



Winter Service Policy 2021 – 2026

Interim Executive Director.

Environmental, Property and IT Services.

September 2021.

Contents

Introduction	4
Winter Service Policy Statement 2021 - 2026	4
A - Statement of Policies	5
B - Specification	6
1. General	6
2. Safety	6
3. Route Planning for Carriageways and Footways	7
4. Route Hierarchy	7
5. Car Parks	9
6. Standards	9
7. Salt Bins	10
8. Islands Services	11
9. Personnel	11
10. Training	12
11. Plant, Vehicles and Equipment	13
12. Operational communication systems	13
13. Weather Forecasts	13
14. Decision Making	14
15. Material standards and storage	14
16. Treatment	14
17. Media Communications	15
18. Performance Monitoring	15
C - Appendices	16

Document Control & Council Approval

Version Number/Date.	v1/September 2021. v1.1 – Minor error correction after D&I committee/September 2021
Approved by Council.	General Meeting of the Council. 05 October 2021.
Next Update Due.	September 2026.

Introduction

Winter Service Policy Statement 2021 - 2026

1. Orkney Islands Council aims to provide a winter service which allows the safe movement of vehicles and pedestrians on roads, and keeps to a minimum, delays caused by adverse winter weather.
2. The Council as Roads Authority will set the standards and level of service, make adequate budgetary provision to achieve the standards and approve a carriageway and footway hierarchy.
3. The operational management of the service will be provided by the Interim Executive Director of Environmental, Property and IT Services. The service will be delivered using in-house resources and other contractors as appropriate.
4. The service will be provided in accordance with the aims and objectives of the Council Plan 2018-2023, The Roads Management and Maintenance Plan 2018 – 2023, the Development and Infrastructure Service Plans and this Winter Service Policy Statement.
5. The Interim Executive Director of Environmental, Property and IT Services will prepare a Winter Service Plan defining a Carriageway and Footway hierarchy for winter treatment, which will be reviewed annually by the Council.
6. The standard of performance achieved, and all the fixed and variable costs incurred will be monitored annually and reported to the Interim Executive Director of Environmental, Property and IT Services.
7. The Interim Executive Director of Environmental, Property and IT Services will report to the Council annually on the standard of service achieved, the costs involved and where changes or improvements to the level of services should be considered.
8. The Interim Executive Director of Environmental, Property and IT Services may in certain circumstances due to severe weather conditions or other conditions amend or suspend part of the Winter Service Plan to achieve the best service that the prevailing conditions will allow.
9. The Interim Executive Director of Environmental, Property and IT Services may carry out trials whenever necessary on proposals to improve the service prior to the review.

A - Statement of Policies

1. The Service will be provided in accordance with this document and the current Winter Service Plan.
2. The Roads Support Manager shall amend the Winter Service Plan on an annual basis and shall submit a final copy before 1st October each year to The Roads and Environmental Services Operations Manager for implementation.
3. This document reflects the recommendations in Well-Managed Highway Infrastructure: A Code of Practice 2016 to adopt a risk-based approach to winter service operations utilising recommendations within the National Winter Service Research Group (NWSRG) Practical Guide for Winter Service.
4. The Roads and Environmental Services Operations Manager is authorised to make such operational decisions as are necessary to perform the service as specified and as are allowed for in Appendix 1 and 2 of this document. If circumstances arise which require further instruction such matters should be referred to the Roads and Environmental Services Manager or such other person appointed by the Interim Executive Director of Environmental, Property and IT Services for this purpose.

B - Specification

1. General

This specification relates to the delivery of the winter service. Roads and Environmental Services will be required to follow the procedures and policies referred to as set out in this document.

The functions conferred by this document shall be exercised by the Interim Executive Director of Environmental, Property and IT Services, or duly appointed representative.

The Roads and Environmental Services Operations Manager shall provide and maintain sufficient personnel, vehicles, plant, machinery, and equipment as are necessary for the proper and safe delivery of the service outlined in this document and the Winter Service Plan.

If insufficient resources are available from within the Roads and Environmental Services Section to ensure the delivery of the service, the Roads and Environmental Services Operations Manager shall notify this to the Interim Head of Roads, Fleet and Waste Services who will identify resources available from within other sections of the Service, other Services of the Council or from external contractors.

The Service as specified will be delivered during the winter period 1st November to 31st March the following year. The Roads and Environmental Services Operations Manager may decide to extend this cover out with this period as necessary.

