Aberdeenshire
COUNCIL

From mountain to sea

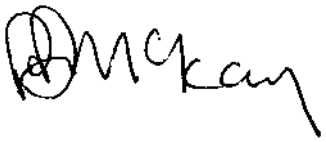
OP12
Roads Winter Maintenance Operational Plan 2026/27



Date	Effect	Pages Amended	Originator Approved by
October 2026	Initial Issue	-	-

Document Status: Operational from 12 October 2026

Approved by:



Head of Roads & Infrastructure Services

Date: 12 October 2026

Amendment Policy

It is envisaged that revisions will fall into two categories:

1 Major

2 Minor

And it is proposed to deal with these as follows:

Major Revisions to the Winter Maintenance Operational Plan will be carried out immediately in accordance with Quality Assurance Procedures.

Minor Revisions will be collated in Appendix (O) and the Winter Maintenance Document will be updated as required by the Head of Roads & Infrastructure Services or other appointed official.

Contents

1 Priorities and Standards 7
1.1 Carriageways - Precautionary Salting 7
1.2 Footways 9
2 Operational Plan 11
2.1 Introduction 11
2.2 Delegation, Responsibilities and Roles 11
2.3 Working Arrangements 13
3 Decision Making 15
3.1 Weather Forecasts 15
3.2 Roadside Weather Stations 16
3.3 Treatment Decisions 16
3.4 Snow Forecast 29
3.5 Treatment Table for Non-Precautionary Treatment Including Snow 31
3.6 Footway Treatment 31
3.7 Thawing 32
3.8 Lifting of Snow from Roads etc 32
3.9 Communications 32
3.10 Public Communication 32
3.11 Winter Readiness 33
4 Reporting and Monitoring 34
4.1 Road Condition Reports 34
4.2 Material Usage 35
4.3 Expenditure 35
4.4 Performance Indicator 36
4.5 Health & Safety 36
4.6 Record Keeping 36
5 Plant, Equipment and Depots 38
5.1 Availability & Maintenance of Vehicles, Plant etc 38
5.2 Operation of Vehicles 38
5.3 Assistance from Third Parties 39
6 Labour 40
6.1 Labour Arrangements 40
7 Materials 41
7.1 Specification 41
7.2 Stock of Materials 41
8 Supplementary Information 43
8.1 Road Closures 43
8.2 Snow Gates and Snow Gate Signing 43
8.3 Variable Message Signs 44
8.4 Snow Clearing at Lecht & Glenshee 44
8.5 Railway Level Crossings 45

8.6 Ice Warning Signs etc 45
8.7 Grit Bins 46
8.8 Winter Maintenance Operations for Other Parties 51
8.9 Resilience Network 52

Appendices

Appendix 1 - List of Contacts – This appendix has been withheld from publication as it contains personal information that is exempt from disclosure.

Appendix 2 – Rotas - This appendix has been withheld from publication as it contains personal information that is exempt from disclosure.

Appendix 3 - Primary Treatment Routes – Link to Website

Appendix 4 - Secondary Treatment Routes – Link to Website

Appendix 5 - Priority 1 Footways – Link to Website

Appendix 6 - Engagement of External Resources - This appendix has been withheld from publication as it contains personal information that is exempt from disclosure.

Appendix 7 - Grit Bins

01. Banff & Buchan – Link to Website
02. Buchan – Link to Website
03. Formartine – Link to Website
04. Garioch – Link to Website
05. Kincardine & Mearns – Link to Website
06. Marr – Link to Website
07. Large Volume Grit Bins – Link to Website

Appendix 8 - Rock Salt – This appendix contains operational information and is not included within the published version of this document.

Appendix 9 – Miscellaneous – Part of this appendix has been withheld from publication as it contains sensitive operational information that is exempt from disclosure.

03. Roadside Weather Stations - Warning Signs – Link to Website
04. Resilience Road Network – Link to Website

Appendix 10 - Reporting - This appendix contains operational information and is not included within the published version of this document.

Appendix 11 - Winter Plant - This appendix contains operational information and is not included within the published version of this document.

Appendix 12 – RECONNECT – This appendix will be published on the Council website. Supporting appendices are not included within the published version as they contain operational information.

1 Priorities and Standards

1.1 Carriageways - Precautionary Salting

Trunk Roads A90, A92 and A96

Trunk Roads are the responsibility of the Scottish Executive, with winter maintenance operations carried out by Amey, except for the Aberdeen Western Peripheral Route/Balmedie -Tipperty section and the A92 from Blackdog roundabout to Aberdeen City boundary, which is maintained by Balfour Beatty Regional Civil Engineering

Priority 1 Roads

Priority 1 roads will be principal roads or other classified roads serving as the main routes between communities or major traffic distributors within communities. They should also carry heavy traffic flows, act as public service bus routes or give access to public services or emergency facilities providing an essential public service.

In special circumstances, a road which does not meet the above definition may be considered a Priority 1 road if it is regularly used and presents special hazards because it is habitually liable to drifting snow or freezing due to altitude and exposure.

A road need not be considered a Priority 1 road at all times. A certain degree of flexibility is necessary to take account of seasonal or irregular usage e.g. access roads to skiing areas may be a higher priority at weekends and in peak holiday periods, and a lower priority at other times.

The standard to be aimed at on Priority 1 roads is that these roads should never become impassable to traffic unless there are abnormal conditions.

Precautionary treatment will be carried out between 05:30 hrs and 21:00 hrs. The standard to be aimed at on Priority 1 roads is that **winter maintenance operations should commence within 1½ hours in response to an instruction. Sufficient resources must be available to complete normal gritting of the Priority 1 roads within 2½ hours of the physical start of operations.**

A list of Priority 1 roads should be drawn up to assist in developing operational plans which deliver the required standard of service. The list should be reviewed annually in late summer or early autumn to take account of changes in the road network.

Priority 2 Roads

Priority 2 roads will be principal and other classified roads not included in the Priority 1 list. These serve as main roads between small communities or as traffic distributors within larger communities and which carry medium traffic flows, or give access to community or public facilities of a non-essential nature.

The standard to be aimed at on Priority 2 roads is that these should be treated only after completion of treatment of Priority 1 roads.

The response time to carry out treatment on Priority 2 roads will depend on progress on Priority 1 roads but will not normally be less than 3 hours from the receipt of an instruction to commence winter operations. Treatment should normally be completed within a further 3 hours.

Priority 3 Roads

Priority 3 roads will be all other roads not included in the list of Priority 1 and 2 roads. Typically these will be access roads to isolated communities in rural areas, local access roads, service roads and minor roads in urban areas.

The standard to be aimed at on Priority 3 routes is that these routes should not receive precautionary treatment.

Exceptions

- A939 Ballater to Corgarff
- B974 Cairn O Mount
- B976 Crathie to Gairnshiel

Although the above roads are not considered Priority 1 or 2 roads they do warrant a treatment level above that of other Priority 3 roads. The treatment regime for these routes is that they may be treated without the need for the 48 hour ice conditions forecast applying. Treatment may be of a precautionary nature and/or on the day of a frost/ ice event, but treatments should be carried out no earlier than 08:00 hrs. There are no performance measures for treatment of these routes.

New Developments

Roads in new developments that are yet to be adopted may only be treated if the Developer has submitted form CC7 from the Road Construction Consent suite of forms. This form confirms: the substantial completion of the road, the absence of protruding ironwork, the availability of turning areas; and indemnifies the Council against any claims for loss or damage.

Private Roads

Privately maintained roads will not be treated except in the case of emergency. This shall include private (unadopted) roads.

The Primary Route Network

To enable a practical approach to road treatment, 32 Primary Routes will be established (Appendix 3). These Primary Routes shall include all Priority 1 and Priority 2 roads.

It is recognised that when primary gritting routes are being designed, they are likely to consist of Priority 1, 2 and 3 routes. For efficient route design, it is permissible to treat a lower priority route in advance of a higher one to improve route efficiency. However, routes should be designed with the aim of treating the higher priority route as early as practicable on that route.

Secondary Treatments

All roads not included in the Primary Route Network may receive reactive treatment, should prevailing weather forecasts indicate that snow or ice conditions might be expected to persist for a period in excess of 48 hours.

To enable a practical approach to road treatment, Secondary Treatment Routes will be established, consisting of Priority 3 roads of greater strategic significance (Appendix 4). These Secondary Treatment Routes will be treated first, prior to treating the remainder of the Priority 3 roads.

Carriageways - Snow Clearing

Following heavy falls of snow, in general roads will be cleared in order of their priority, however this will be dependent on operational circumstances. Repeat clearing/ treatment of the Primary Route Network may be necessary to achieve adequate removal of snow/ compacted snow/ ice. Priority 3 roads would not normally be cleared until all routes of a higher priority are adequately cleared, except in the case of access for emergency services, for an event such as a funeral or for operational efficiency. However, snow clearing may be started on Priority 3 roads by contracted farmers before higher priority routes are clear. The use of contracted farmers in this instance allows an enhanced service to be delivered. Repeat clearing/ treatment of Priority 3 roads may be necessary to achieve adequate removal of snow/ compacted snow/ ice. Snow clearing should be carried out between 05:30 hrs and 22:00 hrs, and where conditions persist it is likely that clearing operations will be taking place during these hours.

Emergency Response Outwith Normal Working Hours

The normal planned out-of-hours treatments comprise an evening pre-treatment of Primary gritting routes normally completed by 21:00 hrs, and early morning patrols commencing at 05:30 hrs. In severe weather conditions the full operational period extends from 05:30 hrs to 22:00 hrs.

Outwith these periods the emergency response service is provided by standby Roads staff who can be contacted by Police Scotland on Aberdeenshire's Roads Emergency Contact number.

1.2 Footways

F1/F2 Footways

F1 footways are main pedestrian routes in busy central areas of urban communities where shopping and business/commercial facilities are concentrated.

F2 footways are busy pedestrian accesses routes, linking the central areas to areas of significant housing density, school academies and transport interchanges.

The standard to be aimed at on F1/F2 footways is that these footways should be kept in a safe condition for pedestrians other than in storm conditions. This to be planned to allow treatment of F1 footways to be completed, as far as practical, before 08:00 hrs. The treatment of F2 footways follows completion of the F1 footways. In exceptional

circumstances, where heavy snowfall is forecast, snow clearing operations may start earlier.

A list of F1/F2 footways has been established to assist in developing operational plans which deliver the required level of service. The list should be reviewed annually in late summer or early autumn to take account of changes in the network.

F3/F4 Footways

F3/F4 footways are all footways not on the F1/F2 list.

F3 footways link residential and industrial areas to the busy central areas of larger urban communities and also main footways located in smaller towns and villages that do not have a F1/F2 network.

The standard to be aimed at on F3 footways is that these footways should be treated only after completion of treatment on F1/F2 footways and then only when conditions are severe enough to prevent the safe passage of pedestrians and are likely to persist for a period in excess of 48 hours.

F4 footways are footways with low usage, short estate roads to the main routes, cul-de-sacs and rural footways.

F4 footways will receive snow clearance only, and is dependent on available resources.

Footways - Snow Clearing

Following heavy falls of snow, in general footways will be cleared in order of their priority, however this will be dependent on operational circumstances. Footway snow clearing should be carried out between 08:00 hrs and 16:00 hrs, and where conditions persist it is likely that clearing operations will be taking place during these hours (including weekends).

Public Car Parks

Public car parks of significant importance will be treated along with the Priority 3 roads in an area if treatment is necessary.

Private Footways

Private footways will not normally be treated.

Cycleways

All cycleways will be treated to the same standard as the surface they share (i.e. carriageway or footway).

2 Operational Plan

2.1 Introduction

Outline

The Winter Plan is designed to provide a level of service that meets Aberdeenshire Council's Winter Policy.

2.2 Delegation, Responsibilities and Roles

The Director of Environment & Infrastructure Services

The Director of Environment & Infrastructure Services has the overall responsibility for the General, Structural and Winter Maintenance of the road network throughout Aberdeenshire. The responsibility for the provision and execution of the Winter Maintenance Operations in accordance with the Council's Policies and the Operational Plan developed from them is delegated to the Head of Roads & Infrastructure Services.

