



**ST HELENS**  
BOROUGH COUNCIL

# St Helens Winter Service Policy

2023-24



# Table of Contents

|   |           |
|---|-----------|
| <b>TABLE OF CONTENTS</b> .....  | <b>1</b>  |
| <b>1.0 INTRODUCTION</b> .....   | <b>3</b>  |
| <b>2.0 POLICIES</b> .....   | <b>4</b>  |
| ROADS AND LEVELS OF SERVICE.....  | 6         |
| WELL-MAINTAINED HIGHWAYS.....   | 6         |
| QUARMBY REPORT.....   | 6         |
| HIGHWAYS ENGLAND NETWORK MANAGEMENT MANUAL .....                            | 6         |
| <b>3.0 POLICY STATEMENT</b> .....   | <b>6</b>  |
| <b>4.0 SCOPE</b> .....  | <b>7</b>  |
| <b>5.0 RESPONSIBILITIES, STAKEHOLDERS AND MANAGEMENT ARRANGEMENTS</b> ..... | <b>7</b>  |
| <b>6.0 ROUTE PRIORITISATION</b> .....                                       | <b>7</b>  |
| <b>7.0 TREATMENT RATIONALE</b> .....  | <b>8</b>  |
| PRECAUTIONARY SALTING CARRIAGEWAYS .....                                    | 8         |
| PRECAUTIONARY FOOTWAYS:.....  | 9         |
| <b>8.0 POST SALTING:</b> .....  | <b>9</b>  |
| <b>9.0 SNOW CLEARANCE:</b> .....  | <b>9</b>  |
| CARRIAGEWAYS.....   | 9         |
| FOOTWAYS.....   | 9         |
| <b>10.0 WEATHER PREDICTION SYSTEMS</b> .....                                | <b>10</b> |
| "ROADCAST" SERVICE.....   | 10        |
| WEATHER STATION .....   | 11        |
| MAINTENANCE OF ICE DETECTION EQUIPMENT .....                                | 11        |
| THERMAL MAPPING.....  | 12        |
| <b>11.0 MAKING THE DECISION</b> .....                                       | <b>12</b> |
| SPREAD RATE RATIONALE.....  | 12        |
| <b>12.0 RECOMMENDED SPREAD RATES</b> .....                                  | <b>15</b> |
| <b>13.0 STANDARD OPERATING PROCEDURES</b> .....                             | <b>16</b> |
| <b>14.0 TRAINING AND DEVELOPMENT</b> .....                                  | <b>16</b> |
| <b>15.0 HEALTH AND SAFETY</b> .....   | <b>17</b> |
| <b>16.0 PROLONGED OR SEVERE WEATHER EVENTS</b> .....                        | <b>17</b> |
| TRIGGER POINTS .....  | 18        |
| <b>17.0 PLANT AND MATERIAL RESOURCES</b> .....                              | <b>18</b> |

|   |           |
|---|-----------|
| VEHICLES: .....                               | 18        |
| SALT STOCK.....                               | 19        |
| MONITORING SALT STOCKS.....                   | 19        |
| <b>18.0 SALT BINS.....</b>                    | <b>19</b> |
| SUPPORT TO THE PUBLIC AND OTHER AGENCIES..... | 20        |
| <b>19.0 COMMUNICATIONS .....</b>              | <b>20</b> |
| WEBSITE.....                                  | 20        |
| SERVICE REQUESTS.....                         | 20        |

## 1.0 Introduction

The Highways Act 1980 Section 41 and 58 clearly states that Highway Authorities have a statutory duty to maintain the highway and must at all times take reasonable care to ensure that the highway is not dangerous, and that the standard of maintenance is appropriate for a highway of that character and used by such traffic. It must also ensure that a competent person must supervise maintenance work, having received proper training with regard to the highway.

The Railways and Transport Safety Act 2003 (section 111) inserted an additional section (41(1A)) to the Highways Act 1980 which places a duty on Highway Authorities in respect of winter conditions, as follows:-

‘In particular, 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’. The effective date of this duty is 31st October 2003.

In 2001, a joint group, comprising DETR, LGA, National Assembly for Wales, Northern Ireland Roads Service, SCOTS, The Highways Agency and the Audit Commission published a document entitled ‘Delivering Best Value in Highway Maintenance’. This document included a section entitled ‘Winter Service’ which set out recommendations on how a Highway Authority could meet their legal obligations regarding winter service economically, efficiently and effectively.

