

# ENVIRONMENT SERVICES



## STIRLING COUNCIL

### ROADS MAINTENANCE

### WINTER SERVICE POLICY

2011/2012



*Quality Management System  
Certificate No. FS 37213  
ISO 9001:2008 Registered*



*Occupational Health & Safety Management System  
Certificate No. OHS 531391  
OHSAS 18001:2007 Registered*

## INDEX

<b>INTRODUCTION .....</b>	<b>3</b>
<b>WINTER SERVICE POLICY.....</b>	<b>4</b>
1. POLICY.....	4
2. PRIORITIES AND STANDARDS .....	4
3. WINTER PERIOD.....	4
4. CARRIAGEWAY TREATMENTS .....	4
a. <i>Motorways and Trunk roads</i> .....	4
b. <i>Priority 1 Routes</i> .....	4
c. <i>Priority 2 Routes</i> .....	5
d. <i>Priority 3 Routes</i> .....	5
e. <i>Priority 4 Routes</i> .....	5
5. FOOTWAY TREATMENT .....	7
a. <i>Priority F1A – This priority relates to ice formation only</i> .....	7
b. <i>Priority F1B – This priority relates to snow conditions</i> .....	7
c. <i>Priority F2 – This priority relates to ice or snow and comprises the remaining footway/             footpath network.</i> .....	8
6. SALT BINS .....	8
7. PERFORMANCE REPORTING .....	9
8. USE OF EXTERNAL ASSISTANCE TO DEAL WITH SEVERE SNOW CONDITIONS .....	9
9. Flooding – Sandbag Policy.....	10
10. Operational Procedures and Arrangements .....	12
11. Duty Personnel; Roles and Responsibilities.....	16

## WINTER SERVICE 2011/2012

### INTRODUCTION

The Winter Service forms an integral part of the management and maintenance of Stirling Council's road network. Stirling Council, by virtue of the Roads (Scotland) Act 1984, has a statutory duty to take such steps as it considers reasonable to prevent snow and ice or indeed the consequences of any other weather condition endangering the safe passage of vehicular and pedestrian traffic over its public roads.

The intention of this duty is not that Stirling Council will take immediate and simultaneous steps to clear/treat every road whenever ice formations or snow accumulations or floods or fallen trees exist. To do so would be impossible and beyond the limit of the resources available and, indeed, this is recognised by the Courts. The Council prepares a plan of action, setting out how it intends to treat ice and snow in a reasonable and logical manner. Flooding events and the management of flooding is also covered by the action plan that was initially agreed by Stirling Council in February 2007.

In order to deal efficiently and effectively with Winter Service delivery, operations need to be planned in a systematic manner and it is essential that a policy and procedures, with clearly defined priorities, is established. The objective is to provide a Winter Service that will permit the safe movement of all road users, including pedestrians, whilst minimising the effects on the environment and the consequences of adverse weather conditions to the national and local economy and the social life of the country.

Stirling Council's Environment Service is responsible for providing the Winter Service, on publicly adopted Roads and other identified routes, within the Council area.

The Winter Service comprises the following types of treatment:

- Precautionary Salt Treatment
- Treatment of Ice
- Treatment of Snow
- Treatment of Hard Packed Snow and Ice
- Flooding Events – Sandbag Policy

The treatment of the snow and ice conditions is generally carried out in accordance with the Institution of Civil Engineers', *'Design and Practice Guides, Highway Winter Maintenance'*, 2000. Policy guidance on the issuing of sandbags during flooding events is covered on pages 10 and 11 of this document.

The principal period covered will extend from Friday 14 October 2011 to the morning of Friday 13 April 2012. However, cover will be available, at short notice, outwith this period, should weather conditions so necessitate.

Control of operations will be available on a 24-hour basis, with Environment Services employees covering normal working hours, and Duty Officers, working on a rota basis, covering the remainder of the day. Weather forecast information will be used, along with ice sensor and weather radar monitoring data, to determine the most appropriate level of treatment required.

The Council's Winter Service, which has been established for the execution and control of winter treatment, for the forthcoming winter period, is set out in this document.

## WINTER SERVICE POLICY

### 1. POLICY

The Council's policy statement in relation to winter treatment is;

***The reduction, as far as reasonably practicable, of the effects of adverse weather conditions on the movement of people and vehicles, to permit safe travel on the more important roads, within the Stirling Council area.***

### 2. PRIORITIES AND STANDARDS

The Council determines the appropriate level of treatment or standards of treatment in accordance with the relative importance of any particular carriageway, footway or footpath in its network.

The Head of Environment Services will endeavour to curtail the level of expenditure to the sum provided in the annual budget. However, prevailing weather conditions will determine the actual level of expenditure. The Head of Service will provide regular updates, to the Council, of the actual expenditure incurred.

### 3. WINTER PERIOD

The Council will require to provide a Winter Service for a period of at least 26 weeks from **14 October, 2011 to 13 April, 2012**. Formal operational procedures and standby arrangements will apply during this period. However, in the event of adverse weather outwith this period, a state of operational readiness will be available.

### 4. CARRIAGEWAY TREATMENTS

Carriageways will receive treatment based on the following priority category:

#### a. Motorways and Trunk roads

**Scottish Executive provides a Winter Service for trunk roads and motorways, which run through the Council area.**

**BEAR** Scotland carry out the M9 and M80 motorway treatment, which includes the interchange roundabouts and slip roads. (Telephone Number 0800 138 9903).

The A82, A84 & A85 treatments are carried out by **TRANSERV** Scotland. (Telephone Number 0800 028 1414).

The A9 treatments are carried out by **BEAR** Scotland (Telephone Number 0800 587 1108).