Head of Roads & Infrastructure Services

The responsibility for the execution of the Operational Plan is delegated to the Head of Roads & Infrastructure Services.

The Head of Roads & Infrastructure Services will concern themself with the policy objectives with regard to Winter Maintenance operations and ensuring that adequate resources are allocated to meet the objectives and standards set out in this document. The Head of Roads & Infrastructure Services will also be responsible for ensuring that the Operational Plan is continuously reviewed in the light of experience and changing circumstances.

The Head of Roads & Infrastructure Services will be wholly responsible for ensuring that Winter Maintenance operations are carried out in accordance with the Policy. The Head of Roads & Infrastructure Services may delegate the day-to-day responsibility for the organisation and supervision of Winter Maintenance operations to the Roads Managers.

Roads Managers

The Roads Managers are responsible for the management of the Winter Maintenance budgets, operational personnel and plant. They will ensure that resources are available and deployed as required to provide the required level of winter maintenance.

Principal Roads Engineers

The Principal Roads Engineers are responsible for collecting, recording and reporting information in relation to weather forecasts, actual weather conditions, planned operations, actual operations and reasons for variations from planned actions.

The Duty Officer

The Principal Roads Engineers, along with other nominated officers, will fulfil the role of Duty Officer on a rota basis. The Duty Officer will determine the planned Winter Maintenance operations to ensure that they are commensurate with the forecast. The Duty Officer is responsible for periodically reviewing the planned action to ensure it is appropriate.

The Duty Officer will assume the role of communication, coordination, monitoring and reporting. The Duty Officer will be on 24/7 standby for winter related emergencies. They will take the appropriate action in relation to any calls received.

Out of Hours Call Handler

The Out of Hours Call Handler will be the emergency contact 24/7 however, during the working day (Monday to Friday) Police Scotland should direct calls to the Contact Centre. The Out of Hours Call Handler will take the appropriate action in relation to any calls received. The Out of Hours Call Handler will liaise with the Duty Officer on technical and other matters when necessary.

The Winter Duty Supervisor

The Winter Duty Supervisors are wholly responsible to the Principal Roads Engineers for the day-to-day organisation and execution of the Winter Maintenance operations and will take immediate action during the hours of service delivery to implement the Winter Maintenance Plan on receipt of instruction or when actual weather conditions vary to such an extent from the forecast that any previous action is inadequate.

The Winter Duty Supervisors shall keep the Principal Roads Engineers fully advised of the prevailing circumstances with regard to the progress of Winter Maintenance operations and shall seek their advice and assistance in dealing with any augmented working undertaken or conditions outwith the scope of the Winter Maintenance Plan. In particular, any road conditions encountered that vary from the forecast conditions should be notified to the Duty Officer. Similarly, the Winter Duty Supervisor must notify the Duty Officer as soon as possible of any treatment to a route that the Supervisor instigates that was not planned by the Duty Officer.

Trunk Roads (A90, A92 and A96)

Trunk Roads are the responsibility of the Scottish Executive, with winter maintenance operations carried out by Amey, except for the Aberdeen Western Peripheral Route/Balmedie-Tipperty section and the A92 from Blackdog roundabout to Aberdeen City boundary which is maintained by Balfour Beatty Regional Civil Engineering. Aberdeenshire Council may enter into some contractual arrangements with Amey and/or Balfour Beatty to carry out winter treatment on Trunk Roads (e.g. footway treatment), but this should not adversely affect our service provision.

Aberdeenshire Council recognises the importance of mutual aid as a tool for resilience of service delivery for all Roads Authorities and will carry out Winter Maintenance work on the Trunk Roads when authorised by the Head of Roads & Infrastructure Services.

Alternatively, Winter Maintenance work may be provided when Police Scotland declare a major incident, at which time Aberdeenshire Council resources will operate under Police Scotlands direction.

2.3 Working Arrangements

Standby Service

The Road Supervisors, in consultation with the Principal Roads Engineers, will draw up a weekly duty rota for drivers and plant operators to cover both the standby service and all prescribed treatment. This will ensure that all specialist Winter Maintenance vehicles can be staffed to deliver the service in accordance with the Winter Maintenance Operational Plan.

Start Times

The normal start time for early morning treatment is 05:30 hrs.

Service During Normal Working Hours

If, in the opinion of the Principal Roads Engineer, road or weather conditions warrant it, Winter Maintenance operations utilising the specialist vehicles will continue during the course of the working day. In addition to the specialist vehicles, the Roads Supervisors in consultation with the Principal Roads Engineer can instruct the use of the Council's normal heavy goods vehicles on Winter Maintenance operations. The vehicles will be fitted with snowploughs and/or gritters according to road conditions.

The Roads Supervisors in consultation with the Principal Roads Engineer, are authorised, in the event of prolonged spells of severe weather, to seek assistance from other Services who might have suitable labour, vehicles and plant available, or to hire labour, plant and vehicles from local contractors.

Weekend and Public Holidays

Every effort will be made to maintain the stated levels of service during weekends and public holidays. However, the Operational Plan recognises that the availability of personnel during these periods may be more limited than on normal working days. In addition, traffic volumes and network usage are generally lower during weekends and public holidays.

In these circumstances, it may be necessary to adjust service delivery arrangements to make the most effective use of available resources while continuing to protect public safety and maintain network functionality. Any temporary reduction in service levels will be risk based and applied in accordance with the priority hierarchy set out in this Plan, with lower category routes receiving a reduced level of service before higher priority routes.

This approach helps ensure that resources remain focused on those parts of the network where demand, risk and public benefit are greatest.

Emergency Response Outwith 05:30 – 22:00 Normal Working Hours

Outwith normal working hours the emergency response service is provided by Standby Roads staff who can be contacted by Police Scotland on Aberdeenshire's Roads Emergency Contact number.

While it is not possible to define what constitutes an emergency in absolute terms, the following should be used as guidance:

- Any "blue-light" emergency where the Emergency Services require assistance in responding to an incident;
- Attendance at road traffic accidents to assist the police in relation to the provision of road closures and traffic diversion routes;
- Clearing debris and treating oil spills that may constitute a hazard to road users;
- Assisting the medical profession to make urgent home visits to patients.

In each operational area there will be a Winter Duty Supervisor with sufficient operatives on standby available to respond to emergency call-outs. The Out of Hours Call Handler will normally receive telephone calls from Police Scotland. They shall, where necessary, contact the appropriate Winter Duty Supervisor who will assess road conditions prior to mobilising the required resources. The Out of Hours Call Handler, when taking calls, may deal solely with the Winter Duty Supervisor for very localised events or conditions. However, where events or conditions may be more widespread, the Out of Hours Call Handler shall also alert the Duty Officer. The Duty Officer or Out of Hours Call Handler will log all telephone calls together with the details of any action taken in response.

The operative mobilised will report the road conditions at the area of the particular hazard and in the surrounding area together with details of action taken which will be recorded by the Winter Duty Supervisor. The Winter Duty Supervisor will notify the Duty Officer or Out of Hours Call Handler of action taken.

The Winter Duty Supervisor is authorised to mobilise all additional resources necessary in deteriorating weather conditions, and has the discretion to contact the Duty Officer for advice or assistance at any time they considers that conditions warrant it.

Winter Maintenance vehicles will be stationed at various depots for immediate use outwith working hours. The vehicles will be loaded with appropriate material.

3 Decision Making

3.1 Weather Forecasts

Weather information is available to authorised personnel through our weather forecast providers website from 1 October to 30 April (inclusive). Weather forecast information will be posted every day at 04:00 hrs, 06:00 hrs and 12:00 hrs by the forecaster.

The forecasts include a general synopsis and a route based forecast for each of the 32 Primary Gritting Routes. These forecasts cover an initial 24 hour period and the following 24 to 48 hour period.

The route based forecasts should be used as the source of information on which to base treatment decisions.

Forecast updates do occur and the forecaster will contact the Duty Officer in the following circumstances:

Road Surface Temperature (RST) related:

- Observed RST now below zero but was forecast to remain above and their client has not taken any salting action
- Observed RST now below plus 1C but was forecast to remain above and their client has not taken any salting action.
- Observed RST below zero for two or more hours earlier than forecast and their client has already salted (unless below zero period already covered by route/domain-wide zero crossing times and action not affected therefore).
- RSTs below zero for two or more hours longer than forecast (unless below zero period already covered by route/domain-wide zero crossing times and action not affected therefore).
- RSTs now expected to remain comfortably (>+2C) above zero, but the forecast was to be below zero and salting was planned for a later time.
- RSTs below zero and was expected to stay above. Salting has taken place but showers, predicted and observed, have occurred since salting and wash-off may have occurred.

Precipitation/moisture related:

- Settling snow now expected to arrive earlier, or last significantly longer, than previously predicted (>2hrs).
- Settling snow depths now expected to be significantly greater than predicted.
- Showers (any form) now expected on nights that have required salting, but no showers were predicted.
- Freezing rain now expected, arriving earlier, or departing later, contrary to forecast.
- Hoar frost and/or ice now expected on nights during which dry roads were forecast.
- RSTs dip to zero or below in hail and do not recover 1 hour or more later.

The forecast provider also provides: a morning forecast summary, a 3 – 5 day forecast specifically for Aberdeenshire. In addition, precipitation and air temperature forecast maps (between 5 and 10 days in advance) are available.

3.2 Roadside Weather Stations

Aberdeenshire owns a number of automatic roadside weather recording stations. These weather stations are maintained and calibrated by Vaisala Ltd. The data from these stations and other stations managed by Vaisala Ltd can be viewed using Vaisala Manager.

The information available includes road and air temperatures, dew point data, wind speed and direction, road state (wet, damp, dry or icy), and precipitation information. Station information is used by our weather forecast provider when they are producing their forecast. Station information should be used by Aberdeenshire staff as supplementary information to the route based forecast.

Any defects or faults with stations should be notified to Vaisala without delay.

3.3 Treatment Decisions

Route Based Forecast information and the Treatment Flowcharts will be used to determine planned treatments.

Carriageway Primary Routes – Precautionary Treatments: upon receipt of the 12:00 hrs forecast, the Duty Officer will use the Treatment Flowcharts to determine the planned treatment for each route for that evening and the following morning. The 04:00 hrs forecast will be used to review the planned treatment for that morning and make any necessary changes based on the latest forecast information. The Duty Officer may consult Road Managers, Principal Engineers and Roads Supervisors. The planned treatment for each route shall be input by the Duty Officer into Vaisala Manager. This allows the information to be disseminated to appropriate staff and provides an electronic record of planned action, and read-only access allows our neighbouring authorities to view our planned action.

The Duty Officer shall state the number of Winter Duty Supervisors required to be on duty.

Carriageway Primary Routes – Reactive Treatments: where the planned morning action is Standby, the Duty Officer shall review this decision upon receipt of the 04:00 hrs forecast using the Morning Treatment (Reactive) Flowchart. If the Duty Officer determines that a morning treatment is required they shall arrange for Winter Duty Supervisors to be informed without delay and shall record the treatment decision in Vaisala Manager.

Carriageway P3 Roads: upon receipt of the forecast the Principal Engineer or their delegated officer in each area will use the Treatment Flowchart to determine whether treatment of the P3 roads in their area should be planned for 08:00 hrs the following morning. The decision to carry out a treatment should be recorded in Vaisala Manager and conveyed to their Winter Duty Supervisor.

Footways F1 and F2: upon receipt of the forecast the Duty Officer will use the Treatment Flowcharts to determine whether footway treatment crews are required to be put on Standby.

Footways F3: upon receipt of the forecast the Principal Engineer or their delegated officer in each area will use the Treatment Flowchart to determine whether treatment of the F3 footways in their area should be planned for 08:00 hrs the following morning. The decision to carry out a treatment should be recorded in Vaisala Manager and conveyed to their Winter Duty Supervisor.

There may be circumstances where planned action varies from the guidance contained within the Treatment Flowcharts. In these circumstances the Duty Officer should record in Vaisala Manager the reason for such variance.

In the absence of any indication or information to the contrary, the treatment plan should be followed.

