successive salting at 20-40g/m<sup>2</sup></p> <p>(ii) Air temperature below -8C gritting with single size abrasive aggregate not exceeding 6mm or 5mm sharp sand</p>
<p><u>Snowploughing</u></p> <p>No policy has been approved for snowploughing operations. Reference should be made to ICE design and practice guide – Highway winter maintenance section 2 and UK Roads Liaison Group – Winter Service Guidance for Local Authority Practitioners – section 3.5</p>
<p><u>Snow Fences</u></p> <p>Snow fences are not in use in this County but powers to erect fences and secure easements are provided in the Highways Act 1980, covered by Sections 102, 249, 251, 291 and 292. For guidance in design and location of snow fences references should be made to TRRL Report LR 362 “SNOW FENCES”.</p>
<p><u>Salt Bins/ Salt Heaps</u></p> <p>Salt bins or salt heaps will only be provided in accordance with the criteria set out in the salt bin / heap assessment form.</p> <p>Salt bins or salt heaps will be spaced a minimum of 40 metres apart and contain a maximum of 0.5 tonnes of salt/grit.</p> <p>A salt bin will be provided at the main access to each school which is not on a priority 1 treatment route.</p> <p>The County Council will consider provision of salt bins at locations not meeting the criteria, where salt bins and their replenishment is funded by another local authority.</p> <p>Care must be taken to avoid locating the bins where they may be used for the disposal of litter or act as litter traps.</p>
<p><u>Extreme Weather Protocol</u></p> <p>In extreme or prolonged severe weather conditions, if it is necessary to conserve salt stocks then treatments may be modified as follows:</p> <p><u>Treatment and Snow Clearance</u></p> <p>Priority 1 - Use 50% salt and 50% sand/grit mix – no reduction in treatment length  Priority 2 - Use 50% salt and 50% sand/grit mix – route lengths may be reduced, however at least one route to each community will be maintained.  Priority 3 - Use sand or grit only roads will be treated as resources permit.</p> <p>The most minor rural lanes and estate roads are unlikely to receive treatment/ snow</p>

clearance in such conditions as resources focus on the important traffic routes and providing community access

Priority 2 routes may be subject to a two direction “plough only” followed by a “plough and treat” using a 50% salt 50% sand/grit mix. Similar treatments can be adopted on Priority 3 routes will use a 100% sand/grit mix.

Timing

Priority 2 routes will be treated no more than once a day except in exceptional circumstances when directed by the Head of Highway Operations.

Footways

Treatments will be modified with a 50% salt and 50% sand/grit mix used on Category 1 footways, whilst other footways may be treated a sand /grit mix only. Many footways will remain untreated and communities can utilize the County Council’s Community Engagement Scheme and/or clear footways taking note of the Government’s “Snow Code”.

Salt Bins/ Salt Heaps

Salt bins and heaps will generally be stocked with 10% salt and 90% grit mix. A 50% salt and 50% grit mix may be used in certain circumstances, for example where the facility affords the sole access to a community.

Restocking of salt bins and heaps during prolonged periods of extreme weather may need to be restricted to conserve salt and could only be carried out on request, not as a matter of routine.

In extreme circumstances it may be necessary to restrict this further in which case only salt bins or heaps at critical locations will be replenished.

**ASSESSMENT FORM FOR PROVISION OF A SALT BIN / HEAP**

Actual Location of Salt Bin	Date of Assessment	Assessed By:	
Characteristic	Severity	Standard Scores	Assessed Actual Score
(i) Gradient	Greater than 1 in 10	75	
	1 in 10 to 1 in 30	40	
	Less than 1 in 30	Nil	
(ii)Severity of Bend	Sharp	60	
	Moderate	25	
	Slight	Nil	
(iii)Close proximity to and falling towards and away from a junction	Heavily trafficked road	90	
	Moderately trafficked road	75	

**APPENDIX A**

	Lightly trafficked road	30	
	Not falling towards	Nil	
(iv) Assessed traffic density at peak times	Moderate	40	
	Light	Nil	
(v) Number of premises for which this is the only access	Over 50	30	
	20 – 50	20	
	0 – 20	Nil	
(vi) Pedestrian Movements	High	60	
	Moderate	25	
	Low	Nil	
(vii) Road Priority	Priority 1 route	300	
	Priority 2 route	Nil	
	Priority 3 route	20	
		<b>TOTAL</b>	This needs to be over 100 to pass



**TREATMENT MATRIX GUIDE**

Weather Conditions Road Surface Conditions Road Surface Temperature (RST)	Air Temp	Treatment		
		Salt Barn-Dry Salting (g/m <sup>2</sup> )	Open Storage Salting (g/m <sup>2</sup> )	Ploughing
Frost or forecast frost RST at or above -2°C		10	15*	No
Frost or forecast frost RST below -2°C and above -5°C and dry or damp road conditions		15	20	No
Frost or forecast frost RST below -2°C and above -5°C and wet road conditions		20	20	No
Frost or forecast frost RST below -5°C and above -10°C and dry or damp road conditions		20	20	No
Frost or forecast frost RST below -5°C and above -10°C and wet road conditions		40 or (2x20)	40 or (2x20)	No
Light snow forecast (<10mm) Pre-salt		20	20	No
Medium/heavy snow or freezing rain forecast Pre-salt		40 or (2x20)	40 or (2x20)	No
Freezing rain falling		20 (successive)	20 (successive)	No
After freezing rain		20	20	No
Ice formed (minor accumulations)	Above -5°C	20	20	No
Ice formed	At or below -5°C	40 or (2x20)	40 or (2x20)	No
Snow covering exceeding 30mm		20 – 40 (successive)	20 – 40 (successive)	Yes
Hard packed snow and ice	Above -8°C	20 – 40 (successive)	20 – 40 (successive)	No
Hard packed snow and ice	At or below -8°C	Salt/abrasive (successive)	Salt/abrasive (successive)	No

\*Subject to stockpile exposure and condition and spreader capability.