All charges incurred through the delivery of this Winter Service Policy will be covered by the relevant revenue budget code.

All materials laid down in accordance with the Specification remain the property of Roads Services.

2. Safety

Drivers should be instructed to take all possible precautions to protect their own safety and that of other road users.

High visibility clothing to BS EN 471 Class 3 must be worn by all personnel carrying out treatment to carriageway or footway.

All vehicles being actively used in winter service operations shall have warning beacons on at all times.

Drivers must abide by regulation 110 of the Road Vehicles (Construction and Use) Regulations, which prohibits a person from driving a motor vehicle from using a hand-held mobile telephone or a hand-held device.

3. Route Planning for Carriageways and Footways

Route plans showing extent of cover for treatment are provided annually in the Winter Service Plan.

Carriageway routine treatment – Treatment to commence not earlier than 06:00 and no new routes to be started after 18:00.

Footway routine treatment – Prioritised treatment will be provided Monday to Saturday 06:00 to 16:00. A reduced service, subject to available resources, will be provided on all days observed by the workforce as local holidays.

Emergencies – 24-hour cover will be provided for emergencies notified via the Police only.

4. Route Hierarchy

It is recognised by the NWSRG that no Council has sufficient resources to treat all its road network. It is therefore necessary to establish, based on the risk-based approach, a Carriageway and Footway hierarchy which provides a resilient network to the best of the Councils ability given current resource levels.

The following indicators are used to establish the route priority of each section of carriageway, footway and cycleway across Orkney and will be reviewed annually. Consultation with the community will also take place annually and feed into this decision-making process.

Carriageway Hierarchy

This hierarchy excludes Islands where resources are not currently present. All roads on those Islands will be treated when resources allow. Increased Salt bin allocation will be considered on these Islands.

Salting and Snow Clearance Carriageways

Priority 1

- Primary Routes.
- Important Principal Roads.
- Roads Leading to important industrial establishments.
- Roads leading to the Hospital.
- Roads leading to Police and Fire Stations.
- Roads leading to Schools.
- Roads leading to Transport terminals.
- Selected Bus Routes.
- Important journey-to-work routes.

- Known trouble spots.

Priority 2

- Other known trouble spots (not on Priority 1).
- Remaining principal roads.
- Town Centres.
- School Bus Routes (Priority 2S) treated on school days.
- Roads leading to Health Centres.

Priority 3 (Snow Clearance only. Not normally treated unless snow is present for more than 48 hours).

- Minor side Roads.
- Residential Roads
- No Salting or Gritting to be undertaken.

Footway and Cycleway Hierarchy

Footway treatment will apply to Kirkwall and Stromness only.

Salting and Snow Clearance Footway, Footpath and Cycleway

Priority 1

- Primary Routes
- Footways leading to the Town Centre
- Footways leading to the Hospital and other Health Centres.
- Footways leading to Police and Fire Stations
- Footways leading to Schools
- Footways leading to Transport terminals.
- Important journey-to-work routes.

Priority 2

- Busy footways leading to Priority 1's from well populated areas.
- Other routes leading to Schools

Priority 3

- Other busy footways not included in Priority 1 or 2.

5. Car Parks

Public Car Parks including Education and Care establishments will be treated as per the Winter Service Plan.

When notified, car parks adjacent to cemeteries will be treated prior to any funeral. The adjoining public carriageway will also be treated if not already done so on that day.

6. Standards

The Roads and Environmental Services Operations Manager must ensure that sufficient resources are or can be made available in the light of the decisions made in accordance with Appendix 1 and 2 considering response times, treatment times, vehicle characteristics, treatment length and rate of spread.

The target response time is one hour. This is the mobilisation period for commencing winter service operations following receipt of a weather warning.

Salting and Gritting - Carriageways

Priority 1 Routes – on receipt of frost, ice, or snow warning but subject to judgement and local experience. Once treatment has commenced the target completion time for Carriageway Priority 1's is 2 hours.

Priority 2 Routes – only when adverse conditions become apparent and when all Priority 1 routes have been completed. Priority 2's will not generally be pre-treated in the afternoon unless conditions become severe.

Priority 3 Routes – No salting or gritting to be undertaken.

Snow Clearance – Carriageways

Generally, should be started as soon as practicable and the need for it becomes apparent beginning with Priority 1 routes and then Priority 2 as equipment is available.