In July 2005 the Code of Practice for Highway Maintenance Management titled “Well maintained Highways” was published replacing “Delivering Best Value in Highway Maintenance”

The ‘Well Managed Highway Infrastructure: Code of practice 2016’ (WMHI 2016) published by the UK Roads Liaison Group on 28<sup>th</sup> October 2016 (amended 15<sup>th</sup> March 2017) is the current national guidance available for highway authorities on the suggested management approach to adopt for the delivery of a safe and well-maintained highway network.

September 2013 saw the latest and extensive update to Section 13 and Appendix H of the “Well-maintained Highways” document providing an up to ten-year implementation plan which Authorities must strive to achieve to provide a robust Winter Service. Guidance relating to practical issues and the delivery of the Winter Service is contained within the National Winter Service Research Group (NWSRG) Practical Guide for Winter Service.

St Helens Council Winter Service Policy and Operational Plan has been updated to seek as far as reasonably practical to comply with the revised guidance. The policy will undergo further regular review in light of experience during the winter season and to ensure it remains consistent with legislation.

Whilst it is not affordable or practical to prevent the formation of ice and snow on all of the borough’s roads and footways, St Helens Council Network Management will use its’ best endeavours to meet its’ statutory duty by minimising the detrimental effects of ice and snow on the highway user.

- The winter service provision within St Helens Council is provided by the Highway Direct Services Organisation which forms part of the Authority's Place Operations department and comprises of 7 routes. It is planned to ensure that adequate resources are available at all times during the winter period to respond to adverse weather conditions. A pre-season, mid-season and end of season review is conducted s to ensure continual improvements are made.

The purpose of this plan is to clarify both the standard and extent of the winter service the Council will provide by:

- Maintaining key elements of the highway network and facilitating public transport's accessibility;
- Assisting business continuity and resilience to other public sector and private sector service providers;
- Confirming what areas will receive winter service provision;
- Providing residents, community groups and businesses with information to ensure they can adequately prepare themselves.

The Council's aim is to respond appropriately to winter weather conditions, to ensure key corridors of the highway network are operating satisfactorily to support residents, businesses and other service providers.

The Civil Contingency Act 2004 requires a Local Authority as Category 1 responders to plan for a range of emergencies, including prolonged extreme or adverse weather. This plan sets out how St Helens Council will respond to such situations; and its particular arrangements for maintaining, as far as is reasonably practicable, a free flowing highway network which is part of its Winter Service Policy and Operational Plan.

## 2.0 Policies

As highway authority the Council has the responsibility of providing a degree of winter service provision. The Highways Act 1980 Section 41(1A) imposes a duty on a highway authority ***'to ensure, so far as is reasonably practicable, that safe passage along a highway is not endangered by ice and snow'***. However, it is important to note that this does not create an absolute duty on the Council to remove ice and snow from our all our roads and footways.

### Client and Contractor Risks and Responsibilities

- The Highway Direct Services Organisation which forms part of the Authority's Place Operations Department is responsible for delivering St Helen's Winter Service.

## Partnership or Shared Risks and Responsibilities

- As the present Contractor that provides the Winter Service for the Authority is within the Highways and Infrastructure Service there is a close working relationship in service delivery.

## Decision Making Process and Responsibilities

- During the full Winter Period, all decisions with regards to precautionary salting will be made by the relevant Duty Engineer as per internal rota. All other general enquiries with respect to the Winter Service should be addressed to the Winter Maintenance Manager based via the contact centre. The decision to activate the minimum winter network will be part of the contingency planning process.

## Liaison and Communication Arrangements with Other Authorities

- Meetings to discuss Winter Service matters are held involving all the five Authorities on Merseyside. Road weather forecasts are provided by MetDesk. Vaisala Ltd, provide software and hardware support to the five Merseyside Authorities for monitoring road conditions. Their contracts will run until 2025. A representative from MetDesk and Vaisala Ltd, will attend these maintenance meetings during the Winter Period to discuss the ongoing management of the service provision for the six Merseyside Authorities and Warrington.

## Winter Risk Period

- It is the Authority's Policy to define the period of full Winter Maintenance as the 22 week period starting on the last week of October to the last week of March. Should it be necessary to deal with wintry conditions outside this period, provision has been made within the present Contractor for Winter Maintenance to cover this eventuality.