At any time designated officers or Winter Duty Supervisors may consult the Duty Officer if they feel that conditions have changed such that the treatment agreed in the afternoon should be significantly changed.

It is the duty of the Duty Officers and Winter Duty Supervisors to keep themselves apprised of the up-to-date information at all times, particularly immediately prior to taking their overnight rest, when contact with the forecasters may be appropriate.

The forecasters are available 24 hours a day and can be contacted at any time by staff for advice.

The following flowcharts should be used as a guide to treatment decision making.

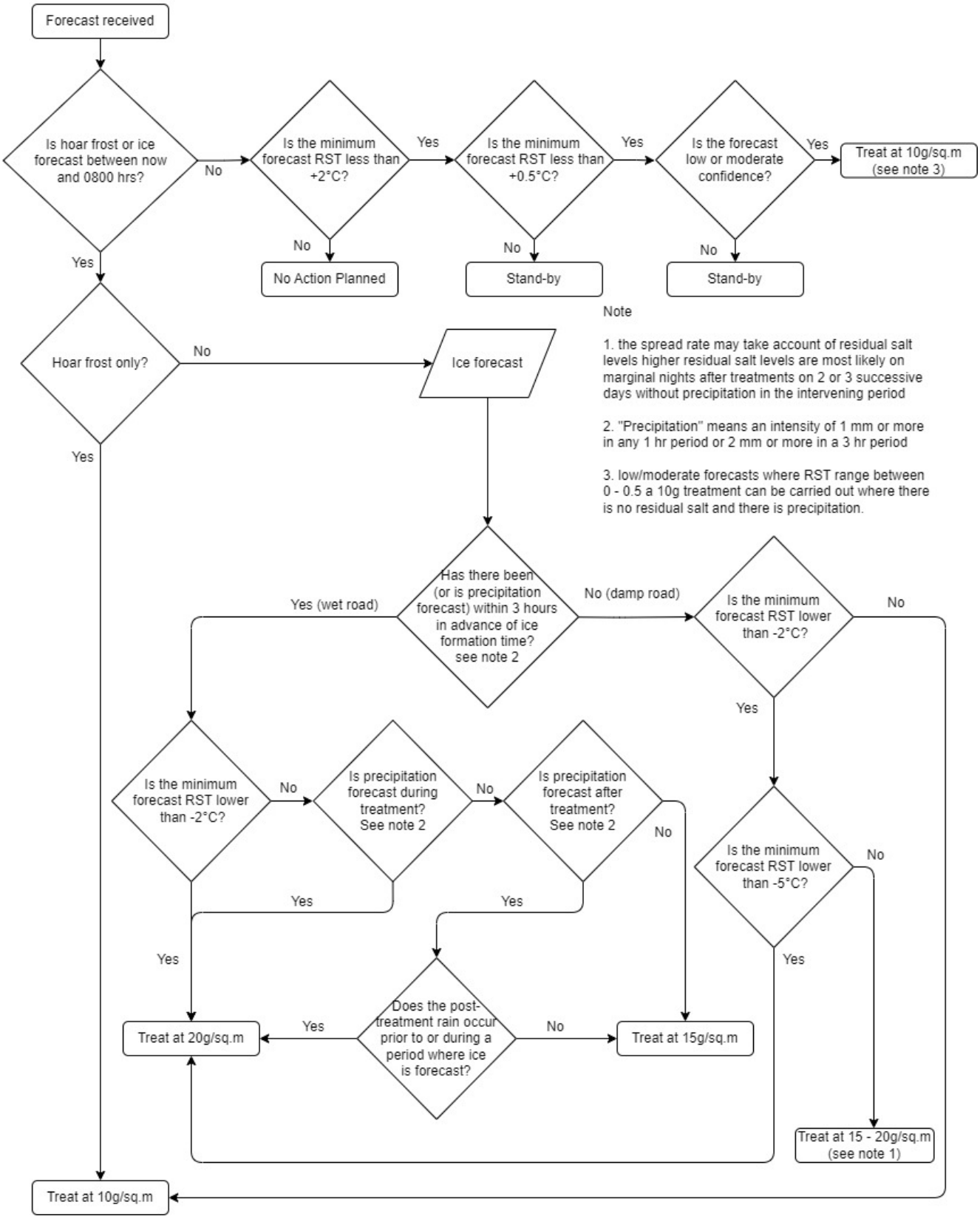
Note

1 Attention should be given to the possibility of water run-off and its effect on the efficacy of salt spreading. Such locations should be considered for increased treatment.

2 The forecast of rain will have an effect on the timing of treatments. The occurrence of rain will also have a diluting effect on any salt spread, and ideally treatment should take place as close to rain ceasing as possible. In the event that treatment takes place whilst rain is evident or predicted, consideration should be given to increasing spread rates.

3 The rates may be adjusted to take account of residual salt levels. However, residual salt levels will tend to be lower if lower spread rates are introduced. Residual salt levels are most likely to be significant on marginal nights after treatments on two or three successive days without precipitation in the intervening period.

Evening Treatment (Planned) Decision Flowchart



Evening Treatment (Planned) Decision Flowchart

Forecast received, go to question 1.

1. **Is hoar frost or ice forecast between now and 08:00 hours?**
    - If yes – go to question 3
    - If no – go to question 2
2. **Is the minimum forecast RST less than +2 degrees Celsius?**
    - If yes – go to question 11
    - If no – there is no action planned
3. **Hoar frost only?**
    - If yes – Treat at 10g per square metre
    - If no – go to question 4
4. **Has there been (or is precipitation forecast) within 3 hours in advance of ice formation time? "Precipitation" means the intensity of 2mm or more in any 1 hour period or 2mm or more in a 3 hour period.**
    - If yes – go to question 5
    - If no – go to question 6
5. **Is the minimum forecast RST less than -2 degrees Celsius?**
    - If yes – treat at 20g per square metre
    - If no – go to question 8
6. **Is the minimum forecast RST less than -2 degrees Celsius?**
    - If yes – treat at 10g per square metre
    - If no – go to question 7
7. **Is the minimum forecast RST lower than -5 degrees Celsius?**
    - If yes – treat at 20g per square metre
    - If no – treat at 15 - 20g per square metre. The spread rate may take account of residual salt levels higher residual salt levels are most likely on marginal nights after treatment on two or three successive days without precipitation in the intervening period.
8. **Is precipitation forecast during treatment? "Precipitation" means the intensity of 2mm or more in any 1 hour period or 2mm or more in a 3 hour period.**
    - If yes – treat at 20g per square metre
    - If no – go to question 9
9. **Is precipitation forecast after treatment? "Precipitation" means the intensity of 2mm or more in any 1 hour period or 2mm or more in a 3 hour period.**
    - If yes – go to question 10
    - If no – treat at 15g per square metre
10. **Does the post-treatment rain occur prior to or during a period where ice is forecast?**
    - If yes – treat at 20g per square metre

- If no – treat at 15g per square metre

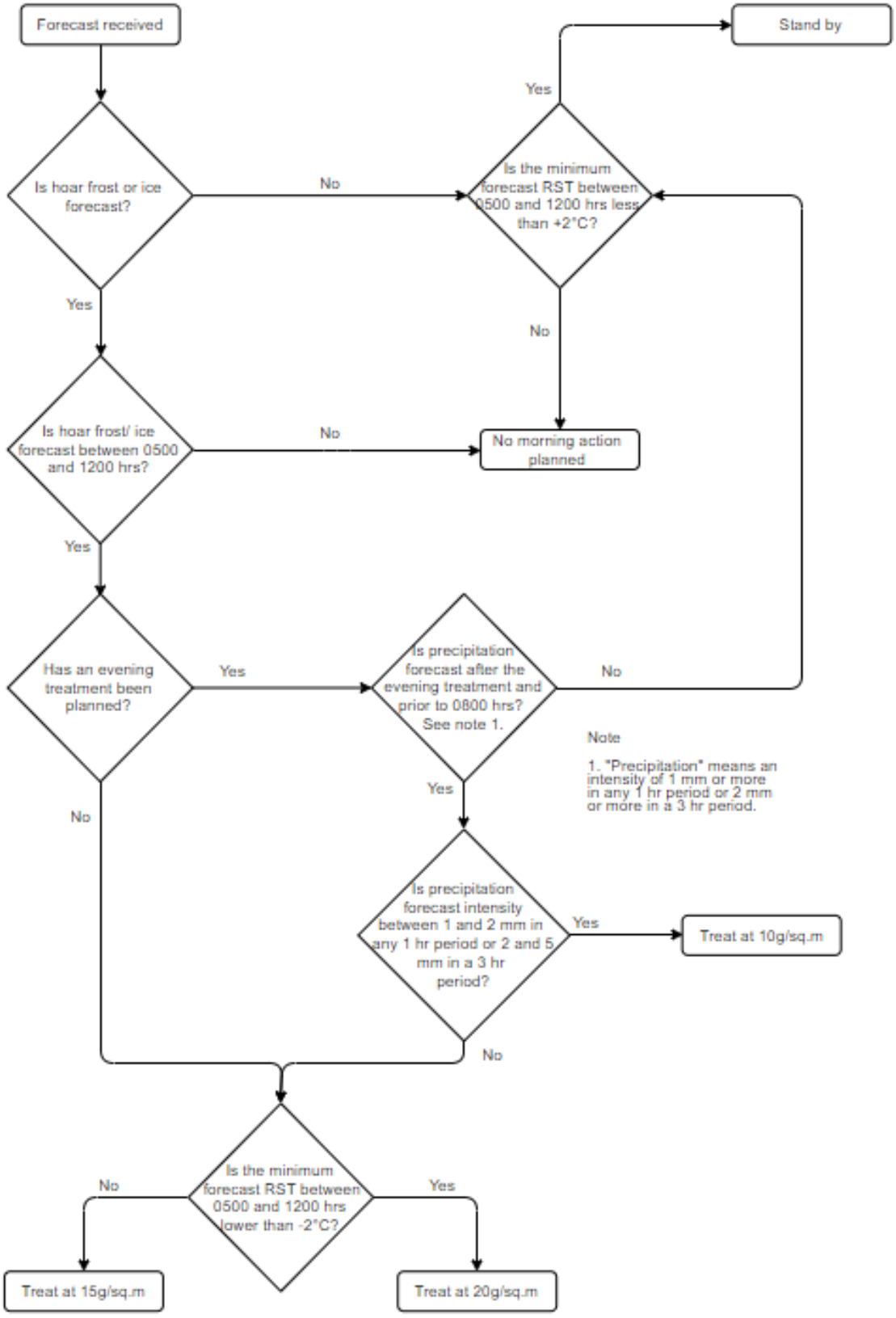
11. Is the minimum forecast RST less than +0.5 degrees Celsius?

- If yes - go to question 12
- If no – standby
-

12. Is the forecast low or moderate confidence?

- If yes – treat at 10g per square metre
- If no – standby

Morning Treatment (Planned) Decision Flowchart



Morning Treatment (Planned) Decision Flowchart

Forecast received, go to question 1.