#### b. Priority 1 Routes

- i. All routes which have a cumulative average daily flow (both ways) of greater than 800 vehicles per day.
- ii. Where a bus service uses a road then the bus will have an equivalent value of 40 vehicles. That is, ten bus services a day is the equivalent to 400 vehicles.
- iii. Road priorities may change from winter to winter or within any one winter depending on changes in bus service.
- iv. A route to Emergency Services establishments. Such establishments include continuously manned police stations, fire stations, ambulance garages and hospitals providing accident, emergency, acute and/or maternity services.
- v. A route to each primary and secondary school from the nearest Priority 1 route except Inversnaid primary school, due to the remote location.
- vi. Park and Ride bus routes on operational days only. Includes bus-turning areas in respective parks but not the rest of the car parking area.

- vii. Cross-boundary treatment routes with daily average flows (both ways) greater than 500 vehicles per day.

These routes shall receive precautionary salt treatment between 5.30am and midnight and;

- Clearance of snow accumulations 24 hrs per day.
- The treatment of ice formations 24 hrs per day.

The roads treated to priority 1 standard are set out in the route maps that form part of this document.

Where the cumulative number of vehicles is within 5% of the threshold value then a 5 day (weekday) average will be used to determine the winter service priority.

**c. Priority 2 Routes**

These routes will comprise of roads where the 24 hour cumulative daily average flow (both ways) is greater than 600 vehicles.

These routes will not receive precautionary salting, and any treatment of ice or snow will be carried out only when a specific instruction to do so is given by the Duty Manager, who has to be satisfied that the following criteria are met:

1. The general outlook established from forecasts, other meteorological information, icelert trends etc. indicate that the prevailing ice and/or snow conditions are likely to continue beyond midday.
2. That the treatment of priority 2 routes would **not** be detrimental to the level of Service required on priority 1 routes.

**d. Priority 3 Routes**

These are the identified Tertiary Routes where the cumulative daily average (both ways) is greater than 400 vehicles per day.

A route through, or in and out of, each Council car park, where practical. Includes the shortest practical route from a road gritted in any priority group, e.g. Station Road for Station Car Park, Bridge of Allan.

1. These routes will only be treated in exceptional weather conditions. Treatment will require authorisation by the Head of Environment Services, or his nominated representative.
2. After a period of 72 hours of adverse weather, and a 2-day weather forecast predicting continuing severe adverse wintry conditions, will the Head of Environment Services authorize the treating of priority 3 routes.

**e. Priority 4 Routes (all other routes, including residential culs de sac)**

- i. The remainder of the public road network, priority being given to locations of difficult junctions, gradients, bends or short, sharp incline, together with reasonable lengths of carriageway adjacent to these specific problems.
- ii. These routes will only be treated in very exceptional weather conditions. Treatment will require authorisation by the Head of Environment Services, or his nominated representative.
- iii. The treatment of all priorities (1 to 4) will result in significant resources being deployed, at substantial cost. Only after a period of 120 hours of adverse weather, and a 5-day weather forecast predicting continuing severe adverse wintry conditions, will the Head of Environment Services authorize the treating of priority 4 routes.

## Notes on the interpretation of the Policy on Carriageways

1. Within any Priority, categories of road will be dropped from treatment in reverse order if, and for as long as conditions so dictate. Every effort will be made to avoid this eventuality.
2. All routes, with the exception of those within Priority 4, have been clearly established and will be listed under their priority categories on the route cards/maps for each gritter's area.
3. Particularly in housing areas, or car parks, it may not be practical to treat completely to plan, for example, if the weather conditions dictate treatment at a time when considerable numbers of vehicles are parked. If this occurs, instructions may be issued to take the first realistic and practical opportunity to return to these areas or to send in smaller back-up gritters.
4. On occasions, especially in adverse weather conditions, only the highest or higher priority routes will receive treatment. There may be times when only Priority 1 can be kept open.
5. Following consultation with the Duty Manager instructions may be issued for back-up gritters to be mobilised, where practical, when such conditions become apparent or when lesser priorities have been authorised but main line gritters are required continually on higher priority routes.
6. Following consultation with the Duty Manager instructions may be issued to treat selected sections of Priority 2 routes where, due to geographic reasons, frost does not thaw by midday, even though there has been a general rise in temperature, above 0 degrees centigrade, during the daytime period.
7. In more traditional housing and industrial areas, special interpretations of spine and cul-de-sacs may be required but the spirit should be adhered to. It may be possible for gritters, in such areas, to be routed out via a different route than that used for access, particularly if geometry or gradient problems exist.
8. It may be that to take the shortest way between parts of it's route, a gritter will traverse a road of lesser priority than that currently being treated. Salt will NOT be spread on such occasions but ploughing will be permitted. This also applies from the gritters' parking area to a gritted route.
9. Farm accesses on a route, of any priority, will not be granted additional consideration simply because they have produce to send away or feedstuffs to bring in. Similarly, hotels with tourist buses will not be granted additional consideration.
10. In cases of sudden illness or injury, the necessary roads will be opened up but purely on an ad-hoc basis. Routine pre-arranged hospital visits for dialysis or other treatments are excluded from service. (It may be necessary on the first occasion to open the roads necessary, advise the patient or families concerned and record that this has been done). The same criteria will apply to the accesses to cemeteries and to churches in the case of funeral services. Other types of church service will not be aided. Access to the home of the immediate bereaved family will be provided only where gradients or geometry problems exist.
11. Roads serving the homes of doctors, nurses, ministers, etc. will not be given special priority because of the vocation of the residents. However, the Duty Officer may approve special treatment for specific emergencies.
12. Only requests by the Central Scotland Police to allow access to accidents for emergency vehicles, will be responded to.
13. Notification, by the Police, of icy or snow conditions will be checked by a Duty Supervisor before responding.
14. Should a sudden unexpected freeze or snowfall occur just before or during rush hour, it will be virtually impossible for gritters to operate effectively.