## Contingency Planning

- Although the Authority has a robust Winter Service Plan, key elements will continue to be reviewed, including network coverage, minimal winter network, operational procedures and standards and appropriate salt stockholding, all in line with current best practice. Driver availability is also a key pressure, as part of the national shortage of HGV drivers.

*In preparing this policy document, information and direction has been drawn from key regional and national policies and guidance notes set out below.*

## **Roads and Levels of Service**

Precautionary Salting Routes -

Classified roads, must but not all bus routes, major through routes between towns, villages and large residential areas and routes to emergency service premises and schools. A schedule of all roads included on primary routes is available. These routes cover 38% of the total road network in St Helens. See website for details: [www.sthelens.gov.uk](http://www.sthelens.gov.uk)

Other Roads-

The treatment of other roads will be at the discretion of the Winter Maintenance Manager/ Duty Engineer as available resources permit

## **Well-maintained Highways**

The 'Well Managed Highway Infrastructure: Code of practice 2016' (WMHI 2016) published by the UK Roads Liaison Group on 28<sup>th</sup> October 2016 (amended 15<sup>th</sup> March 2017) is the current national guidance available for highway authorities on the suggested management approach to adopt for the delivery of a safe and well-maintained highway network.

## **Quarmby Report**

Following national issues which arose from recent severe weather conditions, the United Kingdom Road Liaison Group Report 2009, and the Quarmby Report 2010, set out a range of recommendations which have been adopted/noted in producing St Helens' Winter Service Operational Policy.

## **Highways England Network Management Manual**

Consideration has also been given to guidance published by the Highways Agency in its Network Management Manual, although it is recognised that these recommendations are generally more suited to motorways and strategic routes.

This Highway Winter Service Policy has been developed to ensure the Council acts responsibly in fulfilling its statutory duties.

## **3.0 Policy statement**

The Council aims to provide a winter service which, in so far as is reasonably practicable, will permit safe movement of traffic and minimise delays and accidents directly attributable to adverse weather conditions having regard to financial constraints and legal requirements.

## **4.0 Scope**

This policy details the context for St Helens Council's winter service provision and how the policy will be implemented and put into practice.

The Policy includes the Council's agreed salting routes proposed treatments—deployment of personnel and plant to enable precautionary salting and snow clearance of the highway network in accordance with specified response times.

## **5.0 Responsibilities, Stakeholders and Management Arrangements**

The Executive Director of Place Services is responsible for implementing the Council's Highway Winter Service Policy.

The Winter Maintenance Manager is responsible for the day-to-day operation of the Council's Highway Winter Service Policy.

The Highways and Infrastructure Manager and Duty Engineers within operations act as winter duty managers during the winter risk period and are operationally responsible for deploying the winter service when required.

Stakeholder interest in the service is high. Stakeholders include all residents of St Helens, any person who chooses to visit St Helens for either business or pleasure or to pass through the Borough, local and non-local businesses with an interest in St Helens, any organisation that has an interest in the highway network in St Helens (bus services, taxi companies, emergency service etc) and all other Council services.

## **6.0 Route Prioritisation**

St Helens Council is responsible for the maintenance of a highway network of 748km of carriageway and 1147km of footways. Given the scale of the financial implications and other operational resources involved in delivering the winter service, it is not considered to be practically possible to:

- Provide a winter service on all parts of the highway network in one operation and
- Ensure all running surfaces are kept free from ice and snow at all times, even on the treated part of the network.

St Helens Council carries out salting on 284km (178 miles) of main traffic routes.



The precautionary salting route priorities are listed on the link below and account for approximately 38% of the total road length across the full borough as listed in on the council's website on: [www.sthelens.gov.uk](http://www.sthelens.gov.uk)

Under conditions of lying snow, snow ploughing and associated precautionary salting will be undertaken with roads being cleared in order of their traffic importance based on the approved precautionary salting routes. Once this priority network of roads is clear, then action may be undertaken on more minor routes (secondary routes) with priorities for action being those areas where people are most at risk e.g., steep gradients etc.

Secondary routes are treated only in case of extreme and prolonged icy conditions, only during the day and only when the priority network routes are fully and adequately treated. The majority of secondary routes are bus routes which are not on the approved precautionary salting routes. The treatment of secondary routes will be at the discretion of the Winter Maintenance Manager as available resources permit.

