Bolton Council

## Highways & Engineering Division

# Winter Service Policy

# 2022/2027

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# 1 INTRODUCTION

The winter service provision within Bolton Council is provided by Highways & Engineering Division from within the Department of Place. It is planned to ensure that adequate resources are available at all times during the winter period to respond to adverse weather conditions.

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 the type of highway under consideration and traffic use. 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".

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.

Bolton Council's Winter Service Policy has been updated to seek as far as reasonably practicable to comply with the revised guidance. The policy will undergo further regular review in light of experience during the winter season and as a result of the foregoing.

Whilst it must be accepted that it is impossible on the grounds of both practicality and economy to prevent the formation of ice and snow on all of the borough's roads and footways, Bolton Council will use its best endeavours to meet its statutory duty by minimising the detrimental effects of ice and snow on the highway user.

Bolton Council will 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 and managed by the Winter Service team comprising all decision makers, duty officers and front-line operational staff 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 which 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 Bolton 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.

# 2 POLICIES

As Highway Authority the Council has the responsibility for 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.

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

## 2.1 Local Transport Plan (LTP)

The strategic policy document, which gives direction to the Association of Greater Manchester Authorities (AGMA) transportation and highway activity, is the LTP. The plan, for which there is a statutory duty to produce, is prepared jointly by the ten Greater Manchester districts and Transport for Greater Manchester (TfGM). The Plan's emphasis is to underpin wider regeneration policies and to promote improvements in public transport, cycling and walking, while also ensuring effective traffic management and making the best use of the existing infrastructure.

An effective transport network is clearly critical to AGMA's social, economic and environmental well-being. The policies set out in the LTP embrace the principles contained within the hierarchy of road users, which gives priority to more vulnerable road users and public transport and to those living in and using a particular area.

The LTP is therefore seen as a primary document with the key policies influencing the way in which Winter Services Operational Policies are produced and implemented.

### 2.2 Well-Maintained Highways

The document: "Well-maintained Highways - Code of Practice for Maintenance Management", and the Institute of Civil Engineers' publication "Design and Practice Guides - Highway Winter Maintenance", provide detailed professional guidance in the delivery and management of winter services.

### 2.3 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 Bolton's Winter Service Operational Policy.

### 2.4 HA 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 POLICY STATEMENT

The Council aims to provide a winter service which, insofar 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 SCOPE

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

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

# 5 RESPONSIBILITIES, STAKEHOLDERS AND MANAGEMENT ARRANGEMENTS

The Assistant Director for Highways and Engineering (H&E) is responsible for implementing the Council's Highway Winter Service Policy.

The Service Manager (Operations) within H&E is responsible for the day-to-day operation of the Council's Highway Winter Service Policy.

A Senior Engineering Manager and two Service Managers act as winter duty managers during the winter risk period (October to March) and are operationally responsible for deploying the winter service when required.

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

# 6 ROUTE PRIORITISATION AND LEVEL OF SERVICE

Bolton Council is responsible for the maintenance of a highway network of 1001 Km of carriageway and 1530 Km of footways. Given the scale of the financial implications and other operational resources involved in delivering the winter service, it is considered to be impracticable to:

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

## 6.1 Precautionary Salting

Precautionary salting is the advanced application of salt applied to a road to prevent ice forming and snow settling.

**The Routes:**

- Classified roads; the majority of bus routes; major through routes between wards, and routes to emergency service premises. A schedule of all roads included on primary routes is available. These routes cover 51% of the total road network in Bolton. See website for details: http://www.Bolton.gov.uk/transport/winter-service/
- Bolton Council carries out gritting on 510kms (317 miles) of main traffic routes

### 6.2 Other Roads

The treatment of other roads will be at the discretion of the Winter Maintenance / Duty Manager when the precautionary salting routes have been fully and adequately treated, and resources become available.

### 6.3 Seek and Destroy Routes (High Level Routes)

When weather conditions are forecast to be marginal, the Decision-Maker may consider that a full route grit is not warranted. Such an occasion may arise when gritting has been carried out in the recent past and sufficient residual grit remains on the carriageway to preclude the need for further full treatment. In such circumstanced the Decision-Maker may opt to focus gritting on pre-identified high-risk routes (e.g. cold spots and locations subject to localised water run-off). These pre-identified routes are known locally as 'Seek and Destroy' routes or High Level Routes).

