SALFORD CITY COUNCIL

WINTER WEATHER OPERATIONAL PLAN FOR HIGHWAYS

2019/2020

Reviewed September 2019
# CITY OF SALFORD
## WINTER WEATHER OPERATIONAL PLAN FOR HIGHWAYS

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APPENDIX A - Primary Gritting Routes 1-5

APPENDIX B - List of Secondary Routes / Locations
CITY OF SALFORD

WINTER WEATHER OPERATIONAL PLAN FOR HIGHWAYS

1. INTRODUCTION

1.1 This plan was prepared in response to the Audit Commissions report of the Management of Highway Maintenance, dated 21st September 1988. This plan has been further revised and updated with effect from September 2019.

1.2 It incorporates its requirements and information from the City Councils previous Weather Operational Plan, and the Department of Transport’s publication “Well Maintained Highways – Code of Practice for Highway Maintenance Management”.

1.3 In June 2009 supplementary guidance was issued by the UK Roads Liaison Group (UKLRG) – “Lessons from Severe Weather February 2009” leading to a Complimentary Guidance in Section 13 and Appendix H of the Code of Practice issued on the 15th December 2009 and updated on the 18th September 2013.

2.0 STATEMENT OF SERVICE

2.1 The City Council’s aim is to provide a winter weather maintenance service, which as far as possible allows the safe movement of traffic on trunk, principal, classified and certain district roads in the City of Salford, and keeps to a minimum delays and accidents caused by adverse winter weather.

2.2 Top priority will be given to the defined Key Route Network (KRN) and Principal Roads.

2.3 The following target times should be achieved for the Principal Road Priority routes:

2.4 1) Response time – (time taken from the decision to salt being made to the vehicles being manned, loaded and ready to leave the Depot) shall not exceed 1 hour.

2) Treatment time precautionary salting – (time taken from the vehicle leaving the Depot to its return to the Depot upon completion of spreading) shall not exceed 3.5 hours.
2.5 Other defined non-principal routes shall be treated, as and when necessary, following the completion of the Priority routes. The target time for full route treatment (time taken from the decision to salt being made to the return of the last vehicle to Depot upon completion of spreading) shall not exceed 8 hours.

2.6 The Winter Maintenance Service is funded from the City Council’s Highways Maintenance Revenue allocation.

2.7 The Strategic Director for the Place Directorate is responsible for the overall management of the service and shall provide the necessary labour, plant, equipment, materials and the depot, which acts as a base for the operation.

2.8 Subject to the availability of staff and materials, pre-defined high amenity pedestrian areas will be cleared of ice and snow during normal working hours.

2.9 In extreme conditions of ice and snow, when normal methods of clearing are inadequate, the Strategic Director for the Place Directorate will be responsible for coordinating whatever resources he considers necessary to ensure that the highway network operates as efficiently as possible.

3.0 WINTER WEATHER SEASON

3.1 In England weather is unpredictable and the occurrence of wintry conditions varies considerably through the season and from year to year.

3.2 Operational winter maintenance periods need to be defined to strike a balance between economy and adequate cover. To plan resources regularly on the assumption of a long, severe winter would be wasteful, but to do so on the assumption of a short, mild winter could lead to insufficient cover at times. Planning should therefore be between those extremes, but with enough back up at reasonable notice to react to unforeseen circumstances.

3.3 Two winter maintenance periods are defined for operational purposes:

1) High – December, January, February and March when severe conditions might reasonably be expected.

2) Low – October (last two weeks), November and April (first two weeks) when severe conditions are not expected but may occur.

3) The situation will be reviewed in March to assess the long range forecast and the resourcing requirement for April.
4.0 **STANDBY ARRANGEMENTS**

4.1 Official standby arrangements operate during the high period December to March. An informal rota operates during the low risk periods during November and April.

4.2 High period manning shifts are defined as:

1) **Weekday – daytime (8:00am to 5:00pm)** – drivers diverted from other services e.g. mechanical sweeping onto gritters.  
   Staffing levels – 1-2 Environmental Co-ordinators, 1-5 Drivers (variable).

2) **Weekday – evenings (5:00pm to 11:00pm)**  
   Staffing Levels –1-2 Environmental Co-ordinators 1- 5 drivers (variable), informed during the day they will be required (No standby payment required).