When normal services are suspended due to severe weather conditions, operational teams from across the whole authority will be deployed, where possible, to increase the capacity to respond.

## **7.0 Treatment rationale**

### **Precautionary Salting Carriageways**

The greatest safeguard for the protection of the travelling public is to instigate precautionary salting treatment. This is the advanced application of salt applied to a road to prevent ice forming and snow settling.

Precautionary salting provides an effective treatment aimed at ensuring the safe movement of vehicles and is carried out on roads prioritised in accordance with the routes on the website.

To be both cost-effective and efficient, salt should be spread before ice forms or snow settles on the roads. Anticipating these conditions and reacting correctly depends on a mixture of local knowledge and experience, interpretation of the MetDesk weather forecast and knowledge of the state of the road and the temperatures at that time.

When establishing shift patterns for all staff, St Helens consider building in resilience for staff absence in addition to the requirements of the working time directive and drivers' hours regulations.

Full details of the Councils salting carriageway routes can be found on the St Helens Council web site: <http://www.sthelens.gov.uk>

### Precautionary footways:

Agreed footways within town centres and nominated areas in table 1.

| <b>FOOTWAY PRIORITIES (Snow clearance)</b>   |
|--|
| <b>Description</b>   |
| The areas which may receive treatment are town centres, at the discretion of the Winter Services Duty Officer. |
| Rail station access<br>Bus station access  |
| No other footways receive treatment  |

Table 1 Footway priorities

## 8.0 Post Salting:

This is the action taken to remove ice and snow that has already formed on the road. These roads are prioritised and detailed in on our website: <http://www.sthelens.gov.uk>

## 9.0 Snow Clearance:

### Carriageways

When continuous snow is forecast the salting spread rate will be increased to help melt the initial snowfall and provide a wet surface. This may be followed where appropriate by ploughing. Where snow is already present on the road, a combined ploughing and salting operation will be carried out as per the road priorities listed in on the website:

<http://www.sthelens.gov.uk>

### Footways

Footways will be cleared of ice and snow in accordance with Table 1 above.

### Salt Bins and Salt Piles

Salt bins and piles are generally provided for drivers of vehicles to spread salt on the carriageway as an aid to traction in icy or snow conditions. The salt is often used by residents to spread on footways. See <http://www.sthelens.gov.uk> for the Salt Bin list and Criteria.

## 10.0 Weather Prediction Systems

Accurate weather prediction and information systems to support the decision-making process, are the foundation for an effective winter service delivery provision.

These are provided by the following facilities:

- Weather Prediction Service supplied by the MetDesk
- St Helens' Councils Weather Station and access to adjacent authorities' stations including ice Prediction Systems (Installed on the A57 – Old Brook Hall and the A580 – Catchdale Moss)

### “RoadCast” Service

The MetDesk Roads and ‘Navigator’ facilities are key tools for decision makers supplied by MetDesk/Vaisala and provides forecasts and online intelligence systems that provide the basis for confident decision making. Experience has shown that this facility is in the main accurate and dependable.

This facility provides a range of service intelligence, including:

- Morning summary,
- The actual previous overnight conditions and forecast for the next 12 hours,
- 2 to 10-day forecast of expected weather conditions,
- Main forecast for the next 24 hours giving details and confidence of;
  - ice, hoar frost, snow, fog, wind, and rain
  - road state
- Direct contact to weather forecaster
- Updates as necessary
- Service provided from October – April

The graphical format shows the predicted temperatures for the period based on temperatures and weather conditions which will be monitored. Updates will be issued if there is a change in forecast e.g., from no frost to a frost.

The textual format gives more details of the graphical format. This forecast will include a readiness state coloured green, amber or red depending upon the severity of the forecast. Green will generally mean that no action will be required that night whilst red will generally mean that action will be required.

Amber means that the Duty Engineer will be required to monitor the forecast very carefully as the forecasters are uncertain, due to say cloud cover, as to what is likely to happen on that particular night.

A 2 to 5-day forecast provided on a daily basis giving an indication of the likely conditions for the next 5 days.

A daily morning summary giving a review of the previous 24 hours and an early indication of the likely weather for the coming 24 hours.

A 24-hour help line direct to the forecast room at MetDesk.

