

# Winter Maintenance Operational Plan

## Introduction

This Plan is to be used in conjunction with the Winter Maintenance Policy.

Within this plan are the current criteria's for decision making and the current Carriageway Gritting Routes, Footway Gritting Routes, Grit Box and additional Grit Locations.

## Gritting

The criteria for gritting priorities are:

Priority Routes 1 to 5 include 'A' roads, major bus routes and other key transport routes.

Priority Routes 6 to 10 include secondary bus routes, routes to schools and district feeder roads that carry higher levels of traffic including sites with special circumstances e.g. severe gradients.

Tertiary, trailer mounted and supervisor schedules include all other district bus routes and other district roads with steep gradients.

Current Spread rates to be used are:

### Decision Matrix Guide

Road Surface Temperature	Precipitation	Predicted Road Conditions		
		Wet	Wet Patches	Dry
May fall below 1°C	<u>No</u> rain <u>No</u> hoar frost <u>No</u> fog	Salt before frost	Salt before frost (see note a)	No action likely, monitor weather (see note a)
Expected to fall below 1°C	<u>No</u> rain <u>No</u> hoar frost <u>No</u> fog			
	<u>Expected</u> hoar frost <u>Expected</u> fog	Salt before frost (see note b)		
	<u>Expected</u> rain <u>BEFORE</u> freezing	Salt after rain stops (see note c)		
	<u>Expected</u> rain <u>DURING</u> freezing	Salt before frost, as required during rain and after rain stops (see note d)		
	<u>Possible</u> rain <u>Possible</u> hoar frost <u>Possible</u> fog	Salt before frost		Monitor weather conditions
<u>Expected</u> snow		Salt before snow fall		
<p>The decision to undertake precautionary treatments should be, if appropriate, adjusted to take account of residual salt or surface moisture.</p> <p>All decisions should be evidence based, recorded and require continuous monitoring and review.</p>				

**Notes:**

- (a) Particular attention should be given to the possibility of water running across carriageways and other running surfaces e.g. off adjacent fields after heavy rains, washing off salt previously deposited. Such locations should be closely monitored and may require treating in the evening and morning and possible other occasions.
  
- (b) When a weather warning contains reference to expected hoarfrost, considerable deposits of frost are likely to occur. Hoarfrost usually occurs in the early morning and is difficult to cater for because of the probability that any salt deposited on a dry road too soon before its onset, may be dispersed before it can become effective. Close monitoring is required under this forecast condition which should ideally be treated just as the hoarfrost is forming. Such action is usually not practicable and salt may have to be deposited on a dry road prior to and as close as possible to the expected  
  
time of the condition. Hoarfrost may be forecast at other times in which case the timing of salting operations should be adjusted accordingly.
  
- (c) If, under these conditions, rain has not ceased by early morning, crews should be called out and action initiated as rain ceases.
  
- (d) Under these circumstances rain will freeze on contact with running surfaces and full pre-treatment should be provided even on dry roads. This is a most serious condition and should be monitored closely and continuously throughout the danger period.
  
- (e) Weather warnings are often qualified by altitudes in which case differing action may be required from each depot.
  
- (f) Where there is any hint of moisture being present, a pessimistic view of the forecast should be taken when considering treatment to negatively textured surfaces.

## Treatment Matrix Guide

Weather Conditions Road Surface Conditions Road Surface Temperature (RST)	Treatment		
	Air Temperature	Salting (g/m <sup>2</sup> )	Ploughing
Frost or forecast frost RST at or above – 2°C		10	No
Frost or forecast frost RST below – 2°C and above – 5°C		20	No
Frost or forecast frost RST at or below – 5°C and above – 10°C and dry or damp road conditions		20	No
Frost or forecast frost RST at or below – 5°C and above – 10°C and wet road conditions (existing or anticipated)		2 x 20	No
Light snow forecast (<10mm)		20	No
Medium/heavy snow or freezing rain forecast		2 x 20	No
Ice formed	Above – 5°C	20	No
Ice formed	at or below – 5°C	2 x 20	No
Snow covering exceeding 30mm		20 – 40 (successive)	Yes
Hard packed snow/ice	Above – 8°C	20 -40 (successive)	No
Hard packed snow/ice	at or below – 8°C	salt/abrasive (successive)	No

### Notes:

- (a) Rate of spread for precautionary treatments may be adjusted to take account of variations occurring along the route such as residual salt, temperature variations, surface moisture (in the air or on the road surface) road alignment and traffic density.
- (b) All decisions should be evidence based, recorded and require continuous monitoring and review.
- (c) Ice refers to all ice on the road surface, including black ice.

(Taken from Well-maintained Highways, Code of Practice for Highway Maintenance Management, December 2009 Update)

## **Grit Bins**

The criteria for grit bin placement are:

Grit box positions are assessed individually and the following considered:

- **Altitude** – locations at high altitude are at greater risk of freezing,
- **Highway gradient** – steeper gradients are more problematic in slippery conditions and
- **Nature of properties served** e.g. hospitals, care homes, sheltered accommodation, and community centres.

Grit bins will be replenished as necessary throughout the winter maintenance period. Grit bins will be labelled clearly advising the public that the contents of the bin are for use by the public on the public highway only and is not for use on private land and providing a contact number and an asset number to report bins that need to be refilled. Where grit bins are abused other possible actions will have to be considered.

## **Useful Contact Numbers**

Stockport Direct no. 01612176111