15. It is particularly difficult to tackle twisty, hilly and narrow rural routes when conditions have deteriorated. The safety of the gritter driver is paramount and the risk of losing an operational gritter must be borne in mind.
16. Requests by commercial organisations for earlier treatment due to incoming or outgoing deliveries will not be responded to.
17. Except in an emergency other Council and Public Services will not be assisted, unless on a rechargeable basis e.g. no assistance will be given for routine access to filter stations, country parks etc unless resources have delivered on the Council's policy priorities.
18. It is an unfortunate consequence of snow ploughing that a windrow of snow may be left across driveways and side roads. This may be impenetrable to light vehicles. However, it is not practical for the window to be cleared by the Council without adversely affecting the policy priority treatments.
19. The Winter Service will **not** be provided to the following: (except for adopted roads if Priority 4 routes are authorised)
  - Old Peoples establishments or lunch clubs.
  - Nursery or Education establishments other than primary or secondary schools.
  - Other bus routes, school taxis or post bus routes.
  - Unadopted roads, at whichever stage of the adoption process they have reached. When roads are adopted during the winter period and would otherwise qualify for treatment, they should be added to the appropriate route, provided that the gritting vehicle can turn or exit on an adopted carriageway.

## 5. FOOTWAY TREATMENT

Treatment of ice conditions on footways, and footpaths, will only be carried out between the times (5.30 to 16.00hrs).

The treatment of footways and footpaths may have to be locally curtailed, due to the obstruction caused by wheelie-bins, on collection days. This situation will be most acute where mini-tractor equipment is used to treat footways. Due to the random nature of this eventuality the Council will only return once the wheelie-bins have been removed from the footways to carry out the required treatment.

### a. **Priority F1A – This priority relates to ice formation only**

The footways and footpaths to be treated in the following sequence.

- i. Those immediately outside shops in urban, community or village shopping centres, where a minimum of three essential premises such as foodshops, Post Offices etc. exist.
- ii. Steps and ramps to underpasses and footbridges together with any associated footpaths.
- iii. A connecting footway from the above shopping areas to nearby and identified public building. The connecting footway must be used, by the public, on a regular and predicable basis. Public buildings are those providing a primary and intensive **service** to the public during the majority of the day. This would include hospitals, health centres, police stations, libraries, local authority offices and post offices.
- iv. Those immediately outside individual food shops and post offices in urban, community or village shopping centres.
- v. Adopted footways within sheltered housing or residential home complexes for the elderly.

### b. **Priority F1B – This priority relates to snow conditions**

Footways and footpaths will be treated in the following sequence, should resources permit.

- i. Those listed in Priority F1A (i to iii).
- ii. One footway along Priority 1 carriageways within built-up areas, which best serves pedestrian traffic and/or serves the most, premises.
- iii. Footways providing a pedestrian route to residential old peoples' homes or sheltered housing complexes, from the nearest treated footway.
- iv. Standing areas at bus stops.
- v. Those immediately outside individual food shops and post offices in urban, community or village shopping centres.
- vi. Adopted footways within sheltered housing or residential home complexes for the elderly.

Footways and footpaths will be cleared, when snow exists unless specific information indicates that a thaw will take place before 8.00am.

**c. Priority F2 – This priority relates to ice or snow and comprises the remaining footway/footpath network.**

These will only be treated in very exceptional weather conditions and when resources permit. Treatment will require authorisation by the Duty Manager.

Note: Link footpaths will not be treated where alternative, albeit longer footway, routes are available.

**Notes on the interpretation of the Policy for Footways and Footpaths**

1. Within any Priority, categories of footway/footpath will be dropped from treatment in reverse order if, and for as long as conditions so dictate and whilst the principal routes are being dealt with. Every effort will be made to avoid this eventuality.
2. On occasions, during adverse weather conditions, only the highest of higher priority routes will be treated. There may be times when only Priority F1A routes and the most important pedestrian links, within the F1B list, will be treated.
3. In snow conditions it is imperative that an early start is made to prevent hard packing by pedestrians. Authorisation, by the Duty Manager, for salt and/or grit will be required if packing occurs. Easily accessed sources of grit may have to be established.
4. In pedestrian areas, where gritting equipment can take access, it should do so with due care.
5. Pedestrian areas, within shopping centres, which gritting equipment cannot reach or where street furniture screens part of the footway, only 2m widths, outside each frontage and limited criss-crossing tracks will receive treatment.
6. Notwithstanding the descriptions given within each Priority, a footway route would usually be provided in preference to that of a footpath, even though it may be of greater length.
7. The connecting footway must be used, by the public, on a regular and predicable basis. Public buildings are those providing a **primary and intensive** service to the public during the majority of the day. This would include hospitals, health centres, police stations, libraries, local authority offices and post offices.

**6. SALT BINS**

The Council will provide 475 salt bins, for the storage of salt and/or grit. Bins will be placed at various identified locations, throughout the Council area. Salt and/or grit heaps may be placed instead, particularly in rural areas, but these should be replaced with bins, for environmental reasons, as resources allow. Bins will be provided, as follows:

- i. The bins are for the storage of salt and/or grit for use on **public roads only**. These bins will be placed at locations of identified difficulties eg where a gradient of 1 in 17 or steeper exists.