Navigator forecasts are accessed by direct link to the Vaisala server which hosts the forecasts. During normal working hours, this operation is carried out using a computer within the Highway Maintenance Section of the Place Operations department. Forecasts can also be accessed via a website hosted by Vaisala and one hosted by MetDesk. Outside normal working hours, the Duty Engineer on call can access the Internet using a home computer, tablet or a laptop.

### ***Weather Station***

The Authority has installed weather stations on the A580 East Lancashire Road and the A57 Warrington Road. The Stations are equipped with sensors to monitor air and road surface temperatures, rainfall, humidity, dew point, road surface conditions, depth temperatures and the residual salt on the road. In addition, arrangements have been made to allow access to weather information from weather stations in Liverpool, Knowsley, Sefton, Wirral, and Lancashire.

This information can be accessed by the Authority to assist in making decisions with respect to winter maintenance operations. The weather stations can also be accessed by MetDesk in their production of weather forecasts for the Authority.

### **Maintenance of Ice Detection Equipment**

The software used for manipulating the forecast data is called “Navigator” and is provided by Vaisala Ltd. Vaisala also provides the maintenance to the weather stations. The Authority has extended its maintenance agreement with Vaisala for the maintenance of the weather stations and the software for a period of 5 years to July 2025.

The information received by the stations provides localised information which is applied within a borough wide scenario. The information includes:

- road surface temperatures
- air temperature
- dew temperature
- relative humidity
- precipitation
- surface state – ice/snow/wet/moist/treated etc.
- wind direction
- level of grip

## Thermal Mapping

A new thermal mapping exercise was undertaken by Vaisala Ltd during the 2016/17 winter season and the data is included in the ice prediction system.

## 11.0 Making the Decision

The Decision Maker and Duty Supervisor will maintain close contact throughout the winter period. This along with maintaining a wider communication network with other agencies and advisors, as recommended within the LGA report on winter services, will help share critical information and improve the decision-making process.

The quality of decisions made by the Winter Service Decision Maker will be the key factor in determining both the effectiveness of the Winter Service and also how it is perceived by road users. In these circumstances, a 'learning organisation' culture is crucial to the continued improvement of the service.

The decision-making process is influenced by the Winter Service Guidance for Local Authority Practitioners (published following the Quarmby Review 2010). References to changes to the National Winter Service Research Group (NWSRG) Practical Guide for Winter Service are noted below: *(Please note these may be further changed over time and continuous references to the latest guidance issued to Local Authorities should be used when reading this document).*

The network of roads listed by are combined into 7 pre-treatment routes each of which starts from the salt barn on Jackson Street after each spreading vehicle is loaded.

All roads where the emergency services have Stations are treated.

Precautionary treatment will normally be completed prior to the morning rush hour. However, there may be occasions when weather conditions will dictate that precautionary salting will have to be continued through the rush hour e.g. continuous snow.

Under normal circumstances, the Authority will not treat cycle tracks.

Within the Authority there are no specific special sites which need consideration. Any roads which contain traffic calming measures and form part of the agreed precautionary salting routes will be treated as a matter of course.

### Spread Rate Rationale

The majority of winter service treatments in the UK are precautionary. National Winter Service Research Group (NWSRG) Practical Guide for Winter Service recommends that sufficient salt should be spread to:

- Prevent frost and ice formation,
- Prevent ice or snow bonding to the carriageway,
- Spread rates should be kept as low as practicable for the forecast conditions and road surfaces considered,
- Cost savings,
- Increased resilience,

- Minimise impact on the environment.

National Winter Service Research Group (NWSRG) Practical Guide for Winter Service states that spread rate decision based on assessment of 3 factors:

- Salt distribution Good/Fair/Poor
- Traffic level Light/Medium or High/ Congested
- Salt loss immediately after spreading Normal or High

Decision on the salt distribution based on:

- -Assessment of spreader performance during calibration
- -Type and condition of the salt
- -Calibration of the spreader
- -Wind speed during spreading

Traffic levels

- National Winter Service Research Group (NWSRG) Practical Guide for Winter Service considers 2 traffic levels:
- High and Congested – 250 vehicles per hour per lane or more and moving at normal or slower than normal traffic speeds
- Light and medium – up to 250 vehicles per hour per lane

Salt loss immediately after spreading

- The salt loss anticipated after spreading should be assessed as normal or high:
- Normal loss:
  - Traffic is not heavy during spreading
  - Road surface is wet
- High loss:
  - Traffic high during spreading and road surface dry or damp, or If the moisture content of dry salt is less than 2% when dry salting