### 6.4 Treatment of Footways

- When normal departmental services are suspended due to severe weather conditions, operational teams from across the department will be deployed to increase our capacity to respond to treating footways. The footway hierarchies set out in Table 1 are based on the volume of pedestrian traffic

**Table 1**

| **Footway Priorities (Snow Clearance)** | |
|---|---|
| **Priority** | **Description** |
| **Priority A** | Town centres |
| **Priority B**<br><br>**(Subject to available resources)** | Rail station access<br>Bus station access<br>Bus stops (Priority A footways)<br>Pedestrian crossing points (Priority A footways)<br>Main car parks access<br>Public building access (providing essential services)<br>Bus stops on Quality Bus Corridors |
| No other footways receive treatment | |

## 7 TREATMENT RATIONALE

### 7.1 Precautionary Gritting Carriageways

The greatest safeguard for the protection of the travelling public is to instigate precautionary gritting treatment.

Precautionary gritting provides an effective gritting operation aimed at ensuring the safe movement of vehicles across the borough. The precautionary gritting routes described in paragraph 6.1 have been the subject of the Council's democratic approval process and cannot be arbitrarily amended by officers within the service.

To be both cost-effective and efficient, grit 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.

Full details of the Council's gritting carriageway and footway routes can be found on the Bolton Council web site: www.bolton.gov.uk

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

The drivers' hours regulations are in place to contribute to road safety. BMBC observes the GB domestic drivers' rules and VOSA's guidance on drivers' hours, 'Rules on Drivers' Hours and Tachographs' which can be found at the below web link:

http://assets.dft.gov.uk/publications/drivers-hours-passenger-vehicles/report.pdf

Reserve gritting drivers may be sourced internally or externally subject to the demands of the service.

### 7.2 Precautionary Gritting footways

Agreed footways within town centres only, full details can be found on the Bolton Council web site www.bolton.gov.uk

## 8 POST GRITTING

This is the action (i.e. further gritting) taken to remove ice and snow that has already formed on the road. The roads treated are the precautionary salting routes described in paragraph 6.1.

## 9 SNOW CLEARANCE

### 9.1 Carriageways

When continuous snow is forecast the gritting 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 gritting operation will be undertaken on the precautionary salting routes.

### 9.2 Footways

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

# 10 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 systems are provided by the following:

- MetDesk Weather Forecasting Service
- The Council's Weather Stations
- Ice Prediction System - Vaisala Service

## 10.1 Weather Forecasting Service

The weather forecasting service is a key tool for decision makers and provides forecasts and online intelligence systems that provide the basis for confident decision making.

This facility provides a range of service intelligence, including:

- Morning summary - issued at approximately 7.00am
- The actual overnight conditions and forecast for the next 36hours
- 2-5 day forecast of expected weather conditions
- Main forecast - issued at approximately 1.00pm for the next 36 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

## 10.2 Weather Stations

Bolton has two weather stations, one located at a critical high point on Chorley Old Road, and one located at the Chorley Road / Dicconson Lane Junction.

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.

### 10.3 Ice Prediction System - Vaisala Services

The information gathered at the roadside sensor is sent direct to Metdesk Limited who use the data recorded on site, alongside regional data, to monitor and aid forecasting.

The data received is also processed by an ice prediction computer software system (Vaisala), which provides real-time feed back to the Council regarding on site conditions at the weather stations. This platform is also used to receive the Metdesk forecasts, along with updates on changing weather patterns, as and when appropriate.

The two stations are constantly monitoring the weather conditions and communicate the data to the Vaisala and Metdesk systems. This data in turn is analysed and sent through to the Decision Maker.

## 11 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.

Our decision-making process is influenced by the **"**Winter Service Guidance for Local Authority Practitioners**"** (published following the Quarmby Review 2010). References to changes to Appendix H in 2013 (section 13 of the Well-Maintained Highways, national guidance document) and the latest guidance from National Winter Service Research Group, NWSRG. (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 decision to carry out winter service operations in accordance with the designated route priorities will be made by the councils nominated Decision Maker. The decision is made based on the weather forecasting information received, aided by the Decision Making Matrix in Table 2 and Table 3 below and where appropriate taking account of any relevant local intelligence, e.g. Trouble spots, road type (porous or non-porous etc.)