3) **Weekday – night (11:00pm to 8:00am)**  
   Sunday to Thursday – Staffing Levels 1-2 Environmental Co-ordinators, 1-5 gritter drivers (variable).

4) **Weekend shifts:**

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friday</td>
<td></td>
</tr>
<tr>
<td>Saturday Day</td>
<td>11:00pm to 11:00am</td>
</tr>
<tr>
<td>Saturday Night</td>
<td>11:00pm to 11:00am</td>
</tr>
<tr>
<td>Sunday Day</td>
<td>11:00am to 11:00pm</td>
</tr>
<tr>
<td>Sunday Night</td>
<td>11:00pm to 08:00am</td>
</tr>
</tbody>
</table>

The periods outlined in 3) and 4) above are staffed by 1-2 Environmental Co-ordinators and 5 drivers on standby at home ready to be called in for the appropriate shift.

4.3 During the low period, call out arrangements shall operate to ensure that treatment will start within an hour of the decision to salt. Occasions may arise when conditions are so severe that high period arrangements shall be reported to the Strategic Director Place as soon as possible.

4.4 Vehicles, plant and equipment shall be available for use in the depots during both high and low periods.

4.5 The use of a second man in the cab shall be restricted to snow ploughing and to other occasions when conditions are hazardous, especially when
precautionary or emergency salting is required on isolated stretches of road, when difficult manoeuvres are unavoidable.

5.0 SALT

Specification

5.1 While rock salt is the most commonly used salt; marine salt, vacuum and PAD salt are also available. All rock salt and salt used for road de-icing should comply with BS3247:2011.

5.2 In its dry condition, salt has a natural moisture content of between about 2% and 4%. The practical effective temperature of sodium chloride when used for winter maintenance on roads is at or above -5°C at the time of spreading in low humidity conditions (below 80% relative humidity) and at or above -7°C in normal UK winter humidity conditions (at or above 80% relative humidity).

5.3 The rate of dissolution becomes slower as the effective temperature is approached, although finer gradings will dissolve more quickly than coarser at the same temperature. The rate of dissolution will also depend on the salting technology. Although ice may be melted below the effective temperature, this is at a very low rate which is unlikely to be practical for precautionary or post treatments. Furthermore, the amount of salt needed increases to become economically and environmentally undesirable.

5.4 If solid (dry or pre-wetted salting) sodium chloride is spread at temperatures near or lower than -7°C, it will not dissolve quickly enough to become effective until the road surface temperature has risen above the effective temperature (-7°C).

5.5 In theory, once sodium chloride has dissolved it can prevent freezing of a saturated solution down to -21°C. In practice a saturated solution will not be formed on the road surface. Therefore, for winter service purposes, it is considered that sodium chloride can only suppress the freezing point to a minimum of -15°C.

Buying Rock Salt Stock

5.6 The City Council maintains a stock of approximately 3000 tonnes, available for use on the Highway. This amount of stock should be available from the first week in December to the 1st week in January to ensure supplies are not stretched over the Christmas and New Year period. Annual usage varies, but is on average 3,300 tonnes. It will be necessary during severe periods of cold weather to replenish salt stocks during the winter period to ensure continuity of service.
5.7 Incoming deliveries of salt stock shall be weighed on a weighbridge where possible.

Effect on Vegetation

5.8 A strong solution of salt in soil water can affect the properties of soils, resulting in dehydration in plants. But provided that the rate of spread is not greater than that specified in section 7, the resulting salt solution will not be strong enough to affect roadside vegetation unduly. However recently, The Forestry Commission and the Highways Agency have made recommendations regarding de-icing salt damage to trees and vegetation. This information together with the training pack video is available and the contractor can refer to it for the appropriate action during gritting operations.

5.9 Although the sodium ferrocyanide caking inhibitor is not toxic, it can become so under the action of strong sunlight over a long period. This is most unlikely in this country. Nevertheless, heavy run-off from large stockpiles shall not be allowed to drain directly into fishing waters or water courses to which livestock has access. The risk should be minimised by keeping the salt covered (See Section 6).