1. **Is hoar frost or ice forecast?**
    - If yes – go to question 2
    - If no – go to question 6

2. **Is hoar frost or ice forecast between 05:00 hrs and 12:00 hrs?**
    - If yes – go to question 3
    - If no – there is no morning action planned

3. **Has an evening treatment been planned?**
    - If yes – go to question 4
    - If no – go to question

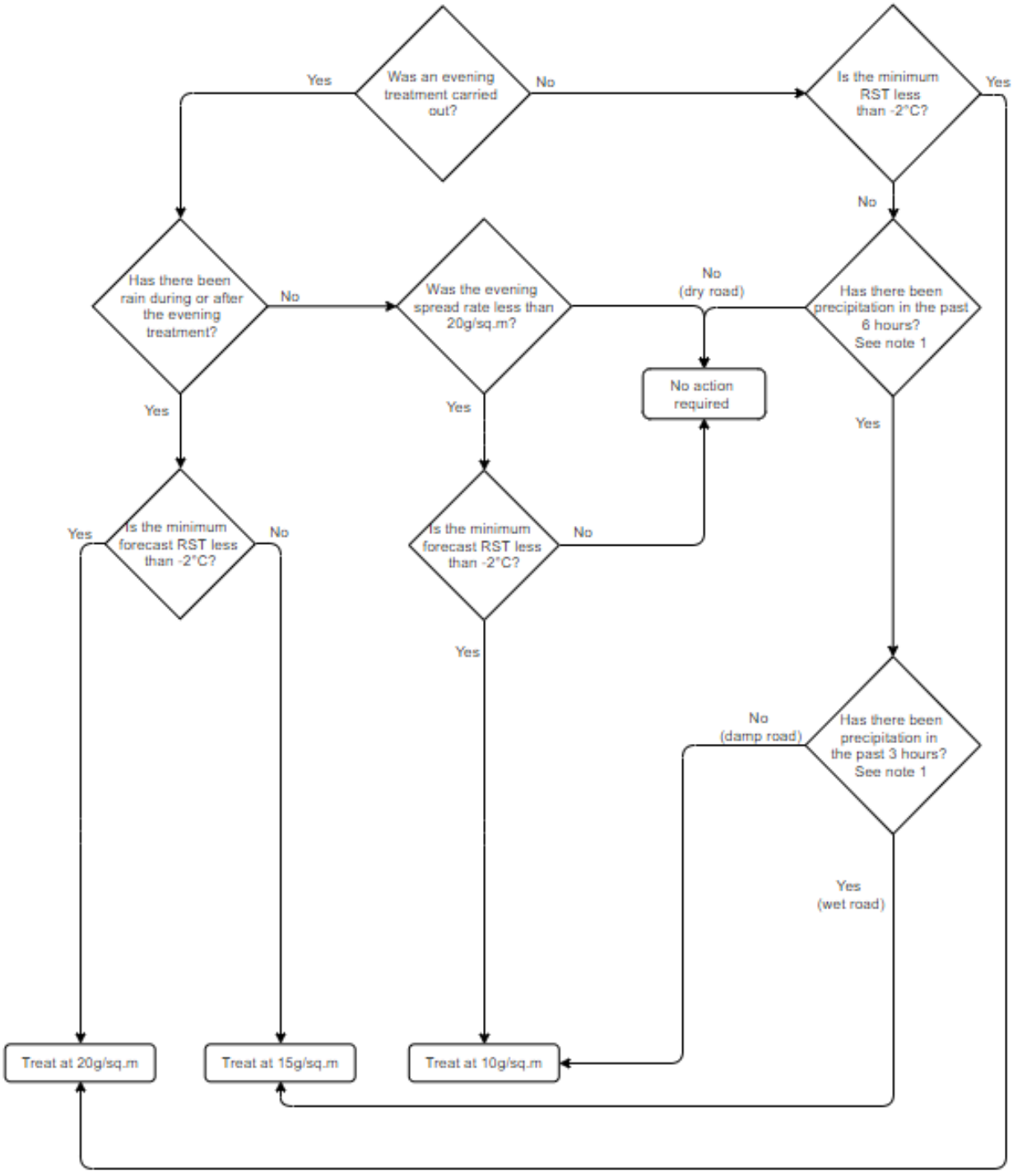
4. **Is precipitation forecast after the evening treatment and before 08:00 hrs? Please note 'precipitations' means an intensity of 1mm or more in any 1 hour period or 2mm or more in a 3 hour period.**
    - If yes – go to question 5
    - If no – go to question 6

5. **Is precipitation forecast intensity between 1 and 2 mm in any 1 hour period or 2 and 5mm in a 3 hour period?**
    - If yes – treat at 10g per square metre
    - If no – got to question 7

6. **Is the minimum forecast RST between 05:00 hrs and 12:00 hrs less than +2 degrees Celsius?**
    - If yes – standby
    - If no – no morning action planned

7. **Is the minimum forecast RST between 05:00 hrs and 12:00 hrs lower than -2 degrees Celsius?**
    - If yes – treat at 20g per square metre
    - If no – treat at 15g per square metre

Morning Treatment (Reactive) Flowchart



Note

1. "Precipitation" means an intensity of 1 mm or more in any 1 hr period or 2 mm or more in a 3 hr period.

Morning Treatment (Reactive) Decision Flowchart

1. **Was an evening treatment carried out?**
    - If yes – go to question 3
    - If no – go to question 2

2. **Is the minimum RST less than -2 degrees Celsius?**
    - If yes – Treat at 20g per square metre
    - If no – go to question 7

3. **Has there been rain during or after the evening treatment?**
    - If yes – go to question 4
    - If no – go to question 5

4. **Is the minimum RST less than -2 degrees Celsius?**
    - If yes – Treat at 20g per square metre
    - If no – Treat at 15g per square metre

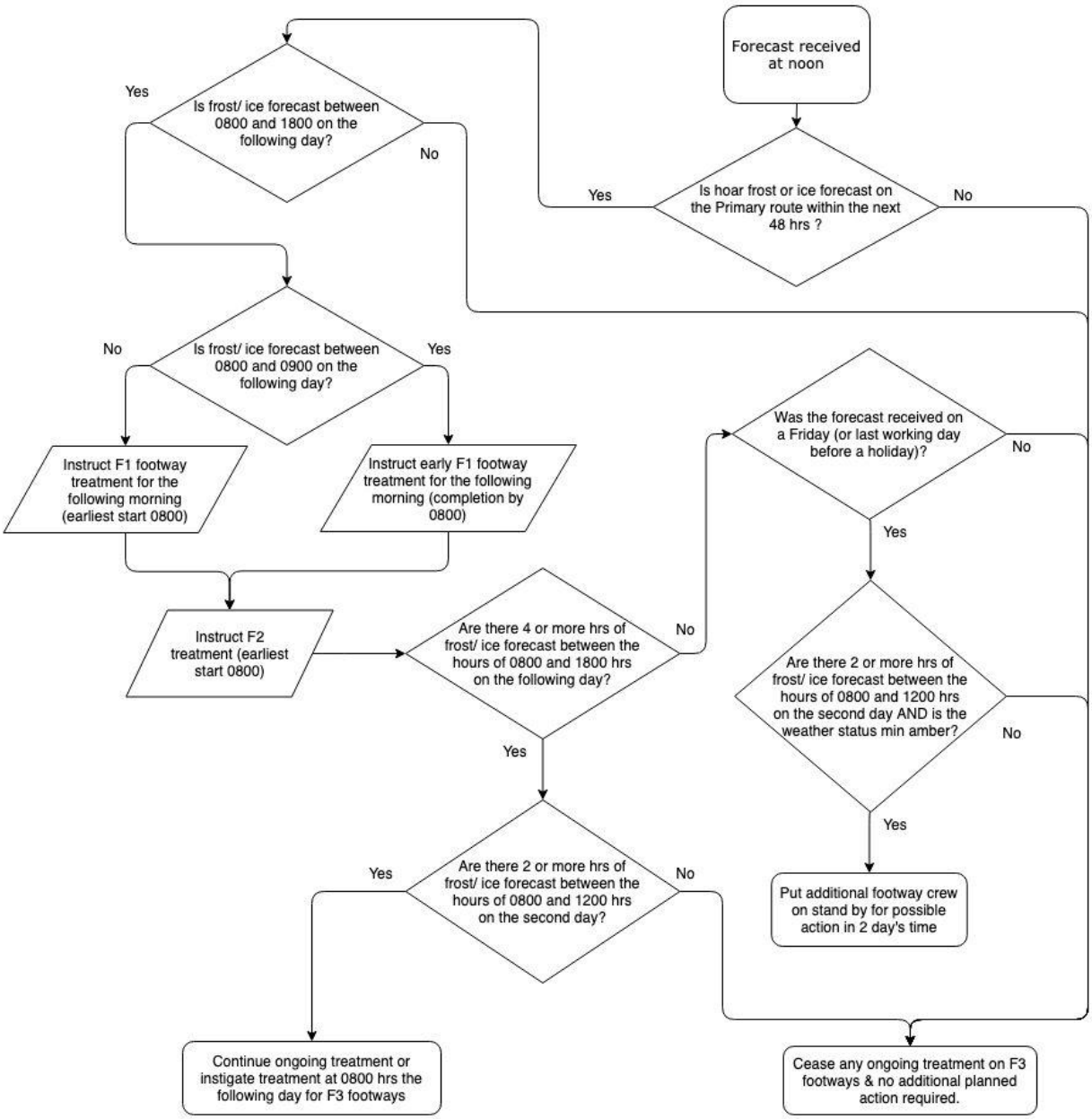
5. **Was the evening spread rate less than 20g per square metre?**
    - If yes – go to question 6
    - If no – no action required

6. **Is the minimum RST less than -2 degrees Celsius?**
    - If yes – Treat at 10g per square metre
    - If no – no action required

7. **Has there been precipitation in the past 6 hours? (“Precipitation” means an intensity of 1mm or more in any 1 hr period or 2mm or more in a 3 hour period.)**
    - If yes – go to question 8
    - If no – no action required

8. **Has there been precipitation in the past 3 hours? (“Precipitation” means an intensity of 1mm or more in any 1 hr period or 2mm or more in a 3 hour period.)**
    - If yes – Treat at 10g per square metre
    - If no – Treat at 15g per square metre

Footway Decision Flowchart



Notes: F1 and F2 follow on treatment will depend on the actual weather conditions encountered locally. The Winter Duty Supervisor has the authority to make arrangements for treatment on F1 and F2 footways.

F3 treatment shall not take place prior to 08:00 hrs

F4 footways receive a snow clearing service only

Footway salting often leaves high residual salt levels and the flowchart decisions may be ignored if recent footway treatment has taken place and residual salt levels are high.

Footway Decision Flowchart

Forecast received at noon

1. **Is hoar frost or ice forecast on the Primary Routes within the next 48 hours?**
    - If yes – go to question 2
    - If no – Cease any ongoing treatment on F3 footways and no additional planned action required.

2. **Is frost/ice forecast between 08:00 hrs and 18:00 hrs on the following day?**
    - If yes – go to question 3
    - If no – Cease any ongoing treatment on F3 footways and no additional planned action required.

3. **Is frost/ice forecast between 08:00 and 09:00 on the following day?**
    - If yes – Instruct early F1 footway treatment for the following morning (to be completed by 08:00 hrs) then proceed to F2 footway treatment (earliest start 08:00 hrs). Go to question 4.
    - If no – Instruct F1 footway treatment for the following morning (earliest start 08:00 hrs) then proceed to F2 footway treatment (earliest start 08:00 hrs). Go to question 4.