Rate of spread for precautionary treatments should be adjusted to take account of residual salt or moisture

**Notes:**

1. Treatments should be carried out whenever possible, after traffic has dispersed standing water. Successive half rate treatments may be considered where gritters return on the same route.
2. Damp conditions definition – Water present which darkens the carriageway surface, no spray. Wet conditions definition – spray is evident.

<b>Table H5 - Spread Rates For Reasonable Spreading Capability (De-icer Spread Rates in g/m<sup>2</sup>)</b>			
<b>Frost or forecast frost Road Surface Temperature (RST) and Road Surface Wetness</b>	<b>Dry salting</b>	<b>Pre-wetted salting (see Note 1)</b>	<b>Treated salting (see Note 2)</b>
RST at or above -2°C and dry or damp road conditions	8	8 (de-icer) 6 (salt)	7
RST at or above -2°C and wet road conditions	8	8 (de-icer) 6 (salt)	7
RST below -2°C and above -5°C and dry or damp road conditions	12	12 (de-icer) 9 (salt)	9
RST below -2°C and above -5°C and wet road conditions	20	21 (de-icer) 16 (salt)	16
RST at or below -5°C and above -10°C and dry or damp road conditions	20	21 (de-icer) 16 (salt)	16
RST at or below -5°C and above -10°C and wet road conditions	2 x 20	2 x 21 (de-icer) 2 x 16 (salt)	32 or 2 x 16
<p>Note 1: Spread rates for pre-wetted salting are the combined weight of dry salt and brine combined in proportion 70:30 by weight with brine of concentration 20 to 23%.</p> <p>Note 2: Weight of salt and additive (approx 3% by weight).</p>			

<b>Initial equality impact assessment screening form</b> (As of October 2015 this form replaces 'Record of decision not to carry out an EIA')			
<b>This form records an equality screening process to determine the relevance of equality to a proposal, and a decision whether or not a full EIA would be appropriate or proportionate.</b>			
<b>Directorate</b>	BES		
<b>Service area</b>	H & T		
<b>Proposal being screened</b>	Proposal to adjust our operational procedures within the Winter Service Policy to reduce salt spreading rates to bring them in line with revised national guidance.		
<b>Officer(s) carrying out screening</b>	Richard Marr		
<b>What are you proposing to do?</b>	Reduce salt spreading rates in line with national guidance		
<b>Why are you proposing this? What are the desired outcomes?</b>	To reduce the amount of salt spread..		
<b>Does the proposal involve a significant commitment or removal of resources? Please give details.</b>	No		
<b>Impact on people with any of the following protected characteristics as defined by the Equality Act 2010, or NYCC's additional agreed characteristic</b> As part of this assessment, please consider the following questions:			
<ul style="list-style-type: none"> <li>To what extent is this service used by particular groups of people with protected characteristics?</li> <li>Does the proposal relate to functions that previous consultation has identified as important?</li> <li>Do different groups have different needs or experiences in the area the proposal relates to?</li> </ul>			
<b>If for any characteristic it is considered that there is likely to be a significant adverse impact or you have ticked 'Don't know/no info available', then a full EIA should be carried out where this is proportionate. You are advised to speak to your <u>Equality rep</u> for advice if you are in any doubt.</b>			
<b>Protected characteristic</b>	<b>Yes</b>	<b>No</b>	<b>Don't know/No info available</b>
Age		✓	
Disability		✓	
Sex (Gender)		✓	
Race		✓	
Sexual orientation		✓	
Gender reassignment		✓	
Religion or belief		✓	
Pregnancy or maternity		✓	
Marriage or civil partnership		✓	
<b>NYCC additional characteristic</b>			
People in rural areas		✓	
People on a low income		✓	
Carer (unpaid family or friend)		✓	

<b>Does the proposal relate to an area where there are known inequalities/probable impacts</b> (e.g. disabled people's access to public transport)? Please give details.	The proposal covers the entire County		
<b>Will the proposal have a significant effect on how other organisations operate?</b> (E.g. partners, funding criteria, etc.). Do any of these organisations support people with protected characteristics? Please explain why you have reached this conclusion.	No.		
<b>Decision (Please tick one option)</b>	EIA not relevant or proportionate:	✓	Continue to full EIA:
<b>Reason for decision</b>	People with protected characteristics should not be adversely affected by the proposed changes		
<b>Signed (Assistant Director or equivalent):</b>	<u>Barrie Mason</u>		
<b>Date:</b>	<u>14/09/20</u>		