Effect on Structures

5.10 Salt accelerates the corrosion of metal when it is exposed to the air and especially when the moisture level is high. The corrosion of reinforcing steel is particularly insidious as it spalls the concrete and eventually leads to its disintegration. Some protection is provided by coating or by lining the structure with impervious sheeting.

Effect on Winter Maintenance Vehicles

5.11 The corrosive nature of salt makes careful cleaning and maintenance of the vehicles and plant essential. They shall be washed down and lubricated in accordance with the requirements of the lease company.

6.0 SALT STORAGE

6.1 Salt shall be kept as dry as possible by utilising a sheltered storage facility thus ensuring the effective application of salt during the gritting process. A covered storage facility minimises any potential adverse environmental effects caused by run-off to adjacent drainage systems. Dry salt causes less damage to the environment, and to spreading and handling equipment, it is easy to handle and can be spread more accurately i.e. thinly onto the carriageway surface.
6.2 Correct drainage of salt storage sites is essential. Ideally, the salt base should be encircled by a cut off drain. Run off from other parts of the site shall not under wash the pile. It is important that the water content of a stockpile is not increased by ground water rising into it. The centre of the pile shall be higher than its perimeter so that any drainage moisture will flow to the outer edges and away. The surface of piles shall be convex and limited in height to avoid the creation of steep faces liable to sudden collapse. Where there are 2 or more piles closely situated, provision shall be made for adequate drainage between them.

6.3 An efficient service depends on the adequate stockpiling of salt before the winter starts. A close watch shall be kept therefore on stocks during the winter to ensure that replenishment takes place, if need be, well before the salt runs out.

6.4 All salt leaving the depot shall, where possible, be weighed on a weighbridge to determine the weight being taken from the stockpile. A record of salt used should be recorded on the AGMA website and a report submitted regularly to the Client showing the tonnages used on a daily basis.

6.5 Salt will be made available for use other than on the Highway when stocks permit, and where its supply does not interfere with implementation of this plan. The receiving department/ body will be recharged at current market rates plus handling charges which will be determined each year.
7.0 **SALT APPLICATION**

7.1 Decision making should be in accordance with Table H1 – Decision Matrix Guide of the Well Maintained Highways Code of Practice:

7.2 **DECISION MATRIX GUIDE**

**Table H9 – Sample Precautionary Treatment Decision Guide**

<table>
<thead>
<tr>
<th>Road Surface Temperature</th>
<th>Precipitation</th>
<th>Predicted Road Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Wet</td>
<td>Wet Patches</td>
</tr>
<tr>
<td>May fall below 1°C</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No rain</td>
<td>Salt before frost</td>
</tr>
<tr>
<td></td>
<td>No hoar frost</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No fog</td>
<td></td>
</tr>
<tr>
<td>Expected to fall below 1°C</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No rain</td>
<td>Salt before frost (see note a)</td>
</tr>
<tr>
<td></td>
<td>No hoar frost</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No fog</td>
<td>Salt before frost</td>
</tr>
<tr>
<td></td>
<td>Expected hoar frost</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Expected fog</td>
<td></td>
</tr>
<tr>
<td>Expected rain BEFORE freezing</td>
<td></td>
<td>Salt before frost (see note b)</td>
</tr>
<tr>
<td>Expected rain DURING freezing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Possible rain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Possible hoar frost</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Possible fog</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Salt before frost</td>
<td>Salt before frost, as required during rain and again after rain stops (see note d)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Salt after rain stops (see note c)</td>
<td>Salt before frost</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected snow</td>
<td></td>
<td>Salt before snowfall</td>
</tr>
</tbody>
</table>

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

7.3 Treatment of ‘the identified network’ will be generally in accordance with TREATMENT MATRIX A Dry Salting and TREATMENT MATRIX D – Precautionary Treatments Before Snow Or Freezing Rain extracted from the Well Maintained Highways Code of Practice:
## 7.4 TREATMENT MATRIX GUIDES