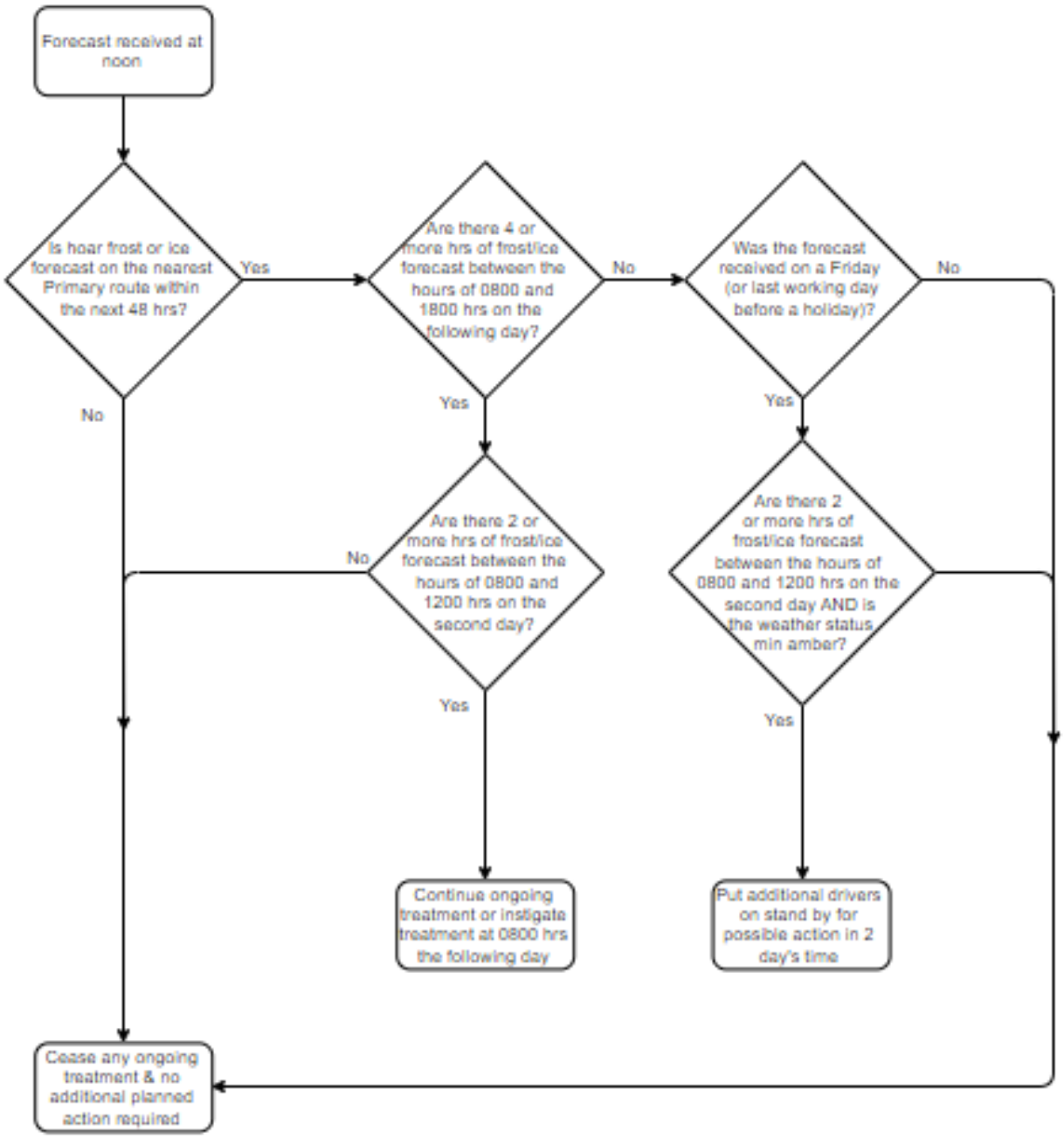
4. **Are there 4 or more hrs of frost/ice forecast between the hours of 08:00 hrs and 1800 hrs on the following day?**
    - If yes – go to question 6
    - If no – go to question 5

5. **Was the forecast received on a Friday (or last working day before a holiday)?**
    - If yes – go to question 7
    - If no – Cease any ongoing treatment on F3 footways and no additional planned action required.

6. **Are there 2 or more hours of frost/ice forecast between the hours of 08:00 hrs and 12:00 hrs on the second day?**
    - If yes – Continue ongoing treatment or instigate treatment at 08:00 hrs the following day for F3 footways.
    - If no – Cease any ongoing treatment on F3 footways and no additional planned action required.

7. **Are there 2 or more hours of frost/ice forecast between the hours of 08:00 hrs and 12:00 hrs on the second day and is the weather status min amber?**
    - If yes – Put additional footway crew on standby for possible action in 2 days' time.
    - If no – Cease any ongoing treatment on F3 footways and no additional planned action required.

P3 Treatment Decision Flowchart



Notes: P3 treatments are reactive to frost/ice/snow conditions. P3 treatment earliest start time is 0800 hrs. Spread rates should be:

for frost - 10g/sq.m salt

for ice layers < 1mm thick - 20g/sq.m salt

for ice/snow layers between 1mm and 5mm thick 20-40 g/sq.m salt/sand mix (or 20g/sq.m salt if earlier treatments have successfully established a debonding layer.

for ice/snow layers > 5,mm thick 20-40g/sq.m sand only. Once layer has started to break up switch to 20g/sq.m salt/sand mix

Sand should be 1mm-6mm angular material

P3 Treatment Decision Flowchart

Forecast received at noon

1. **Is hoar frost or ice forecast on the nearest Primary routes within the next 48 hours?**
    - If yes – go to question 2
    - If no – Cease any ongoing treatment and no additional planned action required.

2. **Are there 4 or more hours of frost/ice forecast between the hours of 08:00 hrs and 18:00 hrs on the following day?**
    - If yes – go to question 4
    - If no – go to question 3

3. **Was the forecast received on a Friday (or last working day before a holiday)?**
    - If yes – go to question 5
    - If no – Cease any ongoing treatment and no additional planned action required.

4. **Are there 2 or more hours of frost/ice forecast between the hours of 08:00 hrs and 12:00 hrs on the second day?**
    - If yes – Continue ongoing treatment or instigate treatment at 08:00 hrs the following day.
    - If no – Cease any ongoing treatment and no additional planned action required.

5. **Are there 2 or more hours of frost/ice forecast between the hours of 08:00 hrs and 12:00 hrs on the second day and is the weather status minimum amber?**
    - If yes – Put additional drivers on standby for possible action in 2 days' time.
    - If no – Cease any ongoing treatment and no additional planned action required.

Notes: P3 treatments are reactive to frost/ice/snow conditions. P3 treatment earliest start time is 08:00 hrs. Spread rates should be:

- for frost - 10g/sq.m salt
- for ice layers < 1mm thick - 20g/sq.m salt
- for ice/snow layers between 1mm and 5mm thick 20 - 40 g/sq.m salt/sand mix (or 20g/sq.m salt if earlier treatments have successfully established a debonding layer.
- for ice/snow layers > 5mm thick 20 - 40g/sq.m sand only. Once layer has started to break up switch to 20g/sq.m salt/sand mix
- Sand should be 1mm - 6mm angular material

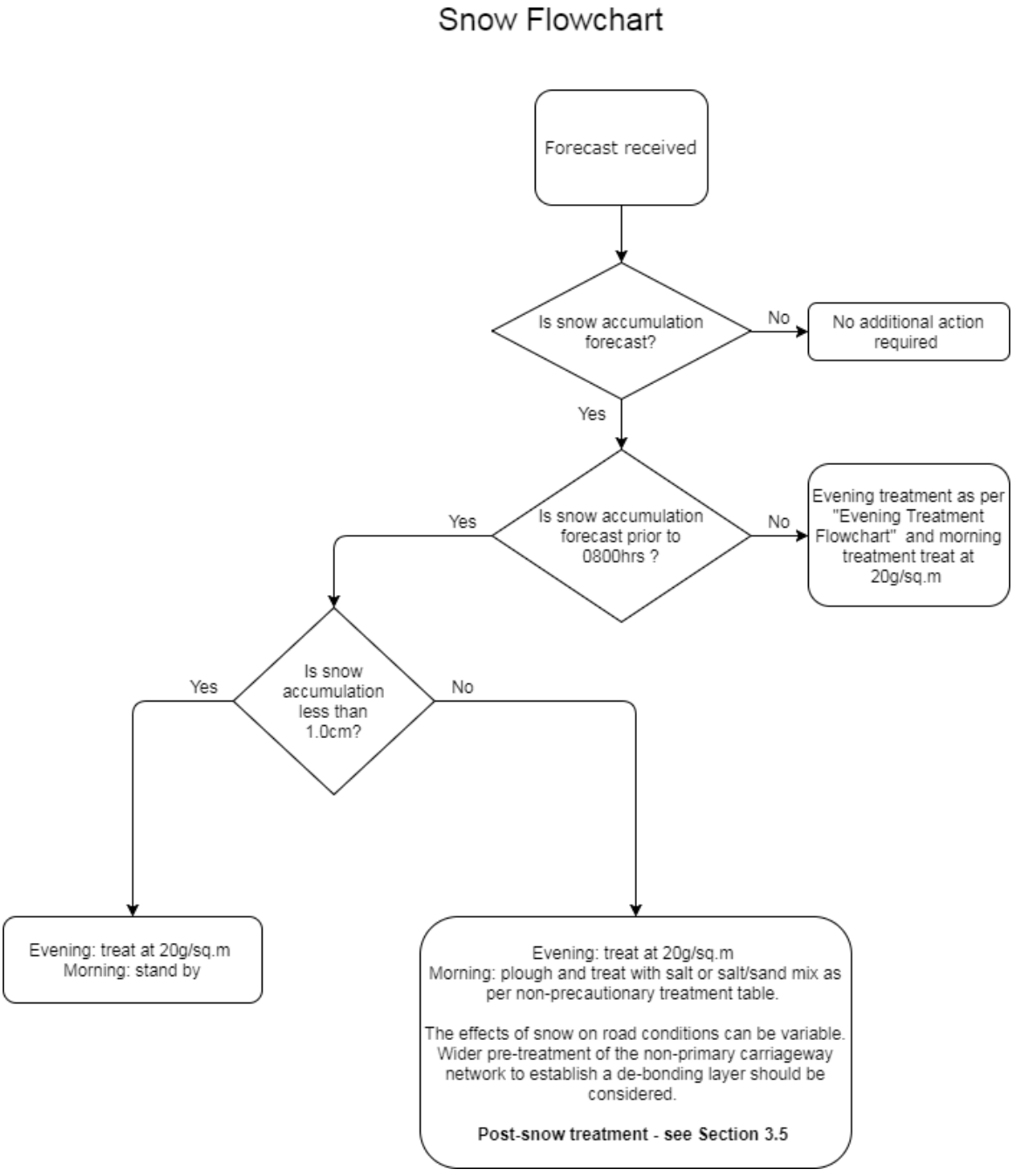
3.4 Snow Forecast

Precautionary treatment of the Primary Routes prior to snowfall will create a debonding layer and facilitate the break up and dispersal of snow by traffic and make subsequent ploughing more effective.

The forecast of snow on any route shall prompt a treatment decision which may increase the proposed spread rate than that indicated by the treatment flowcharts.

The route based forecasts show “Snow Accumulation (cm)”. It should be noted that this accumulation is for each hour i.e. it does not include a summation of previous hours’ accumulations.

Where snow is forecast the following flowchart should be used:



Snow Decision Flowchart

Forecast received at noon

1. **Is snow accumulation forecast?**
    - If yes – go to question 2
    - If no – No additional action required.

2. **Is snow accumulation forecast prior to 08:00 hrs?**
    - If yes – go to question 3
    - If no – Evening treatment as per “Evening Treatment Flowchart” and morning treatment treat at 20g per square metre.

3. **Is snow accumulation less than 1.0cm?**
    - If yes – Evening: treat at 20g per square metre. Morning: Standby
    - If no – Evening: Treat at 20g per square metre with dry salt. Morning: plough and treat with salt or salt/sand mix as per non-precautionary treatment table.

      The effects of snow on road conditions can be variable. Wider pre-treatment of the non-primary carriageway network to establish a de-bonding layer should be considered.

      Post-snow treatment see Section 3.5.

3.5 Treatment Table for Non-Precautionary Treatment Including Snow

It is impractical to spread sufficient salt to melt anything other than very thin layers of snow and ice. Ploughing is the only economical, efficient, effective and environmentally acceptable way to deal with all but very light snow.

The appropriate treatment on roads with snow or ice that have not received precautionary treatment will depend on temperatures and layer thicknesses. **The use of sand will be required** on these roads as the use of salt only can produce dangerously slippery conditions if a weak brine film is formed on top of the ice/snow layer.

Guidance spread rates are provided in the tables below.

Treatment during snowfall		
	20g	
Treatment of thin layers of ice < 1mm		
Air or RST above -5ºC	20g	
Air or RST below -5ºC	20g	Consider use of salt sand mix
Treatment of compacted snow and ice		
Layer thickness 1 to 5mm	20g to 40g of salt sand mix	
Layer thickness greater than 5mm	20g to 40g of **sand only.** After layer has started to break up 20g of salt sand mix.	

Notes

1 For ice/ snow layers between 1 and 5mm thick, salt without sand should only be used where earlier treatments have successfully established a debonding layer.

2 For ice/ snow layers greater than 5mm thick, treatments with significant amounts of salt should not be considered as they can leave the surface very uneven – brine collects in hollows and deepens them further.

3 Sand should be 1 – 6mm angular material.

4 Treatment for snow is not limited to normal morning/ evening treatment times. Repeat treatments are expected, particularly where snow has become compacted, until the break up and/ or removal of snow/ ice.