The decision to carry out winter service operations in accordance with the designated route priorities will be made by the council’s nominated Decision Maker. The decision is made based on the weather forecasting information received from the MetDesk, aided by the Decision-Making Matrix in Table 2 below and where appropriate taking account of any relevant local intelligence:

| H4 – Precautionary Treatment Decision Matrix |               |                           |             |     |
|--|---------------|---------------------------|-------------|-----|
| St Helens Salting Options shown in red       |               |                           |             |     |
|  |               | Predicted Road Conditions |             |     |
| Road Surface Temperature                     | Precipitation | Wet                       | Wet Patches | Dry |

|                           |   |   |  |   |
|---------------------------|---|---|--|---|
| May fall below 1C         | No Rain<br>No Hoar frost<br>No Fog  | Salt before Frost   | Salt before freezing (see note a)        | No action likely, monitor weather (see note a)  |
| Expected to fall below 1C | No Rain<br>No Hoar frost<br>No Fog  | (Option 1)  | (Option 2)                               | (Option 3)                                      |
|                           | <u>Expected</u> hoar frost<br><u>Expected</u> fog                         |   |  | Salt before freezing (see note b)<br>(Option 2) |
|                           | <u>Expected</u> rain<br><u>BEFORE</u> freezing                            | Salt after rain stops (see note c)<br>(Option 4)  |  |   |
|                           | <u>Expected</u> rain<br><u>DURING</u> freezing                            | Salt before freezing, as required during rain and again after rain stops (see note d)<br>(Option 4) |  |   |
|                           | <u>Possible</u> rain<br><u>Possible</u> hoar frost<br><u>Possible</u> fog | Salt before frost<br>(Option 1)   | Monitor weather conditions<br>(Option 3) |   |
| Expected snow             | Salt before snowfall (Option 1)   |   |  |   |

The decision to undertake precautionary treatments should be, if appropriate, adjusted to take account of residual salt or surface moisture.

All decisions should be evidence based, recorded and require continuous monitoring and review.

- 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 on other occasions as is reasonably practicable.
- 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 for each route.
- 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.

**Option 1**

Precautionary salting all routes

**Option 2**

- a) Precautionary salting all routes or,
- b) On occasions where the roads are generally dry with sporadic wet patches but have been treated on at least two previous evenings without rainfall, a spot treatment option may be considered.

**Option 3**

- a) Precautionary salting all routes or,
- b) On occasions where the roads are generally dry with sporadic wet patches but have been treated on at least two previous evenings without rainfall, a spot treatment option may be considered.
- c) Monitor through scouting

**Option 4**

Precautionary salting all routes

- a) If possible after rainfall and prior to ice forming
- b) During rainfall where unavoidable due to freezing road surface temperatures
- c) If necessary after rainfall

**Table 1 Carriageway decision matrix**

Winter service treatments decisions will be at the discretion of the councils nominated decision maker. Treatment decisions should always be made in accordance with the authority's winter service policy and winter service plan and take a risk-based approach to determining the most appropriate course of action in response to the weather forecast and reported conditions.

## **12.0 Recommended Spread Rates**

Table 3 below recommends appropriate spread rates and is to be used as a guideline by duty officers as good practice for when salt stocks are greater than the minimum salt stocks.

The decision maker applies the treatment guidance within WMHI 2016 document appropriate to the route, gritter spread rate limit of 25 grams per square metre, including but not limited to traffic levels, road surface type, climactic conditions, salt condition, vehicle capabilities and residual salt considerations. The duty officer may also request data from Snow Scouts during periods of adverse weather to provide visually obtained information on climactic conditions and residual salt levels.