### TREATMENT MATRIX A

**DRY SALTING (De-icer spread rates in g/m²)**

<table>
<thead>
<tr>
<th>Frost or forecast frost Road Surface Temperature (RST) and Road Surface Wetness</th>
<th>Column Cvrge Traffic Loss</th>
<th>A PC HT NL</th>
<th>B PC HT HL</th>
<th>C PC MT NL</th>
<th>D PC MT HL</th>
<th>E FC HT NL</th>
<th>F FC HT HL</th>
<th>G FC MT NL</th>
<th>H FC MT HL</th>
<th>I GC HT NL</th>
<th>J GC HT HL</th>
<th>K GC MT NL</th>
<th>L GC MT HL</th>
</tr>
</thead>
<tbody>
<tr>
<td>RST at or above -2°C and dry or damp road conditions</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>RST at or above -2°C and wet road conditions</td>
<td>10</td>
<td>13</td>
<td>13</td>
<td>16</td>
<td>8</td>
<td>11</td>
<td>11</td>
<td>13</td>
<td>8</td>
<td>8</td>
<td>8</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>RST below -2°C and above -5°C and dry or damp road conditions</td>
<td>15</td>
<td>20</td>
<td>17</td>
<td>20</td>
<td>13</td>
<td>17</td>
<td>14</td>
<td>17</td>
<td>10</td>
<td>13</td>
<td>11</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>RST below -2°C and above -5°C and wet road conditions</td>
<td>25</td>
<td>2 x 17</td>
<td>2 x 17</td>
<td>2 x 20</td>
<td>21</td>
<td>28</td>
<td>2 x 28</td>
<td>16</td>
<td>21</td>
<td>21</td>
<td>21</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>RST at or below -5°C and above -10°C and dry or damp road conditions</td>
<td>25</td>
<td>2 x 19</td>
<td>2 x 16</td>
<td>2 x 20</td>
<td>24</td>
<td>32</td>
<td>27</td>
<td>2 x 16</td>
<td>18</td>
<td>24</td>
<td>20</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>RST at or below -5°C and above -10°C and wet road conditions*</td>
<td>2 x 24</td>
<td>2 x 32</td>
<td>2 x 32</td>
<td>2 x 20</td>
<td>2 x 27</td>
<td>2 x 27</td>
<td>2 x 32</td>
<td>30</td>
<td>2 x 20</td>
<td>2 x 20</td>
<td>2 x 24</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Please see Table H13 for variations to the rates given above

**Key:**
- Cvrge: PC = Poor coverage, FC = Fair coverage, GC = Good coverage
- Traffic: HT = High level, MT = Medium level
- Loss: NL = Normal loss, HL = High loss
- Refer to Section H10.21 Notes 3, 4 & 5 when spreading at temperatures at or below -5°C.
TREATMENT MATRIX D – Precautionary Treatments Before Snow Or Freezing Rain

<table>
<thead>
<tr>
<th>Weather conditions</th>
<th>Light or medium traffic</th>
<th>Heavy traffic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light snow forecast</td>
<td>Spread: 40g/m² of dry salt, or 40g/m² of pre-wetted salt, or 30g/m² of treated salt</td>
<td>Spread: 20g/m² of dry salt, or 20g/m² of pre-wetted salt, or 15g/m² of treated salt</td>
</tr>
<tr>
<td>Moderate/Heavy snow forecast</td>
<td>Spread: 20-40g/m² of dry salt, 20-40g/m² of pre-wetted salt, or 15-30g/m² of treated salt (see Note 1)</td>
<td>Spread: 40g/m² of dry salt, or 40g/m² of pre-wetted salt, or 30g/m² of treated salt</td>
</tr>
<tr>
<td>Freezing rain forecast</td>
<td>• 40 or 2x20g/m² of dry salt, or 40 or 2x20g/m² of pre-wetted salt, or 30 or 2x15g/m² of treated salt</td>
<td>Note 1: The lower rates (e.g. 20g/m² for dry salt) can be used if the snow is likely to settle quickly, e.g. when the road surface temperature is below zero, the road surface is not wet and the snow is not wet, and/or there is little traffic after snowfall begins and settles. Note 2: Spreading salt before freezing rain can have a limited benefit and Service Providers should be prepared to make follow up treatments on any ice that has formed.</td>
</tr>
</tbody>
</table>

8.0 OPERATIONAL TECHNIQUES

Routes

8.1 There will be an ongoing review on a yearly basis of the winter weather operational plan.

8.2 The operational routes will be reviewed on an annual basis, incorporating changes in the Highway network.

8.3 The secondary routes will be specified together with a list of the motorway footbridge and other footbridge surfaces.