3.6 Footway Treatment

The standard practice for treating footways is to use neat salt, although discretion is given to Supervisors to use sand/ salt mixtures when weather conditions warrant it, and

especially when dealing with ice which has been formed as a result of the refreezing of partially thawed snow.

In clearing a passage for pedestrians, any cleared snow will be left piled at the edge of the footway. Special attention will be given to pedestrian crossings, road junctions where large numbers of pedestrians cross, bus stops, etc., and gaps should be left at these locations to allow pedestrians to cross without having to negotiate the heaped snow.

Special care will also be taken to ensure that street gullies are not blocked by piled snow, as this prevents water draining away at the onset of a thaw.

3.7 Thawing

During the thaw, the first responsibility of the Roads Supervisors will be to ensure, as far as practicable, that road channels and verges are cleared in the area of street gullies and cross grips to allow melted snow to drain away. Only after the channels and cross grips have been cleared should an attempt be made to clear the stockpiled snow.

3.8 Lifting of Snow from Roads etc

In extreme conditions after heavy snowfall it may be necessary to lift snow from streets. Snow cleared from the road will only be uplifted in exceptional circumstances, e.g. where existing piled snow is preventing further snow clearance from the road.

3.9 Communications

Any person engaged in winter maintenance operations on the carriageway shall ensure that, while on duty, they have access to a suitable and operational means of communication, normally a mobile telephone, and are contactable for operational purposes.

The Emergency Contact schedule contains a list of names, addresses and telephone numbers of:

- All senior staff, supervisors and operatives who will be engaged in Winter Maintenance operations;
- Contacts with adjoining Councils;
- Emergency Services, Public Bodies, and Public Utilities;
- Weather forecasting bureaux;
- Vehicle Maintenance Services duty contacts; and
- Amey

3.10 Public Communication

The Communications Plan found in Appendix 9 outlines the communication roles and responsibilities of the Service. It also details the triggers, types, and levels of communication provided both pre-season and in-season. The Quality and Resources team will be responsible for reviewing and updating the Communications Plan prior to each season.

The aim is to inform the public about information currently provided on the website and apps, any impending or adverse weather, and travel restrictions that may impact their daily commute or recreational plans. This enables the public to make informed decisions based on current events.

3.11 Winter Readiness

To aid with long term planning of resources, the Winter Duty Officer will perform a 7 day look ahead for Aberdeenshire at noon each day or when making treatment route decisions. The Winter Readiness Status (Appendix 9) provides details on the level of readiness status and trigger points, which will be determined by Met Office Weather Alerts, to establish the required level of service.

4 Reporting and Monitoring

4.1 Road Condition Reports

Reporting is an integral part of Winter Maintenance operations to:

- brief senior management in relation to road conditions and actions taken;
- advise the public of the up-to-date situation on the road network and highlight any actual or potential problems;
- keep the media informed, via the Council's Corporate Communications office, of current conditions.

The level of reporting will be in relation to the prevailing conditions; the general rule being the worse the weather or road conditions the more information will be required.

Reports, generally relating to the overnight period from 16:00 hrs to 08:00 hrs, on road conditions in the areas, will be passed to the Head of Roads & Infrastructure Services as follows.

Weekdays – Morning Reports

The Duty Officer will prepare and circulate in a standard format details of:

- Outline of weather forecasts issued
- Weather conditions
- Road treatment
- Road conditions
- Roads Closed
- Operational Personnel and plant deployed (severe conditions only)
- Other relevant information

The report shall be sent via the relevant PowerApp to the Head of Roads & Infrastructure Services to arrive not later than 08:00 hrs and be copied to the Director of Environment & Infrastructure Services' P.A., Roads Managers, Roads Quality & Resources Manager, Principal Roads Engineers and the Corporate Communications office. Depending on conditions, subsequent reports on a similar basis may be required throughout the working day. Should such reports be required, these shall be prepared by the Duty Officer and distributed as above.

Weekends and Public Holidays

In Normal Conditions

The Duty Officer will prepare and circulate a report via the relevant PowerApp by 08:00 hrs, detailing operations to the Director of Environment & Infrastructure Services' P.A., Head of Roads & Infrastructure Services, Roads Managers, Roads Quality & Resources Manager and Principal Roads Engineers.

In Severe or Rapidly Deteriorating Conditions

The Duty Officer will make a report on the prevailing situation by telephone to the Head of Roads & Infrastructure Services, or their delegated deputy, who will relay the information to others as they sees fit.

Where a prolonged period of severe winter weather is expected to cause significant disruption to the road network, the Head of Roads & Infrastructure Services, or their delegate, will decide whether to activate the RECONNECT Plan (Appendix 12).

The Duty Officer and Head of Roads & Infrastructure Services will keep in touch as necessary throughout the period of severe weather over the weekend period to 08:00 hrs on Monday.

The Duty Officer will prepare and circulate in a standard format details of:

- Outline of weather forecasts issued;
- Weather conditions;
- Road treatment;
- Road conditions;
- Roads Closed;
- Operational Personnel and plant deployed; and
- Other relevant information.

The report will be sent via the relevant PowerApp to the Head of Roads & Infrastructure Services to arrive not later than 08:00 hrs on Monday and copied to the Director of Environment & Infrastructure Services' P.A., the Corporate Communications office, Roads Managers, Roads Quality & Resources Manager and Principal Roads Engineers.

4.2 Material Usage

Roads Supervisors or their delegate will collate the winter salt and sand and record in the Salt App each week. This should be done on Mondays. From these figures the Technical Assistant (Quality & Resources) will provide a salt return to the Scottish Government. Roads Supervisors or their delegate should also complete the daily salt balances in the Salt App each day.

At times of salt shortage, or when directed by the Scottish Government, salt stock information may be required on a more frequent basis. Roads Supervisors will make every effort to supply accurate information by the required timescales.

4.3 Expenditure

The outturn costs for Winter Maintenance can vary significantly from the allocated budget year-on-year depending on prevailing weather conditions.

A report detailing costs and man-hours deployed to date and a projection of the likely final cost and man-hours worked will be prepared by the Roads Quality & Resources Manager (or delegated officer) on a fortnightly basis throughout the winter to assist in the prediction of overall expenditure required to provide the Winter Maintenance service.

4.4 Performance Indicator

The Roads Managers (or delegated officer) will arrange for the gathering and collation of the information necessary to measure the specified performance indicator:

- Percentage of Primary Gritter Routes morning treatments completed by 08:30 hrs.

This measure will demonstrate the level of achievement in keeping key access routes treated at a time of day when conditions are likely to present greatest public concern.

4.5 Health & Safety

Operatives carrying out Winter Maintenance duties shall be made aware of, and comply with, the relevant sections of the Roads Health and Safety Manual 2017, with particular reference to:

Part 2 - Risk Assessments:

- RA05 – Gritting and Snow Clearing
- RA12 – Mounting and Demounting of Plough Blades
- RA21 – Use of Exchange Body Systems

Part 3 – Safe Systems of Work:

- Section 3 – Winter Maintenance

4.6 Record Keeping

Drivers and Operatives shall provide the Winter Duty Supervisor with sufficient and timely information to enable the required records to be maintained in Vaisala Manager. Winter Duty Supervisors will update the Vaisala Manager system with the times when operations commenced and were completed. **The Winter Duty Supervisor shall record all variations from the planned action. The reason for each variation shall be recorded in Vaisala Manager for record purposes.**

Details of completed footway and secondary carriageway treatments shall be recorded in the comments section of Vaisala Manager. Records shall contain sufficient detail to identify the work undertaken, including, as applicable, the route or zone, settlement, treatment hierarchy and any other relevant location or operational information. The treatment method shall also be recorded, including the material applied, spread rate, whether ploughing was undertaken and details of any variation from the planned action.

There are several situations where variations from the planned treatments are appropriate. These include:

- A clear emergency exists which requires immediate action.
- The actual weather (e.g. as measured by Ice Outstations) is at variance from the forecast such that action taken would need to be significantly different from that advised. For example, stepping up of salting from 10 to 20 g/m² or equivalent in

mixtures or, if a forecast of snow turns out to be rain, then reducing or changing the treatment. In such cases the meteorological advisers should be contacted, advised of actual weather conditions and new forecast information requested.

- The actual weather experienced by the Winter Duty Supervisor is at variance with the forecast requiring a change to proposed treatment (e.g. unexpected rain).
- Treatment already commenced.
- Plant breakdowns may result in a route being started late and this should be recorded in Vaisala. If plant breakdowns result in a route finishing late, this should also be recorded.

5 Plant, Equipment and Depots

5.1 Availability & Maintenance of Vehicles, Plant etc

The maintenance and overhauling of all specialist winter maintenance vehicles and plant, footway snowploughs and snowploughs supplied to farmers prior to the commencement of winter maintenance operations is the responsibility of Roads & Infrastructure Services (Fleet) staff. They will ensure that all items of winter maintenance equipment are overhauled, calibrated and are on station no later than 1 October, with the exception of heavy ploughs which are to be on station by 1 November.

Each Roads Manager will ensure that all footway snowploughs are on station by the second week in October at the latest.

Each Roads Manager will check that all vehicles, plant and equipment are fully operational on return to station. Each Roads Manager shall, before formal standby commences, arrange for calibration of all gritting vehicles to be carried out and ensure that all vehicles have a current calibration chart. Regular checks of salt usage should be used throughout the season as a check of calibration accuracy. In addition to the pre-season checks, a further mid-season calibration of all gritting vehicles should be carried out.

A Duty Mechanic will be available at all times during the winter period to carry out routine maintenance and minor repairs allocated to him.

5.2 Operation of Vehicles

While it is acknowledged that the drivers of vehicles engaged in winter maintenance operations do not operate under normal circumstances, it is nevertheless the driver's duty to take every precaution to avoid accidents.

Once the vehicles are on station and winter maintenance operations have begun it will be the duty of the driver and/ or operator for each vehicle and item of plant to check their vehicle daily before starting duty. The inspection shall cover the fuel, oil and water levels; lights, beacons, brakes and tyres, together with all bolts and couplings securing ploughs, spinners and safety rails. All signage shall be clean and clearly visible.

Any fault(s) revealed by the check shall be immediately reported to the Duty Mechanic. The Duty Mechanic will inform the Supervisor whether or not the vehicle is in a fit state to continue with winter maintenance operations and whether it should be withdrawn from service for repair at the Depot, or transported to a Repair Depot. In the latter case, the Supervisor, in consultation with the Repair Depot Supervisor, shall decide whether or not, depending on the length of time that any repair is likely to take, an alternative vehicle should be made available as a replacement for the unserviceable vehicle.

The amber flashing lights fitted to each vehicle must be kept switched on during gritting and snow clearing operations. In poor visibility, the vehicle's horn should be sounded as necessary but its use should be kept to a minimum consistent with safe driving and the need to cause as little inconvenience as is possible to residents, particularly during early morning and late night working. Any vehicle engaged in winter maintenance operations must be driven at a speed appropriate to weather conditions and shall not exceed the

applicable speed limit or 30mph, whichever is the lower. In urban areas where traffic is heavy, the speed should be further reduced to minimise salt “bounce”. A "KEEP WELL BACK" sign is to be fitted and kept clean on the rear of gritting and large snow plough vehicles.

Snow ploughs and scrapers must always be raised above the road surface when passing over sections of road which are clear of snow and ice and drivers should constantly be on the lookout for manhole covers, street ironwork or other obstructions which may be standing proud of the road surface.

Where normal haulage vehicles are being operated with gritters, it will be the responsibility of the driver to ensure that the safety guard rails are securely fitted before allowing operatives on to the platform of the lorry.

In an effort to reduce the possibility of salt bridging in the hopper, it will be the responsibility of the driver to ensure that after every run, the salt or salt/ sand mix is emptied, regardless of the amount used. Drivers should therefore note the following:

1 During the day, gritters will not stand loaded or part loaded in the depot after having run a route.

2 Gritters returning from an evening presalt and standing outside overnight must be parked up empty.

3 Gritters returning from an evening presalt which can be parked up under cover may be loaded up in preparation for the morning patrol, provided the contents remaining from the evening run were emptied out beforehand.