- ii. In villages, local and smaller communities, community bins will be provided for general treatment of the public road network.
- iii. Salt and/or grit will be replenished during or following spells of adverse weather conditions, as soon as resources allow.
- iv. Bins have been provided only at locations, which are identified, but to which a lorry can be drawn up for ease of filling.
- v. Bins may be provided for a footway or footpath, where particularly treacherous physical conditions exist. It will be located, for ease of filling, adjacent to a carriageway.
- vi. Bins will not generally be provided adjacent to Priority 1 gritting routes, in car parks or for internal use by the Council or any other public or private property, such as, schools, parks, hospitals, old people's homes etc. They will not be placed specifically outside old people's homes. Salt bins will not be provided on established footpath tractor routes.
- vii. A bin may, however, be placed on a Priority 1 carriageway route where difficult geometry may require the additional availability of salt for the public to use.
- viii. A bin will be provided at underpasses and footbridges, provided a location can be found that will limit the public use of the salt on adjacent roads and footways.

**Notes on the interpretation of the Policy regarding Salt Bins**

- 1. The bins will be checked and topped-up on a regular basis, with further inspection and replenishment taking place after each spell of adverse weather.
- 2. While every reasonable effort will be made to keep bins topped up during periods of adverse weather, this will only be practicable when resources are available.
- 3. Salt and/or grit contained in the bins is for the use of the public on public carriageways and footway/footpaths only. **It is not for use on private driveways, accesses or paths.**
- 4. Bins will not be placed specifically outside Old Peoples' establishments or lunch clubs, etc.

**7. Performance Reporting**

The Service is developing a range of performance indicators for the delivery of the Winter Service. These will be reported through the Council's Bulletin at regular intervals during the Winter period. The following are indicative indicators which will form the core of our performance reporting:

- 1. Objective : Compliance with response time for leaving depot.  
PI : Number of late departures: 100% expected
- 2. Objective : Compliance with expected journey time for completing route.  
PI : Number of late arrivals: 100% expected
- 3. Objective : Total amount of salt used to date.  
PI : Total tonnage of salt used per winter maintenance season
- 4. Objective : Average cost to salt per kilometre.  
PI : Cost per winter maintenance season

**8. Use of External Assistance to Deal with Severe Snow Conditions**

Stirling Council Roads Maintenance Service is a member of the Tay Forth Machinery Ring. The Tay Forth Machinery Ring is a non-profit making member owned co-operative, formed in 1989. Its primary purpose is to encourage more efficient joint use of agricultural equipment and labour mainly between its farming and non-farming members. Contracts and supplies are arranged between members in Fife, Tayside and Central Regions of Scotland. Stirling Council can call upon this arrangement for additional resources such as excavators, loaders, front and rear mounted snowploughs during times of extreme weather.

Stirling Council will supply snowploughs to local farmers, located throughout the Council area, with suitable tractor units and who are members of the Tayforth Machinery Ring. Each farmer will sign an agreement to ensure they maintain the plough in good order at their expense. The ploughs will be subject

to an annual inspection by a Council representative. In return the Council will hire the services of the farmer plus tractor and plough through the arrangements of the Tayforth Machinery to plough snow from roads during extreme conditions. The hire arrangements will only be instructed if the Head of Environment Services considers that extreme adverse conditions are likely to prevail for a period in excess of 10 days.

#### **9. Mutual Aid – Agreement with Clackmannanshire and Falkirk Councils**

During rocksalt shortages, extreme winter events or during periods where operational difficulties occur Stirling Council will work with Clackmannanshire and Falkirk Councils to share resources when demand and resources allow. Assistance will only be provided under this agreement if authorised by the Head of Environment Services, or his nominated representative.

## **STIRLING COUNCIL**

### **Sandbag Policy**

#### **In the event of Fluvial (River) and/or Groundwater Flood Containment / Prevention**

This document details the Policy of Stirling Council with regards to the deployment of sandbags to prevent or contain floodwaters from rivers or groundwater.

The sole responsibility for protection of private property in the event of a flood lies with individual owners and not the Council or any other Agency. The Council does have permissive powers in relation to flood defence and will use those powers, where appropriate, to support local communities in preparing for and dealing with floodwater.

The deployment of sandbags will be based on the following priorities:-

1. To prevent loss of life or serious injury
2. Maintaining access for emergency services
3. Protecting vital facilities within the community, i.e. hospitals; emergency service facilities; publicly owned old peoples' establishments; etc.
4. Protection of Residential Property within the area
5. Protection of Stirling Council's community properties, such as schools and other public buildings, if appropriate
6. Protection of Business/Commercial property within the area

The decision to deploy sandbags will be made in two ways:-

1. If a flood event is anticipated sandbags will be delivered to those locations and residential properties deemed 'At Risk' of being affected by floodwater. Stirling Council will maintain a register of these locations and properties and uses its five river monitoring stations to identify potential flooding problems associated with our main river catchment areas.
2. Requests for provision of sandbags can be made to the Council on a telephone number published by the Council - 0845 277 7000. The Emergency Duty Officer or the Emergency Planning Officer will authorise distribution of sandbags in accordance with the priorities above.

Stirling Council's Roads, Transport and Open Space Service will maintain a stock of sandbags to meet emergency needs and will work closely with other agencies during a flood event. The Council will support and encourage local communities and businesses to prepare their own flood risk action plan to deal with emergencies likely to affect them.

No guarantee can be given that sandbags will be delivered within a specific timescale. The property owner/occupier is responsible for placing sandbags and providing other preventative measures.

Sandbags are regarded as short-term, temporary solution to the problem of flooding. The use of Floodwater Protection Schemes for low-level flood events of limited extent is recommended. For extensive areas of inundation, of significant scale, the Council may seek to promote a Flood Prevention (Mitigation) Scheme.

The use of sandbags is not favoured as a long-term solution for the following reasons:

- Filled sandbags are heavy and awkward to lift. Care is required when placing them as injury could result.
- Sandbags have a limited life, as they degrade in sunlight.
- In use sandbags may become contaminated and be a hazard to health. Contaminated sandbags must be disposed of in a responsible manner.
- It is recommended that sandbags are not re-used.