Snowploughing

8.4 It is important to have a clearing policy, which is easily understood, the technique used shall be ‘clearance by lanes’.
Irregular windrows caused by ploughing passes, especially those that weave from one lane to another, are dangerous as they may tempt drivers to overtake by squeezing into the partly cleared lane. Lanes should be completely cleared, and the windrows of snow remaining should form a smooth and continuous line without sudden encroachments into the cleared path.

The aim is to clear all lanes as soon as conditions permit. Clearance work shall therefore proceed continuously, as a pause during a snowfall could lead to a build-up that could take disproportionately longer to clear. Packed snow, glazed by the wind, can be particularly difficult to remove. Care must be taken to avoid damage to road surfaces, road studs and roadside structures.

Due to the difference in local weather conditions, snow depth, snow wetness and road topography, it is difficult to be precise on the order of lane clearance. Also, local traffic densities and movements vary from day to day and even within a day, and may affect lane clearance priorities. However, the following advice is suggested for most situations.

More than 2 lanes ploughed onto the central reservation could be hazardous to traffic inviting drifting and melt water problem later on.

For a 3 lane carriageway, the following technique is suggested:

1st - Plough centre lane snow to left hand lane,

2nd - Plough left hand lane to footway or verge,

3rd - Plough right hand lane snow to central reservation.

An alternative technique is to plough the left hand lane (and slip road) snow to the footway first. That may have particular merit when snowfall is heavy and persistent, but stationary vehicles can easily force a change to a ‘centre lane first’ approach.

A similar technique can be applied to a 2 lane carriageway, clearing the nearside lane first.

It is essential that road markings, reflective studs and hard shoulders are made and kept clear as soon as possible and should be the subject of salting and snow clearance operations at all appropriate times.

**Rises in Temperature**

Melt water from thawing windrows of snow, or from accumulations of snow on central reservations or from verges can spread over the carriageway and re-
freeze, particularly at night. Extra salting may be needed, and potential hazards such as these should be watched closely.

**Slip Roads and Interchanges**

8.14 It is important to maintain the free flow of vehicles at interchanges. At least 1 lane of each slip road shall be kept open.

8.15 Bulk removal of snow from multi-level interchanges (or even some conventional ones) may be necessary on occasions.

**General Safety**

8.16 Drivers shall be instructed to take all possible precautions to protect their own safety and that of other road users at all times.

8.17 U-turns on all roads shall be carried out only when there is no risk to spreading/snowploughing vehicle drivers or other road users.

9.0 **VEHICLES**

**Garaging of Vehicles and Availability for Inspection**

9.1 All vehicles, including the snowplough blades and related equipment, should be kept properly garaged at the depot unless other arrangements have been agreed with the Client directorate. The vehicles must be available for inspection at all reasonable times by the client staff.

**Heavy Goods Vehicle Driver Licence Requirements**

9.2 Drivers of the City Councils spreading/snowploughing vehicles shall hold C + EHGV licences in accordance with the Heavy Goods Vehicles Driving Licence Regulations 1996 as amended, where necessitated by the vehicle type.

**Operator Training**

9.3 Only trained staff shall operate vehicles. The City Council will support a programme of required training for potential operatives.

**Vehicle Insurance**

9.4 Vehicles must be covered to meet all costs arising from any damage to the vehicle caused by an accident, and must ensure that there is enough cover to meet claims for which they may be liable.
Vehicles

9.5 Five spreaders are currently utilised to achieve the target treatment times of 3.5 hours on the Priority Routes. The City Council currently operates the following vehicles:

- Spreaders - 5
- Reserve Vehicle – Hire Vehicle - 1
- Snow Plough – 5
- Loading Shovel – 1

Winter Grade Fuel

9.6 To minimise the risk of immobilisation due to diesel fuel waxing at low temperatures, it is essential for the Councils vehicles to be fuelled with winter grade fuel at winter’s onset. Vehicles shall not be left standing in the open for long periods during winter as even British Standard Class A2 winter grade fuels wax at about -12ºC. Some oil companies supply winter grade fuels that do not wax down to -15ºC and these should be used where available.