While engaged in winter maintenance operations on the carriageway, drivers shall ensure that their means of communication is switched on, fully charged and available for operational communication at all times, while complying with road traffic legislation and the Council’s Driving at Work Policy.

Drivers shall only use the mobile phone when it is safe and lawful to do so and will maintain regular contact with their Supervisor where required.

5.3 Assistance from Third Parties

Other Council Services may undertake the gritting/ salting, and/or snow clearing of footways and/or roads in designated areas, by arrangement prior to the onset of winter. Mutual aid to neighbouring Councils may be provided on an ad hoc basis only when authorised by the Head of Roads & Infrastructure Services.

The use of farmers to assist in snow clearing is an example of best practice. The criteria for assessing the need and route for farmer ploughs are contained in Appendix 6. Each year, farmers should be provided with the relevant terms and conditions, and route details. The rate payable to farmers will be reviewed annually in August. Letters of agreement should be sent in early September to allow the list of farmers to be completed for inclusion in Appendix 6 by 1 October.

6 Labour

6.1 Labour Arrangements

Details of labour available to undertake winter maintenance operations in each Roads Supervisor's area are shown in the relevant Appendices.

7 Materials

7.1 Specification

The key de-icing material used in Aberdeenshire shall be 10mm rock salt to BS3247.

7.2 Stock of Materials

Salt - It will be the responsibility of the Quality and Resources Principal Engineer or their delegate to liaise with the approved supplier to maintain the stock levels at all storage points (Appendix 8). It will be the responsibility of the Roads Supervisor, or their delegate, to make a daily and weekly return of salt stocks through the Salt App so that the Quality and Resources Principal, or their delegate can provide salt delivery distribution lists to Depot Supervisors and the supplier. It will be the responsibility of the supplier to manage salt deliveries to agreed storage locations. Aberdeenshire may establish strategic stocks of salt at various locations. Access to the strategic stock must be authorised by the Roads Quality & Resources Manager or their delegated officer.

Salt/Sand - Stocks of salt/ sand mix will be built up to normal levels no later than mid-October and will be replenished as necessary thereafter.

For operational reasons, daily estimates of stock levels are necessary to ensure timeous restocking.

Salt/ sand mixtures will be mixed in the dumps in accordance with the instructions of the Roads Supervisor for that area and will generally consist of equal parts sand and salt by weight. This mixture may be varied at the discretion of the Roads Supervisors depending upon road and weather conditions.

In general all areas will use neat salt for normal gritting activities. Mixtures may be used on lower trafficked high-level routes or during periods of sustained low temperatures. The use of neat salt or of the salt/ sand mixture may be varied at the discretion of the Roads Supervisor depending upon road and weather conditions.

It shall be the responsibility of the Roads Supervisors to ensure that all dumps within their operational areas are allocated a tractor/ loading shovel when required for winter maintenance operations.

During the spreading of salt, especially in built-up areas, care must be taken to keep salt clear of trees, hedges, shrubs, lawns etc.

Salt Shortages – In the event of salt shortages at depots, efforts should be made to acquire salt from other locations including strategic salt held by the Council. If alternative sources of salt cannot be found, the level of service will reduce as follows:

- Trigger: Stock below 12,500 tonnes
  - Treat Priority 2 footways with salt on one side of the carriageway only.
  - Treat Priority 3 footways with sand only both sides of the carriageway.
  - Priority 4 footways continue with snow clearing only (no sand or salt).
- Trigger: Stock below 10,000 tonnes
  - Treat Priority 2 and 3 footways with sand only (both sides of carriageway).
  - Priority 4 footways continue with snow clearing only (no sand or salt).
- Trigger: Stock below 7,500 tonnes
  - Continue treating Priority 2 and 3 footways with sand only (both sides of carriageway).
  - Priority 4 footways continue with snow clearing only (no sand or salt).
  - Cease supply of salt to other services and partner agencies.
- Trigger: Stock below 5,000 tonnes
  - Stop salt use treatment of Priority 3 carriageways (sand only).
  - Reduce salt spread rate to 50% of the recommended rate on Priority 1 and 2 carriageways.

The Quality & Resources Manager or their delegated, shall inform the Head of Roads & Infrastructures Service, Roads Managers and Principal Roads Engineers when trigger stock levels have been met.

8 Supplementary Information

8.1 Road Closures

The closure of a road under severe winter conditions can only be authorised by Police Scotland but the operation of the signs could equally well be carried out by Police Scotland or Roads & Infrastructure Service. It is absolutely essential that there is consultation and co-operation between the two bodies in the use of the signs *e.g.* for a closure instigated by Police Scotland during the night, the Winter Duty Supervisors affected must be informed as soon as possible, and where the closure initiative came from the Council, Police Scotland must be contacted immediately.

Whilst snow-clearing work is taking place within a blocked section, it is imperative that vehicular traffic is kept out, and this shall be done by placing approved-type barriers across the road and verge.

Where private/ commercial vehicles become stuck and are abandoned in a snowstorm, preventing snow clearing operations from proceeding, the Council is only allowed to move these vehicles clear of the carriageway once Police Scotlands authority has been received. Where a driver of a commercial vehicle is in attendance, they are asked to attach a towing line to get their vehicle clear and must accept responsibility for any damage resulting.

8.2 Snow Gates and Snow Gate Signing

The Road (Scotland) Act 1984 Section 33 states:

Gates (hereafter in this section referred to as 'snow gates') may be provided and maintained by the roads authority for the purpose of temporarily closing a road to vehicular traffic on any occasion when snow is rendering or has rendered that road unsafe for such traffic; and where in the opinion of a Constable such an occasion has arisen as respects a road he (or, where the Constable is a Chief Constable, a person acting on his behalf) may, until the road is once again safe for vehicular traffic, close and secure any snow gate on the road against all such traffic except that engaged in the provision or restoration of essential services.

This quite clearly places the responsibility for decisions to close and open the snow gates upon the Chief Constable of Police Scotland. It also quite clearly allows the Chief Constable, while retaining responsibility, to devolve the day to day operation of this function.

Police Scotland, in agreement with Aberdeenshire Council, Perth and Kinross Council, Moray Council and the Glenshee and Lecht Ski Centres have agreed Memorandum's of Understanding (MoU) on the provision and operation of snow gates on the following roads (See Appendix 9 Miscellaneous):

- A93 Braemar – Blargowrie (Glenshee) Road (Incl U3m Cluniebank Road
- A939 Tomintoul – Cockbridge (Lecht) Road
- B974 Banchory – Fettercairn (Cairn O'Mount) Road
- B976 Crathie – Gairnshiel (Strone) Road

These snow gates are located on some of the area's highest roads most susceptible to severe winter weather and where sudden violent snowstorms of arctic severity are frequently experienced. Opening and closure of the snow gates and associated flap-down and electronic signing will take place in accordance with the MOU's.

Each snow gate on the above roads are secured by a padlock system and only authorised keyholders are permitted access when gates are closed. Aberdeenshire Council are the lead authority for the provision, control and issue of padlocks and keys and all authorised keyholders are required to sign a disclaimer noting their responsibilities.

8.3 Variable Message Signs

Variable Message Signs are located on the A93 at Dinnet (westbound) and on the A944 at Mossat (westbound). These are controlled by Police Scotland by officers from Banchory/ Huntly or South Roads Network Management Team.

8.4 Snow Clearing at Lecht & Glenshee

Lecht

The winter sports development at the Lecht creates particular access problems. In addition to Council plant to cover this area the ski company operates a snowplough and snowblower as required.

During snow conditions the Lecht Ski Centre contacts the Marr North Duty Roads Supervisor as required regarding weather/ road conditions. Information is passed to Strathdon gritting crew to assist co-ordination of snow clearing efforts.

Snow gates exist on the A939 at Allargue (Aberdeenshire) and Badnafrave (Moray) as well as at the ski centre car parks.

As noted above there is a Memorandum of Understanding between Police Scotland, Moray Council, Aberdeenshire Council and the Lecht Ski Centre regarding the A939 Tomintoul to Cockbridge Road (Appendix 9).

The summit gates are in place for emergency use to aid evacuation or if either side of the hill is blocked while the other remains open.

Snow gates are to be kept clear of snow at all times and a JCB will be available for this purpose.

Glenshee

The winter sports development at Glenshee creates particular access problems. The Chairlift Company hire a tractor/ snowplough for the winter season to clear the section of road between the Council boundary at Cairnwell and Sean Spittal. The cost of the hire is split between the Chairlift Company and Aberdeenshire Council.

During snow conditions Glenshee Ski Centre telephones the Marr South Duty Roads Supervisor as required regarding weather/road conditions. Information is passed to Ballater gritting crew to assist co-ordination of snow clearing efforts.

Snow gates exist on the A93 at Braemar (on both the A93 and on the U3m Cluniebank Road, Aberdeenshire) and at Spittal of Glenshee (Perth and Kinross) as well as at the ski centre car parks. As noted above, there is a Memorandum of Understanding between Police Scotland, Perth and Kinross Council, Aberdeenshire Council and the Glenshee Ski Centre regarding the A93 Braemar to Blairgowrie Road (Appendix 9).

The summit gates are in place for emergency use to aid evacuation or if either side of the hill is blocked while the other remains open.

Snow gates are to be kept clear of snow at all times and a JCB will be available for this purpose.

A turning space for snowploughs has been established at the south end of the car parks and must be reserved for this purpose. The pedestrian lane on the north side of the road should be kept free of snow during all operational periods.

The first line of parked vehicles is to be situated at least 1.5 metres from the edge of the surfaced carriageway, facing the road to facilitate rapid evacuation and a 3 metre lane of movement left behind this row. Regular gaps are to be left to facilitate exit and entry and great care must be taken to ensure that parking does not occur on these gaps during the course of the day. Where possible, cars from Aberdeenshire would be parked initially on the north east car parks and those from Perth and Kinross on the more southerly areas. The car park on the west side of the road north of the ski building would only be used during busy periods and again by north traffic for ease of exit.

8.5 Railway Level Crossings

Salt spreading should cease at the STOP line in advance of a level crossing and recommence beyond the STOP line on the opposite side of the crossing. Treatment over the level crossing is only provided by salt carryover from traffic.

Ploughing over level crossings should be carried out at a maximum speed of 5mph.

Snow blowers must not be used on level crossings.

8.6 Ice Warning Signs etc

The Roads Managers, in consultation with their Supervisors, shall consider erecting “ICE” hazard signs in areas where drifting snow and/ or ice habitually causing a hazard.

Any temporary “ICE” hazard signs will be removed by the Supervisor when the possibility of adverse weather conditions has passed but not later than the end of April.

The Roads Managers will ensure that a number of portable “ICE” hazard warning signs are distributed to Supervisors and to each depot. These will be erected in an emergency at any hazardous location and if, for any unforeseen reason, a gritting vehicle is not readily available to treat the hazardous road surface.