#### **Stockholding of Sandbags**

- The Council will retain 500 filled sandbags at its Springkerse Depot in Stirling and a further 500 filled sandbags at its Lagrannoch Depot in Callander.
- The Council will maintain a stockholding of 3000 unfilled sandbags, with sufficient sand for filling them. Should circumstances require these additional sandbags to be filled; resources will be allocated based on the operational priorities at that time.
- The distribution of sandbags will be the sole responsibility of the Roads and Transport Services' Duty Manager, who will allocate sandbags in accordance with the priorities of this policy and knowledge of other operational requirements.

## OPERATIONAL PROCEDURES AND ARRANGEMENTS

The Winter Service shall be provided from **14 October 2011 to 13 April 2012** (the Winter Period)

### 1. Preparation for Winter Maintenance Activities, Prior to 14 October 2011

It is the responsibility of the Roads Maintenance Manager, who will consult with the supervisory employees, to review and update these procedures, in preparation for the coming Winter Period. This review will include an assessment of the labour, materials and equipment required to deliver the Winter Maintenance Service, in accordance with the Council's Policy.

Familiarisation, for Duty Personnel, of the gritting routes and these Operational Procedures and Arrangements will be organised by the Roads Maintenance Manager.

All Duty Drivers and Duty Personnel will be trained on the safe use of plant and equipment. Familiarisation with the various pieces of plant and equipment, including spread rates and patterns, will be organised, by the Roads Maintenance Manager, prior to the commencement of the Winter Period.

### 2. Weather Forecast and Road Condition Information

- Effective Winter Service operations depend upon accurate and timely weather forecast information. Weather forecast information will be received daily from the forecast provider.
- During normal working hours, general weather forecast information will be received in Springkerse Depot, via the Master Station. These general weather forecasts, together with site-specific ice-sensor based information, will be assessed and a recommended course of action determined for the treatment of carriageways and footways, which will be passed to Work Supervisors for action.
- The Roads Maintenance Service will receive, at midday, weather forecast information specific to this authority's operational area. This daily service will include a 24-hour detailed forecast for the Council area, with regular updates. In addition, there will be a 2 to 5 day weather forecast and a 24-hour consultancy service. The weather service will be provided from October 2011 until May 2012.
- During normal office hours the Duty Manager will assess the weather forecast information, to determine the appropriate level of treatment required. The recommended level of treatment will be passed to Duty Personnel, at each depot, for action.
- Outwith normal working hours, the general weather forecast information reports will continue to be passed directly to the Icelert Master Station at Springkerse Depot. Duty Officers will monitor the forecasts and other weather prediction instruments and recommend changes to the planned action, as necessary.
- The Duty Officer will advise the Access Stirling Control Room on a daily basis, of the proposed course action in each area.
- Weather conditions often vary considerably across the Council area, therefore, Duty Officers may require gritting routes to be visually inspected, to verify prevailing conditions, before determining the actual treatment required.
- Winter Service precautionary treatment falls within three broad categories, which are;
  - Treatment of ice.
  - Treatment of snow.
  - Treatment of hard packed snow and ice.
- Where weather forecast information indicates that widespread snow accumulations are likely, outwith normal working hours, the Duty Manager will ensure that additional support, equipment and personnel are placed on stand-by. Thus ensuring that treatment of the priority routes can, as far as is reasonably practicable, be completed. In extreme conditions the use

of additional assistance from the Tayforth Machinery Ring will be authorised from the Head of Environment Services.

- Duty Officers and Duty Supervisors will also have discretion, in deteriorating conditions or in the event of unforeseen circumstances, to call out additional personnel to assist co-ordinate activities.

### **3. Duty Personnel:**

- Duty Personnel, required for Winter Service, will be appointed from the Roads Maintenance Service. Should additional personnel be required, then they will initially be selected from suitably experienced employees from other Council Services. During extended periods of severe weather the Head of Environment Services may call on additional support from private sector contractors.
- All Duty Drivers, and other Duty Personnel, will be rostered for stand-by duty and will be ready for action, when instructed. The rostering arrangements will be agreed in advance with the Roads Maintenance Manager. Alterations to the agreed rostering arrangements will only be permitted with the prior agreement of the relevant Duty Supervisor.
- If no stand-by action is required, on a normal working day, then all personnel should report for duty as usual.

### **4. Call-out Procedures:**

- During precautionary-gritting operations Duty Supervisors will call-out Duty Drivers, and other Duty Personnel, as necessary, in the affected area(s).
- Call-outs will normally be for the treatment of carriageway routes only, on a 24-hour per day basis.
- On completion of any treatment gritters will be reloaded and Duty Personnel will revert to stand-by readiness.

### **5. Arrangements for Continuous Gritting and Ploughing Operations:**

- Rostered stand-by personnel will respond to emergency call-outs and proceed to deal with any winter maintenance emergency, as instructed. Where prolonged overnight operations require stand-by personnel to be relieved then any subsequent treatment will require relief operatives to provide assistance. The ability of the Roads Maintenance Service to deliver Winter Service is inevitably limited by the availability of suitably trained and experienced employees.
- During continuous operations, in particularly adverse conditions, the working hours of the Duty Personnel should be closely monitored.
- A general exemption from Driving Regulations is permitted to deal with winter service emergencies. All time, in excess of the normal daily driving limits, must however be spent dealing with emergency situations.

### **6. Weekend Arrangements for Duty Personnel:**

- At weekends rostered Duty Drivers will be contacted by their Duty Supervisor to confirm the action.