9.7 In order to minimise the risk of diesel waxing in operation due to wind chilling of exposed fuel pipes the winter maintenance vehicles shall be fitted with appropriate fuel heaters.

Safety Covering for Spinner Disc during Training and Maintenance Runs

9.8 When spreading/ snowploughing vehicles are used on the highway for training or maintenance runs, the spinner disc at the rear of the vehicle shall be covered in such a way that damage by sharp edges in the event of an accident is reduced to a minimum.

Prescribed Vehicles Maintenance System

9.9 Vehicles should be maintained in accordance with paragraphs 14.3 to 14.10 of the Department of Transports Winter maintenance “Statement of Services and Code of Practice” August 1987.

Driver Vehicle Checks

9.10 Drivers should undertake all checks as per shift check sheet and any faults reported to the Shift Duty Officer.
9.11 On completion of gritting operations, all vehicles should be emptied of surplus salt before washing off (including spreader chute, spinner mechanism, underneath the belt and inside the gritter unit.

Repair and Call-Out V.M.S. Procedure

9.12 In the event of vehicle breakdown, the driver should contact his Supervising Officer and describe in detail the vehicle fault. The Supervising Officer will then be responsible for implementing the department’s repair and recovery procedures.

Snow Plough

9.13 Arrangements should be in place to enable the plough to be fitted to an appropriate gritter at anytime with minimal notice in the shortest time possible. In periods when the plough can reasonably be expected to be required it should be fitted to an appropriate vehicle at the earliest opportunity.

9.14 All ploughs used on the Council’s Highways shall be fitted with a rubber blade/skirt beneath the steel blade to avoid damage to the highway. In exceptional circumstances this requirement may be rescinded.

10.0 LIAISON AND COMMUNICATIONS

Introduction

10.1 Road conditions in winter can change very quickly over relatively short distances. That variability stresses the importance of effective liaison and communications between the City Council and the local metrological offices, police, the media, emergency services, public transport operators, freight transport, road haulage and automobile associations.

10.2 The officers who co-ordinates winter maintenance activities for the Council and take the decision whether or not to salt shall develop direct personal contact with local metrological offices and avoid extended chains of information.

10.3 Police highway patrolling provides the opportunity for extra surveillance of road conditions. The City Council should discuss with local police ways of formulating guidance on the reporting of road conditions for Police patrols. Close liaison between the Council and the police and the resulting mutual understanding of respective problems will enable the Council to take full advantage of Police observations and reports.
Due to advantages to be gained by broadcasting information about snow, ice and frost on roads, the Council will make full use of the opportunities for this, which exists at both national and local level. In particular, the growth of local radio offers the facility of communicating emergency information of a purely local nature to the community with speed and directness. It is suggested that these arrangements should be reviewed and consideration be given to improving the communication of information via the City Council’s website and social media outlets.

### Liaison between Officers

10.5 Decisions concerning the provision of standbys during the week and weekend period will be made by the Heads of Service/Refuse Manager from the Place Directorate, who will then contact the Duty Officer for the relevant shift, who will in turn make the necessary arrangements to provide staff for that shift.

10.6 If at the weekend, Out of hours security staff receive a Road Danger Warning and both the Refuse Manager and the Head of Service are not available, they have a standing instruction to contact the Shift Duty Officer direct.

10.7 When day and night shifts run consecutively it will be the responsibility of the Shift Duty Officers to exchange all relevant information.

### Liaison between Departments of the Council

10.8 Should weather conditions deteriorate so significantly during the winter months that additional assistance is required, manual staff from both the Place Directorate and Urban Vision’s Highway Services shall be used to salt by hand defined routes which are heavily trafficked by pedestrians. On requests from OAP Homes, Social Services shall contact the City Council via the central call centre **0161 793 2500**. All emergency services will be assisted wherever possible.