8.7 Grit Bins

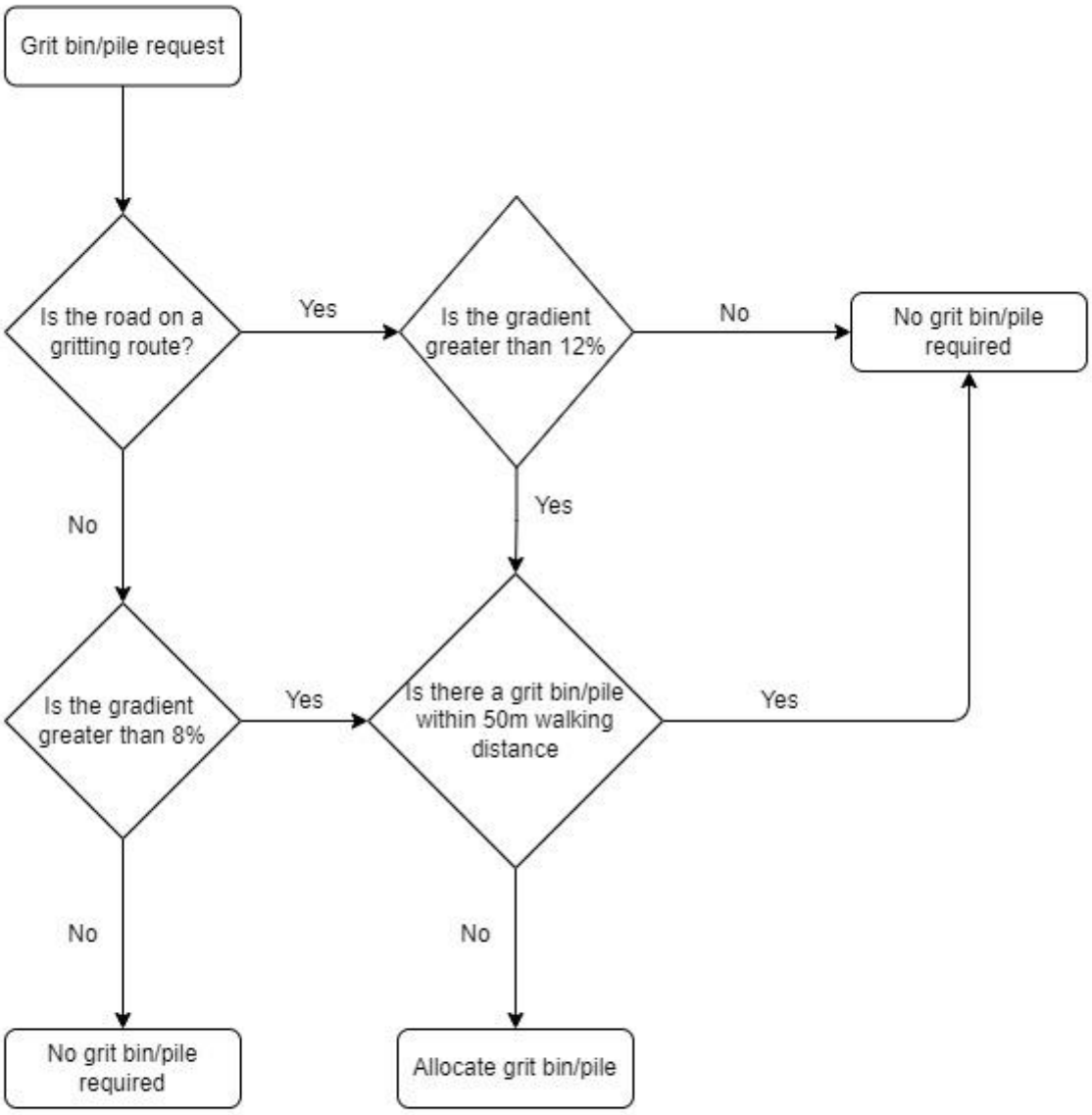
Grit bins will be provided, maintained and kept filled by Roads & Infrastructure Services at locations identified as being potentially hazardous. The grit bins will be stocked with a sand/ salt mixture at a ratio of 3 parts sand to 1 part salt and will be readily available at these locations for use by the local street orderly, roadman, other Council employees, or local residents should they choose to use this facility.

The provision of grit bins is to offer the public a self-help option to overcome localised difficulties in relation to the effect of winter conditions on public roads and footpaths. Careful consideration needs to be given to the provision and location of grit bins. To facilitate this, a criteria has been developed. The criteria considers areas where the greatest risk is possible such as ice/ snow on steep gradients. Additional consideration must also be given to the following:

- If they are currently on a primary route and F1/ F2 then they should not be considered as the risk should be mitigated from planned treatment.
- Ideally, grit bins will only be located where they can be filled from a lorry. The grit bins shall be replenished at the start of the winter period.
- Grit bins will be left in place during the summer months.
- The grit in the bin is purely for use on the public road or footway.
- The locations of grit bins will be recorded and made available on the Council's website.
- Grit bin applications can be made through the Council's website.
- The Council will not provide grit bins in private areas or car parks for use by any other Council or any other public or private property such as schools, parks, hospitals, care homes, etc. unless a Service Level Agreement is in place.

In addition, larger volume grit boxes are provided at Household Waste and Recycling Centres for communal use (Appendix 7).

Rural Grit Bin Criteria



Urban is where the speed limit is 40mph or less and Rural >40mph. For speed limits we define a village as a length of road of at least 600m where there are at least 20 houses and a density of at least 3 houses in every 100 section.

Rural Grit Bin Criteria

Rural is where the speed limit is more than 40mph. For speed limits we define a village as a length of road of at least 600m where there are at least 20 houses and a density of at least 3 houses in every 100 section.

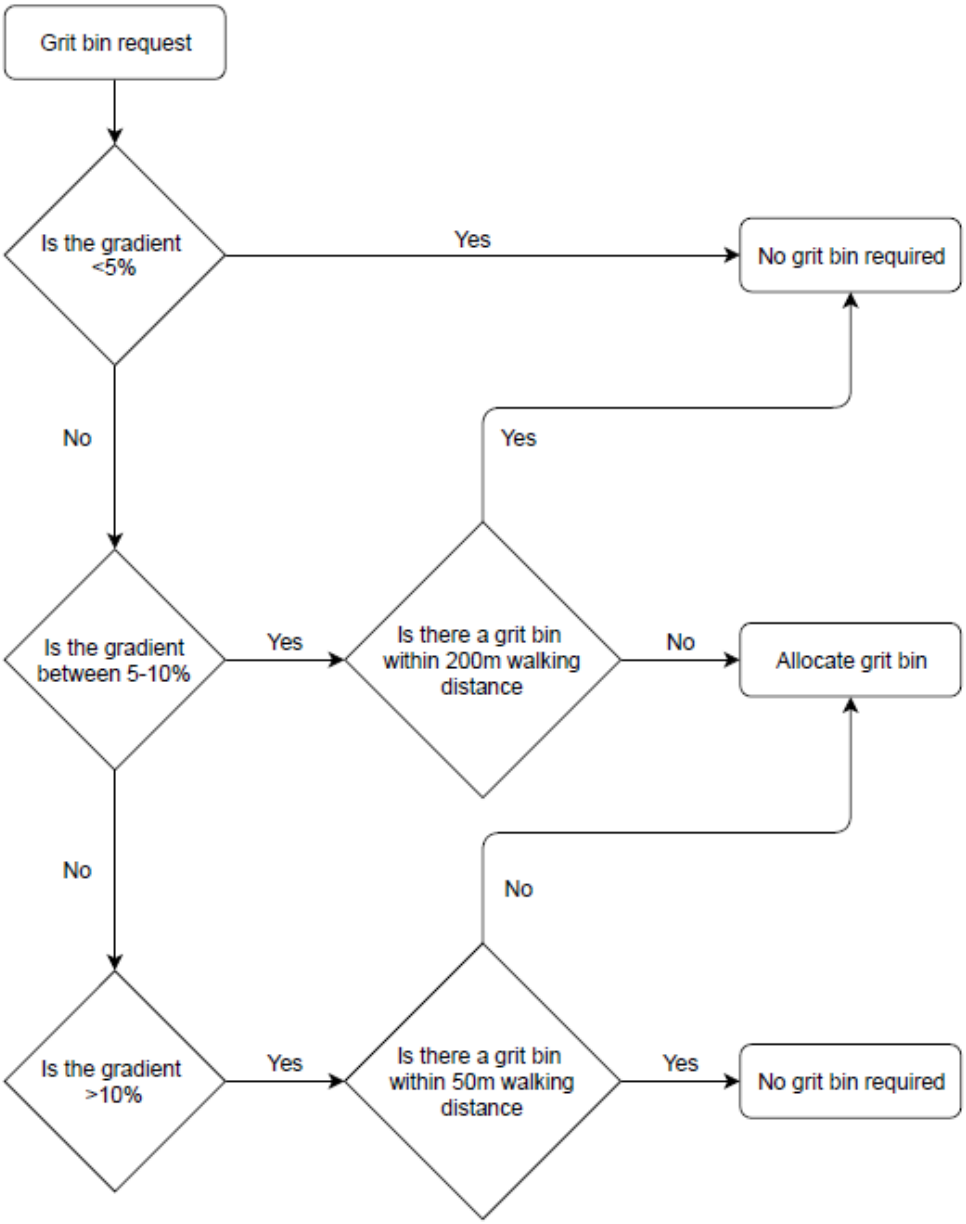
1. **Is the road on a gritting route?**
    - If yes - move onto criteria question number 2
    - If no - move onto criteria question number 3

2. **Is the gradient greater than 12%?**
    - If yes - move onto criteria question number 4
    - If no- no grit bin or pile is required

3. **Is the gradient greater than 8%?**
    - If yes - move onto criteria question number 4
    - If no - no grit bin or pile is required

4. **Is there a grit bin or pile within 50m walking distance?**
    - If yes - no grit bin or pile is required

Urban Grit Bin Criteria



Urban is where the speed limit is 40mph or less and Rural >40mph. For speed limits we define a village as a length of road of at least 600m where there are at least 20 houses and a density of at least 3 houses in every 100 section.

Urban Grit Bin Criteria

Urban is where the speed limit is 40mph or less. For speed limits we define a village as a length of road of at least 600m where there are at least 20 houses and a density of at least 3 houses in every 100 section.

1. **Is the gradient less than 5%?**
    - If yes - no grit bin required
    - If no - move onto criteria question number 2

2. **Is the gradient between 5 and 10%?**
    - If yes - move onto criteria question number 3
    - If gradient is more than 10% move onto question 4

3. **Is there a grit bin within 200m walking distance?**
    - If yes - no grit bin required
    - If no - allocate grit bin

4. **Is there a grit bin within 50m walking distance?**
    - If yes - no grit bin required
    - If no - allocate grit bin

8.8 Winter Maintenance Operations for Other Parties

Provision of Salt and Salt/Sand mixes

Salt or salt/ sand mixes will be made available to public bodies either to be picked up at the nearest depot or to be delivered.

Public bodies includes all other services within Aberdeenshire Council and Health Boards, Centres and Authorities as long as the salt or salt/ sand mix is for use at facilities within Aberdeenshire.

No salt or salt/ sand mix shall be provided or delivered by any Roads depot without an official Purchase Order.

Gritting and Snow Clearing at Schools

Gritting and snow clearing shall take place, at the access roads, bus turning areas and slip roads at the following schools:

- Alford Academy
- Aboyne Academy
- Banchory Academy
- Banff Academy
- Ellon Academy
- Fraserburgh Academy
- The Gordon Schools (Huntly)
- Inverurie Academy
- Kemnay Academy
- Mackie Academy
- Mearns Academy
- Mintlaw Academy
- Peterhead Academy
- Turriff Academy
- Westhill Academy

Although the main focus in rural areas will be on the snow clearance of public roads, assistance will be given with snow clearing at the access roads, bus turning areas and car park entrances at other schools whenever snow ploughs or farmers' ploughs are in the vicinity and it is practical to do so. Academies not listed are PPP/ PFI schools and will carry out their own winter maintenance.

Snow Clearing at Other Council Properties

Roads & Infrastructure Services will provide advice and guidance to assist other Council Services in procuring appropriate winter maintenance arrangements for their properties and, where practicable, in aligning those arrangements with the Council's wider winter maintenance approach. Responsibility for procuring, managing and delivering such arrangements will remain with the relevant Service. As Roads & Infrastructures resources are generally fully committed to winter maintenance of the public road network,

any winter maintenance carried out at Council properties by a Service is on a rechargeable basis. Where Roads and Infrastructure Services carry out such work then they shall maintain adequate records and ensure that the full costs are recharged to the relevant Service or property.

Gritting and Snow Clearing at Hospitals and Health Centres

No gritting or snow clearing shall be undertaken on the premises of any hospital or health centre in Aberdeenshire.

Gritting and Snow Clearing at Other Locations

No gritting or snow clearing will take place at any other location within Aberdeenshire.

8.9 Resilience Network

In extreme unforeseen circumstances, such as fuel shortages or epidemic illness, the level of winter service provided is likely to be severely reduced. The resilience network is designed to allow major settlements to access the trunk road network or routes towards Aberdeen. Treatment of the resilience network only will be instructed by the Head of Roads & Infrastructure Services (Appendix 9).