## 11.1 Carriageway Decision Matrix

**Table 2**

<table>
<tr><th colspan="5">H4 - Decision Matrix Guide of the Well-Maintained Highways Code of Practice<br>Bolton Gritting Options shown in red</th></tr>
<tr><td colspan="2"></td><td colspan="3">Predicted Road Conditions</td></tr>
<tr><td>Road Surface Temperature</td><td>Precipitation</td><td>Wet</td><td>Wet Patches</td><td>Dry</td></tr>
<tr><td>May<br>fall below 1C</td><td>No rain<br>No hoar frost<br>No fog</td><td rowspan="3">Grit before frost<br><br>(Option 1)</td><td rowspan="2">Grit before freezing (see note a)<br>(Option 2)</td><td rowspan="2">No action likely, monitor weather (see note a)<br>(Option 3)</td></tr>
<tr><td rowspan="4">Expected to fall below 1C</td><td>No rain<br>No hoar frost<br>No fog</td></tr>
<tr><td>Expected hoar frost<br>Expected fog</td><td colspan="2">Grit before freezing (see note b)<br>(Option 2)</td></tr>
<tr><td>Expected rain<br>BEFORE freezing</td><td colspan="3">Grit after rain stops (see note c)<br>(Option 4)</td></tr>
<tr><td>Expected rain<br>DURING freezing</td><td colspan="3">Grit before freezing, as required during rain and again after rain stops (see note d)<br>(Option 4)</td></tr>
<tr><td>Possible rain<br>Possible hoar frost<br>Possible fog</td><td colspan="2">Grit before frost<br>(Option 1)</td><td>Monitor weather conditions<br>(Option 3)</td></tr>
<tr><td colspan="2">Expected snow</td><td colspan="3">Grit before snowfall (Option 1)</td></tr>
<tr><td colspan="5">The decision to undertake precautionary treatments should be, if appropriate, adjusted to take account of residual grit or surface moisture.<br><br>All decisions should be evidence based, recorded and require continuous monitoring and review.<br><br>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 grit previously deposited. Such locations should be closely monitored and may require treating in the evening and morning and possible on other occasions.</td></tr>
<tr><td colspan="5">b) When a weather warning contains reference to expected hoar frost, considerable deposits of frost are likely to occur. Hoar frost usually occurs in the early morning</td></tr>
</table>

| |
|---|
| and is difficult to cater for because of the probability that any grit 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 hoar frost is forming. Such action is usually not practicable, and grit may have to be deposited on a dry road prior to and as close as possible to the expected time of the condition. Hoar frost may be forecast at other times in which case the timing of gritting 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 |
| **Option 1**<br><br>a) Precautionary gritting all routes |
| **Option 2**<br><br>a) Precautionary gritting all routes or,<br>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, an S&D option may be considered. |
| **Option 3**<br><br>a) Precautionary gritting all routes or,<br>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, an S&D option may be considered.<br>c) Monitor through scouting |
| **Option 4**<br><br>a) Precautionary gritting all routes<br>b) If possible after rainfall and prior to ice forming<br>c) During rainfall where unavoidable due to freezing road surface temperatures<br>d) If necessary after rainfall |

## 11.2 Footway Decision Matrix

**Table 3**

<table>
<tr><th colspan="5">Designated Footway decision making matrix</th></tr>
<tr><td colspan="2"></td><td colspan="3">Predicted Footpath Conditions</td></tr>
<tr><td>Footway Surface Temperature</td><td>Precipitation</td><td>Wet</td><td>Wet Patches</td><td>Dry</td></tr>
<tr><td rowspan="5">Footway may be below 2C before 07.00am</td><td>No rain<br>No hoar frost<br>No fog</td><td rowspan="2">GRIT</td><td>GRIT</td><td>NO ACTION</td></tr>
<tr><td>Expected hoar frost<br>Expected fog</td><td colspan="2">GRIT</td></tr>
<tr><td>Expected rain<br>BEFORE freezing</td><td colspan="3">GRIT after rain stops</td></tr>
<tr><td>Expected rain<br>DURING freezing</td><td colspan="3">GRIT before freezing, as required during rain and again after rain stops</td></tr>
<tr><td>Expected snow</td><td colspan="3">GRIT before snowfall<br>CLEAR SNOW & GRIT during and/or after snowfall</td></tr>
<tr><td colspan="5">The instruction is made on the forecast information available at 13.30hrs each day. It may, on occasions, be prudent to check the ambient temperature prior to deploying staff. Should the temperature be >2C and there is no lying snow prior to commencement of shift, the instruction to grit can be deemed cancelled.</td></tr>
<tr><td colspan="5">a) Where the weather forecast indicates a likelihood of hoar frost or wet / damp conditions linked with freezing temperatures, consideration should be given to an early-morning grit on the designated footways. In making this decision consideration should be given to other factors, in particular the predicted surface temperature at 0700hrs, this being the time that increased pedestrian traffic would generally occur. Following a period of freezing conditions, ice will only effectively thaw at temperatures of 2C and above. Therefore, if the predicted temperature at 0700hrs is below 2C and the forecast state is for damp/wet conditions and/or hoar frost, gritting is advisable.</td></tr>
<tr><td colspan="5">b) Where the forecast indicates a dry state with no hoar frost, gritting is not deemed necessary other than at known wet spots.</td></tr>
</table>