**Sample Treatment Matrix**  
**(Treated Salt, Good Coverage, Medium Traffic and Normal Loss)**



| <b>St Helens uses modified grit (6mm Safecote) For full list of tables refer to National Winter Service Research Group (NWSRG) Practical Guide for Winter Service</b> |   |  |
|---|---|--|
| <b>Weather Conditions<br/>Frost or Forecast Frost<br/>Road Surface Conditions<br/>Road Surface Temperature (RST)</b>  | <b>Treatment</b>                              |  |
|   | <b>Recommended Gritting (g/m<sup>2</sup>)</b> | <b>St Helens Treatment (g/m<sup>2</sup>)</b> |
| RST at or above – 2°C and dry or damp road conditions   | 7   | 10   |
| RST at or above – 2°C and wet road conditions   | 7   | 10   |
| RST at or below – 2°C and above – 5°C and dry or damp road conditions   | 8   | 10   |
| RST at or below – 2°C and above –5°C and wet road conditions  | 16  | 20   |
| RST at or below – 5°C and above – 10°C and dry or damp road conditions  | 16  | 20   |
| RST at or below – 5°C and above – 10°C and wet road conditions  | 31  | 25   |

**Table 3 Sample Treatment matrix**

### **3.0 Standard Operating Procedures**

The Winter Maintenance Manager will be responsible for organising salting operations required 24 hours per day, 7 days per week including bank holidays and over the Christmas and New Year period. These arrangements will also ensure that sufficient operational staff are also available during these periods.

Generally, operations will consist of a pre-salting exercise during which designated roads are treated. Dependant on the weather forecast pre-salting operations will commence early evening and be fully completed by prior to midnight.

Precautionary salting will be fully operational within 1 hour of the decision to commence treatment operations. It is the aim of St Helens Council to complete each de-icing run within 3 hours.

WMHI 2016 recommends introduction of a comprehensive and accurate record keeping system. At present such information is kept electronically including but not limited to information on all plant via tracking devices, all routes taken, spread rate, all decisions regarding treatments and diary entries.

### **14.0 Training and Development**

Training of operatives, supervisors and senior decision makers is important to the quality of service provided and will be increasingly questioned in any future litigation.

Whilst both Council and contractor employees have considerable experience in their respective part of the service it is important to ensure that they have the required accreditation.

Training will be assessed on an annual basis to ensure compliance with the latest recommendations.

The Duty Engineers will attend attended courses relevant to the Winter Service which included the following topics:-

- 1) Introduction to Meteorology
- 2) Factors affecting road surface temperature
- 3) Winter road hazards
- 4) The Ice Prediction Infrastructure, Thermal Mapping and RoadCast
- 5) Interpretation of Forecasts
- 6) Understanding hazardous weather conditions
- 7) Interpretation of Non-Forecast Data
- 8) Preparation and interpretation of forecasts
- 9) Pavement construction, road surfaces and their behaviour
- 10) Problems relating to cloud cover
- 11) Hoar frost

## **15.0 Health and Safety**

All employees undertaking Winter Service operations hold the necessary qualifications.

All personnel are logged in and logged out at the start and end of each shift. (Lone working procedures guidance card 072 issued to all operatives).

All personnel are in mobile phone contact with the works depot.

Due to the nature of the works, out of hours, employees are on a rotating standby schedule to allow for rest periods.

If any shift goes beyond 3 am then all operatives involved are allowed half a day rest period the following day to recuperate.

## **16.0 Prolonged or Severe Weather Events**

During periods of sever or prolonged weather events (i.e. when normal operations cannot be maintained), the network can be reduced to treating just the strategic routes. Strategic routes are defined as those routes that are essential to the continuance of business, emergency services, social and educational needs, and any other critical establishments.

During severe weather events, St Helens Council is to ensure that salt stocks are used effectively and conserved where practical.

The decisions made by the Decision Makers regarding treatment levels, may on occasions be affected by salt stocks held at the time.

The decision to reduce salting to include only the critical network must be communicated to other districts to enable mutual aid and operational issues and must receive cabinet approval.

When the trigger points in Table 4 below are reached the identified actions are to be invoked. The conservation of stock levels are critical and therefore services will inevitably have to be reduced from those otherwise provided. E.g. the re-filling of self-help salt bins may be suspended, as will any private works requiring the provision of salt.

| <u>District</u>  | <u>Max Stocks (Tonnes)</u> | <u>Trigger 1</u> |
|------------------|----------------------------|------------------|
| <b>St Helens</b> | 2,000                      | 1,500            |

Table 4 Salt Barn Stocks

### **Trigger Points**

Example: Rock salt stocks fall below 500 tonnes during the winter period.

#### Actions:

- Salt bin stock refilling activities may be suspended until minimum levels increase.
- Highways Maintenance Manager to contact supplier to inform of reduction in local service delivery and need for urgent supplies in line with Stock management protocols established within tendered contract conditions.