### **7. Public Holidays:**

During the Christmas and New Year Public Holidays, when priority route treatment will be carried out on a call-out only basis, unless weather conditions warrant there will be no pre-arranged stand-to or patrols. The Roads Maintenance Manager will circulate details, in early December, of the rostering arrangements for the Christmas period.

### **8. General Information for Duty Personnel:**

- Gritters will not be automatically double-manned in snow conditions. However, when conditions become extremely severe Duty Supervisors will have discretion to instruct double-manned operations, where necessary.
- Duty Drivers who require to change, adjust, reverse or repair ploughing equipment will advise their Duty Supervisor, who will organise personnel to assist.
- Outwith normal working hours the stand-by gritter fleet and other winter service equipment will be available to provide an immediate response.
- Drivers must report any defects to winter service vehicle/equipment to their Duty Supervisor or the Duty Officer immediately, so an alternative vehicle or equipment can be provided or repairs organised.
- In the event of a breakdown, during a call-out or patrol, the fault must be reported immediately to the Duty Supervisor, who will either arrange a repair or the uplift of a spare gritter. **It is imperative that the Gritting Operation is completed within the allotted time.**
- The consumption of alcohol during working hours will not be tolerated. Personnel on stand-by duty must, at all times, be fit to undertake their duties.
- When any action takes place, Duty Drivers must report, by radio or telephone, start and finish times to their Duty Supervisor. This information is essential for record purposes and will, during emergencies, prevent unnecessary disturbance to the driver's families.

#### **9. Vehicles, Plant and Equipment for Winter Maintenance Activities:**

- The Roads Manager will carry out a review of Winter Service vehicles, and other winter service equipment, annually. The overall complement of equipment will be determined in relation to the Council's Winter Service Policy requirements. Additional vehicles may be hired, from time to time, to supplement this core equipment.
- Every vehicle, and item of equipment, used for winter maintenance activities, will be thoroughly checked by Roads Maintenance personnel, prior to the commencement of winter activities and thereafter on a regular basis by the Duty Drivers. This checking regime will be in addition to MTS's normal maintenance/checking programme.

#### **10. Salt Spread Rates:**

- Nominal salt tonnage will be calculated for each gritting route, for each rate of spread. This will allow Duty Drivers to load only the quantity of salt required to complete their route.
- Duty Drivers will be required to have a valid weigh-ticket for their vehicle prior to commencing any treatment. Following completion of their route, the Duty Driver will be required to collect a further weighbridge ticket, to confirm the tonnage of salt used. Both weighbridge tickets will be returned to the Duty Supervisor with the Daily Work Ticket.
- The Duty Supervisor will record the loaded vehicle weights before and after treatment. This will ensure accurate stock control is maintained. This information should be recorded in the Duty Supervisor's Report.
- A daily update, on the serviceability of all equipment, is essential. This information must be recorded in the Duty Supervisor's Report. Any defects must be made good as soon as practicable. Defects must be report to the Fleet Co-ordinator daily.
- MTS will operate a 24-hour Standby Service, for the repair and maintenance of all gritting equipment throughout, the Winter Period

#### **11. Salt:**

- Salt stocks are held at the following depots and will be replenished when the stock falls below the recommended level, for the time of year:

Springkerse Depot- Covered Salt Barn.

#### Callander Depot- Covered Salt Barn.

- The salt tonnage used, the depot it was drawn from, and the route it was used on, must be recorded on the Duty Driver's Daily Work Ticket. If no treatment is carried out, a zero tonnage must be reported.
- The supply of salt to private companies, and individuals, is not normally permitted. Other Council Services may be permitted to receive salt, if sufficient stock is available.
- Salt conservation from either the National Salt Cell, UK or Scottish Government and related Professional bodies measures will always be considered for implementation. The Duty Managers after consultation with the Head of Environment Services will inform all staff if changes are to be made.

## **12. Radio and Tracking Systems**

The radio and tracking system are essential tools to assist in the efficient and effective delivery of the Winter Service. They can be a useful source of information, on local road and weather conditions, and assists the Duty Officer monitor the progress of winter service operations. Duty Personnel should, therefore, limit the use of the radio system to a minimum, commensurate with providing an effective service.

## DUTY PERSONNEL'S ROLES AND RESPONSIBILITIES

Employees involved in the management, monitoring and supervision of the Winter Service are expected to be fully aware of the Stirling Council's Winter Service Policy and Procedures document. The Roads Maintenance Manager, prior to the Winter Period, will issue all Duty Personnel with a copy of the Winter Service Policy and Procedures document.

### 1. General Standby Arrangements

In order to ensure a consistency of action across the Council area the well-established two-tier system of stand-by arrangement will operate for the forthcoming Winter Period. Commencing on the 14 October 2011, for a period of at least 26 weeks, to the 13 April, 2012 and on such occasions outwith these dates as may be determined by weather conditions.

During normal working hours the Roads Maintenance Service will monitor the weather forecast and road sensor information and organise the appropriate action/treatment levels.

In the evenings (between 1700 hrs and 2100 hrs), during the Winter Period, Duty Officers will, on a pre-arranged Evening Rota, monitor the weather forecast information at Springkerse depot.

Duty Officers will, also, on a prearranged Shift Rota, monitor the weather forecast information at weekends, public holidays and overnight, from Springkerse depot.