| |
|---|
| c) If, under these conditions, rain has not ceased by early morning, action would be held off until rain ceases. |
| **Option 1**<br>No Action |
| **Option 2**<br>Grit designated town centre footpaths |
| **Option 3**<br>Clear snow and grit |

## 12 RECOMMENDED SPREAD RATES

The majority of winter service treatments in the UK are precautionary. Appendix 'H' recommends that sufficient salt should be spread to:

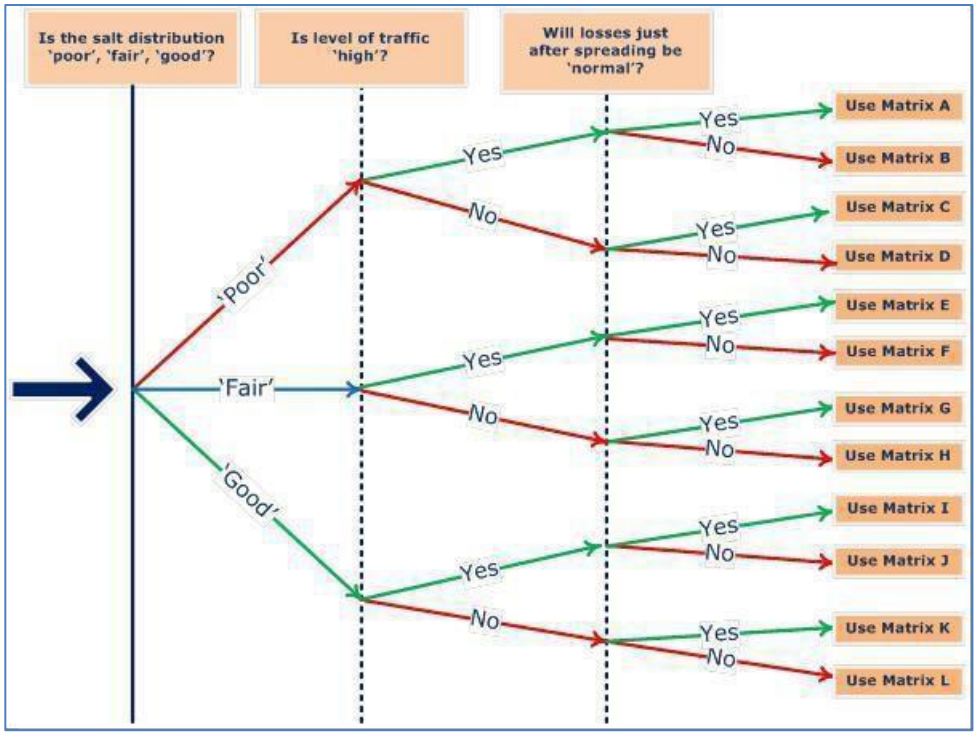
- Prevent frost and ice formation
- Prevent ice or snow bonding to the carriageway
- Spread rates should be kept as low as practicable for the forecast conditions and road surfaces considered
- Cost savings
- Increased resilience
- Minimise impact on the environment

Appendix 'H' states that spread rate decision based on assessment of 3 factors:

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

Bolton Council Decision Makers use the Appendix 'H' 2013 matrix identified in the decision tree, Figure 1, below as basis, wherever practicable, for the appropriate choice of spread rates. Note: All variables considered in Appendix 'H' are considered. However, the latest NWSRG guidance and rates will be utilised and supersede the above at the Decision Makers discretion.