It should be noted that no supplier of Salt in the UK engages in guaranteed supply contracts and therefore is not reasonably practicable to secure a guaranteed supply.

## **17.0 Plant and Material Resources**

### **Vehicles:**

Currently, a fleet of seven salting vehicles cover the designated priority salting routes.

All the fleet vehicles are calibrated pre-season and mid-season to BS 1622 1989 Class A1 (Specification for spreaders for Winter Maintenance) and fitted with electronic road speed related controls.

The Council has just taken delivery of three new gritters. These will improve the reliability of the fleet and enable us to deliver a modern and efficient service.

## **Salt Stock**

Precautionary salting operations operate out of Hardshaw Brook Depot in St Helens Town Centre. Salt is stored in a purpose-built salt barn on Jackson Street, St Helens. Rock salt is supplied by Compass Mineral Ltd. Supplies of rock salt are procured and delivered during the summer months.

The Council has a Contract in place for the supply of rock salt. The Contract is reviewed periodically to ensure value for money and sustainability. The contract does not have a guarantee clause, UK suppliers do not offer this.

Mutual aid is considered during the Merseyside Winter Service group in order to provide support for neighbouring authorities based upon stocks.

The Council has significantly increased its stock levels to a maximum capacity of 2,000 tonnes. A check is kept on salt levels to ensure that identified actions are to be invoked when trigger points in Table 4 are reached. If and when additional stocks are required, these are ordered on a call off basis. (All orders are made by the Civils Section direct to Compass Minerals UK Ltd by telephone confirming times, dates and volume, which are then backed up with an official order placed via e-procurement system).

Best endeavours are undertaken to confirm loading methods ensure minimum loss.

The Council has developed an internal stock management arrangement with its supplier to prevent stock levels falling to a critical point. However, a limited supply chain prevents an absolute solution to the potential for interruptions to salt supplies both regionally and nationally.

St Helens only uses treated salt. Treated salt is normal de-icing Rock Salt BS3247 with an additive 'Safecote', this has advantages over standard dry salt including the need for less salt to be used on the road, greater resilience as stocks last longer, and greater lasting power on the road surface.

No other de-icing agent is used due to lack of suitability.

## **Monitoring Salt Stocks**

Stock control is achieved by staff entering salt used at the end of each treatment, this process ensures stock levels are accurately monitored. These measures are fed into our stock management software to generate orders.

Salt moisture tests will be undertaken by in accordance with guidance with National Winter Service Research Group (NWSRG) Practical Guide for Winter Service of the Well-Maintained Highways document and records kept.

## **18.0 Salt Bins**

Salt bins are strategically located across the borough. The qualification criteria and locations can be viewed on the council website: <http://www.sthelens.gov.uk>

### **Support to the public and other agencies**

Salt can quickly become in short supply, especially during severe weather conditions. The Council would therefore advise people to be prepared and have the necessary supplies and equipment in readiness for these conditions.

Salt from Council stocks will not be supplied to members of the public. Salt can be purchased from builder's merchants and DIY stores for personal use.

## **19.0 Communications**

### **Website**

Throughout winter period the council's website is updated daily giving current information on the weather conditions.

The most comprehensive and current summary of roads included in our designated salting routes and salt bin locations is also available on the Council's web page. This can be accessed by logging on to <http://www.sthelens.gov.uk>

The Council would advise the public to keep up to date with weather forecasts throughout the coldest months and amend their traveling arrangements accordingly. Spreading some rock salt on private footways, in the evening if low temperatures are forecast will help reduce the likelihood of slips. This is especially beneficial for properties that have an inclined path or drive and or where there are steps. However, care should always be taken regardless of spreading salt.

The council promotes a community and neighbourly spirit and recommends that we all watch out for our neighbours through the winter period, especially where they are vulnerable.

This document is controlled by the Winter Service Manager.

### **Service requests**

Enquiries and service requests can be made by telephoning the council's contact centre on 01744 676789 or on the council website: <http://www.sthelens.gov.uk>. During times of heavy snowfall all available resources will be deployed keeping primary routes open. During these periods it will not be possible to respond to service requests on other roads.



**ST HELENS**  
BOROUGH COUNCIL

**Highways and Infrastructure**

Hardshaw Brook Depot

Parr Street

St Helens

Merseyside

WA9 1JR

Tel: 01744 676 789

[www.sthelens.gov.uk](http://www.sthelens.gov.uk)