Under adverse weather conditions and when snow is drifting resources must be withdrawn from lower priority routes to preserve the integrity of the higher priority.

Priority 1 Routes – Should not remain impassable to heavy vehicles for more than 6 hours in rural areas or 4 hours in urban areas except under exceptional weather condition and when snow is drifting.

Priority 2 Routes – Should not remain impassable to heavy vehicles for more than 6 hours in urban areas or 24 hours in rural areas except under exceptional weather conditions and when snow is drifting.

Priority 3 Routes – To be made passable to heavy vehicles within 48 hours wherever possible after dealing with the higher priority routes and only when conditions are severe and likely to persist for several days. The priority of works should be areas with steep hills or where there is a higher number of vehicle movements.

Salting and Gritting – Footways, Footpaths and Cycleways

Priority 1 Routes – on receipt of frost, ice, or snow warning but subject to judgement and local experience.

Priority 2 Routes – only when adverse conditions become apparent and when Priority 1 routes have been completed. Priority 2's will not generally be pre-treated in the afternoon unless conditions become severe.

Priority 3 Routes – only when adverse conditions persist for more than 3 days and when Priority 1 and 2 routes have been completed. Priority 3's will not be pre-treated in the afternoon.

Snow Clearing – Footways, Footpaths and Cycleways

Generally, should be started as soon as practicable and the need for it becomes apparent beginning with Priority 1 routes and then Priority 2 as equipment is available.

Gaps will be formed in piled snow at roadsides at bus-stops and at crossing points.

7. Salt Bins

Salt bins will be deposited and maintained in locations such as known trouble spots, steep hills, dangerous bends, and densely populated areas not on priority routes, as set out in the Winter Service Plan. Additional bins may be instructed throughout the winter as deemed necessary.

The Council will provide salt bins, for self-help by members of the public only where the following criteria are met: -

1. In general, where the location is not on a Priority 1 or 2 route.
2. The bin shall not obstruct pedestrians.
3. The location shall not obstruct junction sight lines.
4. In general, where the location is not within 200 metres of another salt bin location.
5. The location is within the boundary of the public road
6. The Council will not provide bins in private roads or car parks or any other public or private property unless a service level agreement is in place.

Bins will only be located where they can be filled from a lorry and shall be replenished on a regular basis during the winter period, as resources permit.

The location of each bin will be recorded in an electronic database, with a unique identity code for each item.

Formal requests should be submitted to the Council's Roads Services for consideration. Where the criteria for a bin are met the provision will be dependent on available resources.

8. Islands Services

The level of service for all main Ro-Ro connected islands will be the same as the Orkney Mainland where resources allow. This excludes islands where resources are not currently present.

Additional salt bins may be provided in consultation with the local Community Council during the annual Winter Service Plan review.

The local Community Council should liaise with the Roads and Environmental Services Operations Manager as quickly as possible where procedures are not being followed.

9. Personnel

The Roads and Environmental Services Operations Manager must ensure that, as minimum, the following personnel are always on standby during the winter period:

- Duty Technician
- Duty Officer
- Duty Supervisor
- One crew located on the Mainland and Linking South Isles
- One Operative on each of the following islands: Hoy, Flotta, Rousay, Shapinsay, Stronsay, Eday, Westray and Sanday.

The Roads and Environmental Services Operations Manager will, in addition to the personnel noted above, ensure that an additional three crews are on standby on the mainland and linked isles for all local and public holidays, in particular 25th/26th December and 1st/2nd January.

During these periods and in all circumstances other than an emergency the delivery of the service will be limited to between 06:00hrs and 18:00hrs.

The Roads and Environmental Services Operations Manager will provide staff rotas, manpower plan, sources of manpower and methods of contact.

The Roads and Environmental Services Operations Manager will maintain an operations room for the use of operational staff. A copy of this Policy and the Winter Service Plan should be kept in the operations room.

In general vehicles will be single manned however if for reasons of safety or other operational reasons during periods of severe conditions it is necessary, double manning will be permitted.

The Roads Support Manager will amend the Winter Service Plan, incorporating any agreed changes following consultation, and present to the Roads and Environmental Services Manager by 1st October annually.

10. Training

The Roads and Environmental Services Operations Manager will ensure that all personnel engaged on winter service activities will be properly trained and are familiar with safe working practices.

The Roads and Environmental Services Operations Manager shall be responsible for training all winter service personnel and shall ensure that all employees are made aware, to whatever degree necessary for them to perform their functions, of the conditions, specification and operational statements relating to this document and the Winter Service Plan.