**Figure 1**




**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**

Appendix H considers 2 traffic levels:

- Heavy - 250 vehicles per hour per lane or more
- Low 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 heavy during spreading and road surface dry or damp
- if the moisture content of dry salt is less than 2% when dry salting.

Table 4, below recommends appropriate spread rates and is to be used as a guideline by duty officers as good practice when District grit stocks are greater than the minimum grit stocks (i.e. The Council has at least 12 days resilience levels). Note: when stocks fall below these levels, the new AGMA triggers and protocols should be implemented (see item 15 below).

## 12.1 Sample Treatment Matrix Guide of the Well-Maintained Highways Code of Practice

**Table 4**

| **(Matrix C – Col: E) Sample Treatment Matrix Guide for Dry Unmodified Grit Bolton uses modified grit (6mm Safecote) For full list of tables refer to Appendix 'H'** | | | | |
|---|---|---|---|---|
| **Weather Conditions<br>Road Surface Conditions<br>Road Surface Temperature (RST)** | | **Treatment** | | |
| | **Air Temperature** | **Recommended Gritting (g/m2)** | **Bolton's Treatment (g/m2)** | **Ploughing** |
| Frost or forecast frost<br>RST at or above – 2°C | | 7 | 7 | No |
| Frost or forecast frost<br>RST below – 2°C and above – 5°C | | 7 | 7 | No |
| Frost or forecast frost<br>RST at or below – 5°C and above – 10°C and dry or damp road conditions | | 17 | 17 | No |
| Frost or forecast frost<br>RST at or below – 5°C and above – 10°C and wet road conditions (existing or anticipated) | | 2x14 | 2x14 | No |
| Light snow forecast (<10mm) | | 20 | 20 | No |
| Medium/heavy snow or freezing rain forecast | Above – 5°C<br>At or below – 5°C | 2 x 20 | 20 as often as appropriate | No |
| Ice formed Above – 5°C | | 20 | 20 | No |

| | | | | |
|---|---|---|---|---|
| Ice formed at or below – 5°C | | 2 x 20 | 2x20 | No |
| Snow covering exceeding 30mm | | 20 – 40 (successive) | 20 – 40 (successive) | Yes |
| Hard packed snow/ice Above – 8°C | Above – 8°C | 20 -40 (successive) | 20 – 40 (successive) | No |
| Hard packed snow/ice at or below – 8°C | at or below – 8°C | grit/abrasive (successive) | grit/abrasive (successive) | No |

## 13 STANDARD OPERATING PROCEDURES

The Service Manager (Operations) will be responsible for organising gritting operations required from Monday to Friday during normal working hours. In addition, a Decision Maker supported by key officers will be available via a standby rota which covers 16:00 p.m. to 07:30 a.m. 7 days a week including bank holidays 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 precautionary gritting exercise during which designated roads are treated. Dependent on the weather forecast precautionary gritting operations will commence early evening and be fully completed prior to midnight.

Precautionary gritting will be fully operational within 1 hour of the decision to commence treatment operations.

Section 13 of the Code of Practice for Highway Maintenance Management recommends introduction of a comprehensive and accurate record-keeping system. At present, such information is kept electronically on the BMBC SharePoint system including, but not limited to, information on all vehicle movements; all routes taken; vehicle speed; salt distribution and spread rate; all decisions regarding treatments; diary entries, and email and twitter records.

## 14 TRAINING AND DEVELOPMENT

Training of operatives, supervisors and senior decision-makers is important for the quality of service provided. Whilst Council employees have considerable experience in their respective part of the service it is important to ensure that they have the required accreditation.

All operational staff are trained to City and Guilds Winter Maintenance Training and Assistance Units 2, 3, 5 and 8.

Decision making administrative staff are trained in the Introduction to Road Weather conducted by MetDesk.

Where staff refresher training is needed this is undertaken annually prior to the start of the season.