### Liaison with the Public, Members & other Council Departments

10.9 Reports from the public and Council members concerning the need to salt or clear other paved areas or highways other than those covered in the foregoing, shall be dealt with on a priority basis so long as the resources are available. The decisions to clear or salt these areas will be the responsibility of the Refuse Manager of the Place Directorate.
11.0 **SEVERE WEATHER EMERGENCY CONTINGENCY PLAN**

11.1 Should weather conditions deteriorate so significantly during the winter months that additional assistance is required to clear snow and ice from footways or, in extreme conditions carriageways, then staff from both the Place Directorate and Urban Vision’s Highway Services shall be transferred from their normal duties. The employment of the manual staff shall be in accordance with the following contingency plan.

11.2 If a heavy fall of snow should occur overnight which prevents the normal operation of highway maintenance and environmental service operations the Refuse Manager will arrange for a transfer of manual staff to snow clearing duties. The Refuse Manager will decide how to deploy the manual staff on snow clearance. In such instances where he decides they will be needed, he should organise for the relevant personnel to be informed, so that they can attend an appropriate joint planning meeting. He should also contact Urban Vision’s Highways Services emergency number on 603 4027, requesting that the Operations Manager, attends the said planning session.

11.3 If on examination of the Met Office forecast at lunch time, the weather forecast predicts that heavy snow will fall and stay in the next 24 hours, the Duty Officer shall convene a meeting at 1500 hours in Turnpike House between the relevant Place Directorate Officers and Urban Vision’s Highway Services who should be contacted on 603 4027 with a request that the Operations Manager attend.

11.4 In the event that Highways Operatives are unable to carry out their normal work because of the snow conditions and the above deployment of manual staff has not been implemented, then the duty officer shall be contacted by the Operations Manager from Urban Vision’s Highway and the numbers of Operatives unable to work given to the Duty Officer for re-deployment on snow clearing.

11.5 **Areas to be cleared**

During the course of snow clearance work, requests may be received from Councillors, members of the public, etc, for additional areas to be cleared. All such requests shall be passed to the Logistic Principal Officer Environment Services for consideration and prioritisation.

11.6 **Method of work**

The footways specified should be cleared to a minimum width of one metre. Drainage paths should be cleared to the adjacent carriageway or footway gullies. Also, any snow residue that may have built up in the channel around the gully should be cleared. The rationale behind this would be to allow melt water from pavements and roads to be directed into the highway gully.
Following the complete clearance of suitable sections of pavement (Supervisors discretion required) an adequate amount of salt should be spread. From experience, snow conditions usually have three general categories:

(a) Fresh snow,

(b) Snow compacted to form an extremely hard layer of ice.

(c) Snow compacted to a hard layer of ice with a fresh covering of snow.

(a) is the simplest scenario to deal with, but it is essential when dealing with categories (b) and (c), that the snow and ice are completely removed so as to bare the pavement for salt treatment. If this is not done properly the salt treatment may cause a further hazard in conjunction with the snow and ice.

It is important to brief staff adequately on snow clearance methods, in particular, the need to remove all snow and ice to prevent an accident for which they may be morally responsible and the council financially responsible.

11.7 Issue of Salt

The issue of the salt supply will be dependent on the salt stocks held at the storage facility and the salt issue to staff may be discontinued at the discretion of the City Council, in order to conserve supplies for carriageway treatment.

If any salt is required for snow and ice clearance, the driver shall report to the salt storage facility.

The supply of salt for other Council Departments will only be supplied until the start of the gritting season. All salt supplied will be recharged at current market values plus handling charges.

11.8 Health and Safety at Work Act 1974

All staff shall be supplied with adequate protective clothing.

Health and Safety practices shall be in accordance with the policies of the City Council and/or Urbanvision Partnership Limited.
11.9 **Financial Control**

All labour, plant and materials diverted to snow and ice clearance for work executed under this plan shall be recharged to the appropriate budget code. This is to enable accurate monitoring of the costs reporting to the City Council.

Daily plant and labour allocations shall be completed by both Place Directorate and Urban Vision’s Highway Services operatives for this work.