Responsibility for the management and control of the Winter Service, out with normal working hours, will rest with the following Stand-by Personnel:

- **Duty Managers:** Appointed from suitably qualified and experienced managers within the Road Service. Rostered for duty during the Winter Period, to control and manage operations in accordance with the Council's Policy and Procedures document.
- **Duty Officers:** Appointed from suitably qualified and experienced Technical Officers. Rostered, via the Council's partnership arrangements with neighboring Councils, for duty to monitor weather forecast and road condition information, and to amend recommended levels of treatment to deal with prevailing conditions.  
Duty Officers will be responsible for maintaining the Duty Log, which will contain; all contacts with the Service, levels of treatment recommended, any amendments to the recommended level of treatment and details of the progress of any action.
- **Duty Supervisors:** Appointed from suitably qualified and experienced Road Service employees. Rostered, by the Roads Maintenance Manager, so there will be one supervisor on duty for each operational depot.
- **Duty Drivers and other Stand-by Personnel:** Appointed for suitably qualified and experienced Roads Maintenance Service employees. Rostered to carry out the agreed level of treatment.

**It is the responsibility of all winter service personnel to ensure that a suitable replacement is available to carry out their standby duties at all times, other than during periods of sick leave.**

## 2. Duties and Responsibilities

i) **Head of Environment Services:** The Head of Environment Services (or his nominated representative) may, in exceptional weather conditions, declare an emergency and authorise the treatment of all routes.

ii) **Duty Manager:**

- The Duty Manager is responsible for determining levels of treatment on carriageway and footway/path routes.

Carriageway Routes Priority 1 and Footway/path (F1A and F1B) Treatment:

- Normal Working Hours: The designated Duty Manager will evaluate weather forecast and road condition information and thereafter determine the course of action appropriate to the following overnight period. The Duty Officers will ensure the agreed level of treatment is communicated to the relevant Duty Supervisors.
- Outwith normal working hours the Duty Officers will receive forecast information and in consultation, if necessary, with the Duty Manager, determine the level of treatment required.

Carriageway Routes Priority 2 and 3

- Forecast predictions may permit a course of action to be predetermined for priority 2 and 3 routes the previous day. Failing this it is the Duty Officer will consult with the Duty Manager to determine the appropriate level of treatment. The Duty Manager will require accurate, relevant and up-to-date weather forecast information to determine the appropriate level of treatment.

It must also be recognised that circumstances may on occasion prevail which require discretion to be exercised with regard to policy constraints, e.g. Police requests for assistance at major accident locations, or where it is established emergency vehicles are in difficulty. Such requests should not be ignored and policy constraints may be disregarded in exceptional circumstances.

iii) **Duty Officers Responsibilities**

The Duty Officer will co-ordinate and monitor the Council's response to winter weather emergencies. All other matters relating to winter service, for example, flooding, potholes etc. (but excluding lighting) will, also, be passed initially to the Duty Officer.

- The Duty Officer will be responsible for the monitor of the road sensor ice equipment.
- The Duty Officer will ensure that they are fully acquainted with the weather forecasts for the Council area and the intended level of treatment.
- The Duty Officer will have the discretion to vary the level of treatment commensurate with the prevailing conditions and for initiating any further action required.
- The Duty Officer, in consultation with the Duty Supervisor, will determine the appropriate rate of salt spread.
- Having initiated action through the Duty Supervisors, and ensured that the degree of mobilisation is commensurate with conditions prevailing, the Duty Officer will have no direct operational responsibilities.
- The Duty Officer must maintain, throughout the action period, contact with the Duty Supervisors and be aware of the level of operational activities.
- The Duty Officer will, at all times, maintain accurate records of all weather forecast reports, contacts from any source to the Winter Service Control Room and details of the operational activities undertaken during their shift.

- The Duty Officer will, in the event of a dawn stand-to, be prepared, prior to 0530 hrs, to convey road surface conditions and weather forecast information to the Duty Supervisors and to agree operational requirements.
- The Duty Officer will, each day, prior to 0900hrs, prepare a brief report on overnight or weekend activities.

#### Additional Communication Requirements

- Central Scotland Police will be informed daily of the anticipated weather/road surface conditions and of the intended level of treatment. During the normal working week, this information will be passed from Springkerse to the Control Room at Force Headquarters, Randolphfield. Outwith normal working hours, the Duty Officer will relay this information by telephone to the Control Room.

#### iv) **Duty Supervisors Responsibilities**

The Duty Supervisors will be responsible for the management of operational activities and for recording all relevant events in the Duty Supervisor's Daily Report.

- Duty Supervisors must be fully acquainted with the network of carriageway and footway routes operating from their nominated depot.
- Prior to each period of duty they will make themselves aware of the weather forecast information, the proposed level of treatment and the operational status of all winter maintenance equipment operating from their depot.
- Duty Supervisors will be acquainted with the roster of stand-by personnel.
- In the event that the Duty Officer instructs action, the Duty Supervisor will assume full operational control of the activities, in their depot, and mobile resources to treat the prevailing conditions.
- In marginal conditions the Duty Supervisor may be required to inspect, assess and report road conditions to the Duty Officer, prior to action being initiated. The Duty Supervisor is required to provide details of road conditions and any problems, for example, seepage areas or localised difficulties, in their Daily Shift Reports.
- The Duty Supervisor is required to maintain regular contact with the Duty Officer, if action is requested.
- The Duty Supervisor will instruct, on all occasions, the salt spread rate spread rate and monitor compliance with the instruction through the use of the weighbridge tonnage and route length information.
- During a dawn stand-to, the Duty Supervisor will contact the Duty Officer at Springkerse, prior to 0530 hrs, in order to discuss weather and road conditions. The Duty Supervisor will issue instructions to the Duty Drivers on the action required. In the event of no action being instructed the workforce will be deployed to routine activities
- The Duty Supervisor will maintain a Duty Supervisors Daily Shift Report for his depot. The Report will contain the following information:
  1. Duty Supervisor's start and finish times.
  2. Weather condition information.
  3. Carriageway and footway/path conditions.
  4. Routes treated and a record of events.
  5. Vehicles and equipment deployed.
  6. Route inspection information. (if applicable)
  7. Duty Driver details, including, call-out/route completed/off-duty times.
  8. Salt quantity used and spread rate achieved on each route.
  9. Details of interruptions to gritting operations, for example, vehicle or equipment breakdowns and any subsequent action taken to repair or replace the defective equipment.