# 15 PROLONGED OR SEVERE WEATHER EVENTS (AGMA RESILIENCE)

During periods of severe or prolonged weather events (i.e., when normal operations cannot be maintained), the network can be reduced to treating just the critical network. The critical network is 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, Greater Manchester districts have collectively agreed to invoke a considered response to ensure that grit stocks are used effectively and conserved where practical. This rationalisation of winter maintenance service for all Districts will be based upon agreed processes, the decisions made by the Decision Makers regarding treatment levels may, on occasions, be affected by grit stocks held at the time (as reported through a new AGMA data repository on the NMG web site). To this end, 'partnership' working with our preferred supplier, will become a critical issue.

The decision to reduce gritting to include only the critical network must be communicated to other districts to enable mutual aid and operational issues to be considered.

When the trigger points in Table 5 below are reached the identified actions are to be invoked. The conservation of stock levels is critical and therefore services will inevitably have to be reduced from those otherwise provided e.g. the re-filling of self-help grit bins may be suspended, as will any private works requiring the provision of grit.

**Table 5**

| **District** | **Max Stocks (Tonnes)** | **Min Stocks (12 Days** resilience - Salt Union intervention) | **Trigger 1 (50%)** (reduced service delivery) | **Trigger2 (40%)** (Mutual Aid) | **Trigger 3 (30%)** (snow routes only) |
|---|---|---|---|---|---|
| **Bolton** | 4500 | 1500 | 750 | 600 | 450 |

## 15.1 Trigger Points

**ONE**

Rock salt stocks fall 50% or less of minimum stock levels during the winter period.

**Actions:**

- Grit bin stock refilling activities will be suspended until minimum levels increase.
- Winter service manager to contact Salt Union to inform of reduction in local service delivery and need for urgent supplies in line with Stock management protocols established within tendered contract conditions (minimum deliveries to return Authority to 'Minimum Stock Holding levels, i.e. 12 Days resilience).

**Example**

Minimum stock holding of 1500t, grit bin refills suspended when stock levels fall below 750t.

**TWO**

Rock salt stocks fall to 40% or less of minimum stock levels during the winter period, (further actions in addition to the action taken in Trigger One above),

**Actions:**

- Gritting activities will be restricted to the priority transport network only as identified in the relevant policies and plans for Winter Maintenance adopted by the different Greater Manchester Authorities (Typically these are: 'A' roads; major bus routes and other key transport routes including key pedestrian sites and high use pedestrian areas; secondary bus routes; routes to schools and district feeder roads that carry higher levels of traffic; and specific high risk locations including sites with special circumstances e.g. severe gradients). If possible, based on residual grit levels, a reduced spread rate should be implemented on these routes.
- During prolonged snow conditions consideration should be given to using a mixture of abrasive aggregates and grit at a ratio of 50/50.
- An emergency meeting of AGMA winter managers will be held to discuss use of (a) strategic AGMA stocks held at Trafford MBC and/or (b) mutual aid arrangements.
- Alternative suppliers should be explored (use of Government strategic reserves and/or separate supplies from partner organisations /overseas etc).

**Example**

Minimum stock holding of 1500t, gritting restricted to priority transport network only when stock levels fall to 600t.

**THREE**

Rock salt stocks fall to **30% or less** of minimum stock levels during the winter period, (further actions in addition to the action taken in Trigger 1 and 2 above)

**Actions:**

- Gritting activities will be restricted to the strategic transport network or snow routes only as identified in the relevant policies and plans for Winter Maintenance adopted by the different Greater Manchester Authorities (Typically these are: 'A' roads; major bus routes; and other key transport routes.
- If possible, based on residual grit levels, further reduced spread rate should be implemented on these routes.

**Example**

Minimum stock holding of 1500t, gritting restricted to strategic transport network only when stock levels fall to 450t.

# 16 PLANT AND MATERIAL RESOURCES

## 16.1 Vehicles

Currently, a fleet of eight gritting vehicles cover the designated priority gritting routes; seven are used daily with one spare in case of a breakdown. All vehicles can accommodate a snow plough attachment, if required. The vehicles are serviced and made ready for use two weeks before the designated start of the winter period. Calibration of vehicles is conducted pre- and mid-season where practicable by Econ.

## 16.2 Grit Stock

All grit stockpiles are stored under cover in the salt barn situated in the Highways Depot at Ellesmere Street. Rock salt is supplied by Compass Minerals Ltd, based in Winsford, Cheshire. Supplies of rock salt are procured and delivered during the summer months. Bolton only uses treated salt for carriageways and standard de-icing salt for grit bins. No other de-icing agent are used due to lack of suitability.