11.10 **Contacts**

**Place Directorate**
Turnpike Operational Depot
631 Eccles New Road
Salford M50 1SW

David Seager – Assistant Director 07545 860504
Mr D Robinson - Head of Service 07970 132360
Mr D Thornton - Refuse Manager 07305 580399

Out of working hours
contact Duty Officer as required 07919 325640

**Urbanvision Highway Services,**
Swinton Hall Road
Swinton
Salford M27 4HH 0161 603 4001

Mark Whitfield – Urban Vision - Contracts Manager 0161 603 4013
07918 640314

Urban Vision Highway Services – General 0161 603 4027

**Urgent**

Please note. In the event of the Duty Officer receiving the severe emergency warning messages, the Emergency Planning Team should be contacted:

Out of Hours - 0161 794 8888
Communications

11.11 All gritting staff and officers of each shift should be supplied with mobile phone communications.

11.12 The Highway Code advises drivers not to use a hand-held microphone or telephone handsets whilst their vehicle is moving, except in an emergency. Under no circumstances should drivers stop on the hard shoulder of a motorway to answer or make a call. During precautionary salting it is unlikely that an emergency requiring the driver to contact the depot would arise, other than a vehicle breakdown. During snowploughing, it may be necessary for a driver to call for assistance to keep the road open, if conditions deteriorate such as to constitute an emergency.

12.0 METEOROLOGICAL SERVICES AND EQUIPMENT

12.1 Introduction

The Department of Environment, Transport and the Regions has, over the last decade encouraged research into better methods of ice detection. The research, which has been carried out to date, has enabled the Met. Office to provide Metropolitan Boroughs with an ice prediction service called ‘Open Road’ which is used by the City of Salford during the Winter Weather Season from Oct to April.

12.2 Forecasting

The ‘Open Road’ package from the Met. Office provided the following information to the Council.

1) 2 graphs of forecast road surface temperature with an indication (text or pictorial) of which areas they represent.

2) 24 hour forecast with pictorial maps when appropriate.

3) 2 – 5 day planning forecasts.

4) Copy of weather radar pictures when they enhance the understanding of the situation with expected movement of notable features.

5) Updates of items (1) to (4) when sudden changes in the expected weather pattern dictates or when amendment criteria are reached.
6) SMS text message notification of item (5).

7) Consultancy which gives ex-directory telephone access to a forecaster at all times.

12.3 **Ice Detection**

There has, over recent years, been developed a range of systems to improve and enhance the information available to officers when making the decision to salt or not salt. These developments include ice sensors, thermal mapping and computerised ice prediction systems. A study of the possible advantages of using such a system for the Council has shown that at the present time these systems are not cost effective in terms of accident prevention and the potential operational savings. However, the situation is annually reviewed and may lead to the purchase of such a service in the future.

13.0 **YEARLY REVIEW**

*Consultation Period*

13.1 During August/September of each year a service review should take place to discuss the previous year’s service in order to determine what modifications are required to the Winter Maintenance plan. Following this review a revised plan will be submitted to the Council for its formal approval.

*Replacement of Plant*

13.2 Winter maintenance plant has limited life due to the corrosive action of salt upon it. The use of hired equipment is deemed to be the best option, thus ensuring that there will be sufficient plant available to meet the winter weather operational plan for highways.

14.0 **HEALTH AND SAFETY AT WORK ACT 1974**

14.1 A Code of Practice entitled ‘Organisation and Arrangements for the Implementation of the County Council’s Health and Safety at Work Policy within Central Works Depots’ has been produced by the County Surveyors’ Society. It provides general guidance for standards and procedures to be adopted within Central Works Depots of County Surveyor’s Departments so as to ensure the health and safety of all personnel in or visiting such depots. The implementation of the standards and procedures set out in this document are recommended.
14.2 Health and safety practices should be run in accordance with the established policies of the City Council.

14.3 Gritter drivers shall have their attention drawn to the health and safety procedure itemised at the front of each gritter route.

14.4 It is recommended that a safety box be provided on each gritter (one per operative present on the machine) containing first aid equipment and basic survival equipment in the event of minor injury or breakdown.

14.5 It is recommended that when gritting operations are being undertaken, an hourly check by mobile communication is instigated to ensure that the location and condition of staff is known. This will avoid the situation arising where an injured member of staff is not known about or located for several hours.

14.6 To improve the visibility of winter maintenance vehicles they shall be painted yellow (or other appropriate colour) in lieu of the Council’s standard colour.
APPENDIX A

Primary Gritting Routes 1-5

2019/20
APPENDIX B

List of Secondary Routes / Locations

2019/20