- Attention to these matters will enable Duty Supervisors, if called upon, to confidently confirm treated locations in the event of Inquiries, Court Cases or Insurance Claims.
- A copy of the Duty Supervisor's Daily Shift Report (including any 'nil' reports) should be forwarded daily to the Roads Maintenance Service Office, at Springkerse, where they will be checked, collated and filed.
- Duty Officers are required to submit a brief activity report (CFS morning summary) for each day of the week prior to 0900-hrs. Therefore, Duty Supervisors must ensure that the Duty Officer received all relevant information timeously.
- Duty Supervisors are also responsible for dealing with other emergency matters, passed to them by the Duty Officer. On occasions, the support and assistance of additional supervisory staff may be required. Should this eventuality arise agreement from the Duty Manager must be sought.

v) **Duty Driver's Responsibilities**

- Duty Drivers must ensure that they are available and fit for their rostered duty.
- Drivers must ensure their vehicle and its equipment is in working order and ready for action. The vehicle check must be completed at the beginning of each period of duty.
- Drivers must, before beginning salting, have a valid start weighbridge ticket.
- Drivers are responsible for treating their route as instructed.
- Drivers must, at the end of route treatment, have a finish weighbridge ticket.
- Drivers must, if instructed, re-load their gritter for the next action and collect a further start weighbridge ticket.
- Drivers must endeavour to complete their route within the allotted time.
- Drivers who are unable to complete their route, for any reason, must inform their supervisor and await further instructions.
- At weekends and public holidays rostered Duty Drivers will be contacted by their Duty Supervisor to confirm the action.
- Duty Drivers must keep in regular contact, during period of action, and confirm their finished time with their Duty Supervisor.
- When the treatment is finished drivers must immediately complete their work ticket and vehicle check-sheet and pass them, with their weighbridge tickets, to their supervisor. Failure to return completed work tickets and other documents may delay payment of wages.
- The salt tonnage used, the depot it was drawn from, and the route it was used on, must be recorded on the Duty Driver's Daily Work Ticket. If no treatment is carried out, a zero tonnage must be reported.
- Gritting route teams (normally three drivers) are required to liaise with Duty/Work Supervisors to ensure the gritter and equipment is ready for next period of action.

3. **Salt Spread Rates**

Excessive salt spreading is undesirable on economic and environmental grounds. The following spread rates provide guidance on the use of rock salt for the precautionary treatment, on carriageways and during snow-ploughing operations.

Spread rates for de-icing agents is provided in Table 4 and 5 of the I.C.E.'s *'Design and Practice guides for Highway Winter Maintenance'* 2000. However, local circumstances and the practical experience of Roads Maintenance Service employees will be used to determine the actual rate of spread appropriate for the local conditions encountered.

Table 4.

Road Status	Rate of dry salt spread
Mainly dry, some wet patches	10g/sq.m. to wet patches only
Formation of hoar frost expected	10g/sq.m.
Roads wet	10g/sq.m.
Ice already forming	15-40g/sq.m.

Table 5

Snow condition	Salting network	Other routes
Slight, expected less than 25mm	Presalt at 10g/sq.m.	No action
Moderate, expected 25-100mm	Presalt at 20g/sq.m. when snow depth is over 50mm and treat as described in (3)–(9) below.	When plant is available, treat as salting network. Grit when snow is hard packed.
Heavy, expected greater than 100mm	Presalt at 20-40g/sm.m. Plough when snow depth is over 50mm and treat as described in (3)-(9) below.	When plant is available, treat as salting network. Grit when snow is hard packed.

On receiving a snow warning, the following procedure should be carried out:

- 1) Fix ploughs to all vehicles if significant accumulations or drifting are expected.
- 2) Pre-treat the spreading network in accordance with Table 5 immediately prior to snow falling to prevent snow setting on the road surface.
- 3) Start ploughing as soon as snow becomes deep enough to plough, i.e. approximately 50mm in depth.
- 4) After ploughing, treat uncompacted snow with salt at 10 g/m<sup>2</sup> per 25mm depth of snow and re-plough to remove slush.
- 5) When prolonged falls are forecast it will be found useful to continuously plough from the onset of snow to prevent build up and to prevent compaction by traffic. Such ploughing can be combined with simultaneous salting at 20-40 g/m<sup>2</sup> so that a wet base is maintained. However, once snow depths of 120 mm have been reached, or when tackling snowdrifts or where vehicles are operating on gradients, it may be desirable to continue ploughing without salting. The weight of a salt load will aid vehicle traction when ploughing.
- 6) After ploughing, a further treatment of salt is required at the rate of 10 g/m<sup>2</sup> for every 25 mm depth of uncompacted snow for each degree centigrade that the surface temperature is below freezing (see 8 below).
- 7) As snow melts under the action of salt, keep ploughing to remove slush.
- 8) If snow has become compacted and the temperature is low (-5°C or below) neat salt must not be used, as it will accumulate in the form of salt solution in depressions and produce a very uneven and slippery running surface. In these circumstances spreading of grit is advised.
- 9) A 50/50 grit/salt mix should be used on hard-packed snow. Grit is not required on uncompacted snow, as the action of salt will cause the snow to melt allowing the slush to be removed easily by ploughs.
- 10) Very low temperatures do not usually follow immediately after a snowfall and it is therefore very important to apply salt early, plough early, salt again and get the resultant slush off the road before compaction by traffic.