The Council purchases salt through the ESPO Framework Agreement 220 – De-Icing Salt and Associated Products/Services. It should be noted that no supplier of Salt in the UK engages in guaranteed supply contracts.

The Council has significantly increased its stock levels to a maximum capacity of 4,500 tonnes. This in line with new Government guidelines to ensure that councils have a minimum of 12 days resilience (increased from previous 6-day recommendations).

The Council has developed a 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 grit supplies both regionally and nationally. To mitigate this possibility national and regional arrangements have been put in place:

## 16.3 Monitoring Grit Stocks

Stock control is achieved by using weight recordings from our weighbridge taken as gritters and other vehicles enter and leave the depot, this process ensures stock levels are accurately monitored. These measures are fed into our stock management software which communicates directly to our grit supplier to generate automatic deliveries.

## 16.4 Salt Moisture

Salt moisture tests will be undertaken in accordance with guidance with Appendix ‘H’ of the Well-Maintained Highways document and records kept.

# 17 GRIT BINS

There are currently over 500 grit bins strategically located across the locations can be viewed on the Council website:

http://www.bolton.gov.uk/website/pages/Roadsgritting.aspx.

Each bin is checked annually and refilled before the start of the winter season. Those that are either damaged or worn will be replaced as necessary. A register of grit bins is maintained within the service to monitor grit bin issues.

Grit bins are provided at locations which are generally not on gritting routes but because of the onsite circumstances warrant a self-help facility. Typically, these locations are at sharp bends, steep hills, junctions etc.

It is important to note that the Council has determined that the grit bin numbers are at an optimum level. We are unable therefore to provide additional grit bins as this would affect our ability to effectively maintain them without impacting adversely on the wider service. A register of requests is nevertheless retained within the service allowing us to respond should this situation change. However, before any new locations are agreed the Council will confirm that there is a genuine need by undertaking an assessment using the following criteria:

- Only provided on sites with difficult conditions e.g. steep hills, sharp bends, junctions etc.
- There must be sufficient space on the footpath or verge to ensure that the bin will not cause obstruction to pedestrians or traffic sight lines and the bin can be replenished safely.
- No bins will be provided on un-adopted roads.
- Only in exceptional circumstances will a bin be located on a road that is part of a precautionary gritting route, or where it falls outside the defined criteria. (*Such instances shall only be at the direction or approval of the Departmental Executive Member*)

Grit bins will be replenished during and immediately after periods of adverse weather as resources allow. Also, should a site prove problematic because of regular misuse of grit for the treatment of private driveways, vandalism of a bin or through continued antisocial behaviour associated with the bin, following approval by the Departmental Executive Member, the Council reserves the right to remove the bin.

### 17.1 Support to the Public and Other Agencies

Grit 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.

### 17.2 The Public

Bagged crushed rock salt for thawing ice and snow is ideal for gritting paths and driveways; it is available at a relatively small cost and can offer some insurance against the difficulties winter conditions can present. Such supplies are available at local DIY stores and general hardware stores. A list of local suppliers is available on the Council's website. The Council also sells bags of grit directly to the public through Heaton Fold Garden Centre, off Chorley New Road.

### 17.3 Other Agencies

The Council will assist in supplying bulk orders of bags of grit or the purchase of grit bins for other public sector agencies such as schools, parks, hospitals, care homes etc. There is no commitment however to maintain and service these facilities at the expense of the wider winter gritting service.

# 18 COMMUNICATIONS

## 18.1 Daily Briefing

On a daily basis a briefing note is sent to all interested parties including elected members, informing them of important details regarding the evening's weather conditions and the proposed action.

## 18.2 Website and Twitter

Throughout winter period the Council's website is updated daily giving current information on the weather conditions and any proposed treatment for the evening. The Council also operates a Twitter service to communicate useful winter service information.

The most comprehensive and current summary of roads included in our designated gritting routes and grit bin locations is also available on the Council's web page. This can be accessed by logging on to www.bolton.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 grit 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 grit.

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.

## 18.3 Service requests

Service requests can be made by contacting the Council's Streetcare help line on 01204 336600 or e-mail streetcare@bolton.gov.uk

Alternatively, a request can be made on the Council's website: www.bolton.gov.uk

**This document is controlled by the Assistant Director (Highways and Engineering).**