It is recommended that training be provided on the following issues. This is not an exhaustive list and will largely be based on local circumstances:

- The Content and operation of both this Policy, and the Winter Service Plan.
- Route familiarisation.
- Driving in difficult and hazardous road conditions including duty of care to other road users.
- Circumstances where special safety considerations apply.
- Snow ploughing.
- Avoidance of spraying pedestrians, cyclists, where practicable with salt or slush when salting or ploughing.
- Avoidance of risks to pedestrians and cyclists when using vehicles in segregated or partially segregated areas and in treating footways.
- Ploughing and manoeuvring in restricted circumstances.
- Dealing with emergencies; and
- Dealing with post ice and snow emergencies especially flooding.

In addition to such specific training, it will be necessary to ensure that all personnel are provided with information during operational periods on current network characteristics and constraints, including:

- Traffic management in place; and

- Network unavailability.

A system of formal training records shall be maintained by the Roads and Environmental Services Operations Manager.

11. Plant, Vehicles and Equipment

Roads and Environmental Services will maintain a fleet inventory highlighting Location, Capacity and characteristics of plant, vehicles, and equipment to be used in the delivery of the service.

12. Operational communication systems

The Roads and Environmental Services Operations Manager will provide and maintain operational communications systems as detailed in Table 1 below:

Table 1

Communications System	Method of Contact	Allocation
2 Way Radio	Radio Call Sign	All operational vehicles
Telephone Answering machine	Public Telephone System	Operations Room
Mobile Telephones	24-hour Contact/Message Relay Service	Duty Technician Duty Officer Duty Supervisor

A list of all radio call signs, radio paging numbers and telephone numbers shall be finalised no later than 1st October annually and distributed to all relevant personnel.

13. Weather Forecasts

Roads and Environmental Services will supply and maintain an approved ice prediction system covering the mainland and linked isles including thermal mapping and/or Route Based Forecasting to be used in conjunction with a weather forecasting service.

The forecasting service and a minimum 2-5-day prediction facility is to be directly transmitted into the ice prediction computer system.

The principal forecasts should be available no later than 1400 hours each day with updates based on local sensor data transmitted no later than 0500 hours the following morning.

The Roads and Environmental Services Operations Team shall provide, no later than 1600 hours each day, a copy of the 24-hour forecast incorporating planned action, the 2-5-day prediction and the 24-hour temperature prediction graph. In addition, no later than 1600 hours the following day a copy of the graph comparing the temperature prediction to actual temperatures will be provided.

14. Decision Making

The success or otherwise of winter service operations depends greatly on the judgement, enhanced by experience and local knowledge, of those who must make the decisions, however, it is essential that such judgements are also based on recognised and accepted good practice.

Decision making processes will follow the guidance documents provided by the National Winter Service Research Group.

The procedure for decision making is outlined in Appendices 1 and 2.

All decision-making procedures must be recorded and documented in an operational diary stored either electronically or in physical form.

15. Material standards and storage

Salt shall be supplied to Roads and Environmental Services by the Quarry Manager at Cursiter Quarry. All Salt must be stored and delivered as per the Salt Specification in Appendix 3. Any deviation from this specification must be notified to the Roads and Environmental Services Operations Manager as soon as reasonably practicable.

16. Treatment

Dry Salting treatment will be used on all occasions. Should other treatment options be introduced through the life of this document, it must be ensured that the guidance provided in the National Winter Service Research Group guidance documents is followed.

Carriageway treatment will be undertaken as shown in Appendix 1.

Footway and Cycleway treatment will be undertaken as shown in Appendix 2. It is noted by the NWSRG that there is considerably less research available regarding footway treatments when compared with carriageway treatments. Although recommended spread rates are issued by the NWSRG these are far less precise when compared with the carriageway treatments.

Road Surface Temperature has therefore been used as a guide as to when to treat footways and cycleways. If further research becomes available through the lifetime of this document, Appendix 2 will be updated where appropriate.

The spread rates indicated in Appendices 1 and 2 must only be used when Salt moisture content is within the optimum range shown in Appendix 3, and when spreader performance is good and calibrated correctly.

Where moisture content falls out with the optimum range the effectiveness of the salt will be greatly reduced therefore consideration must be made for increasing the spread rate by 20%.

Following decisions taken according to the procedures outlined in Appendix 1 and 2, undertake the treatment in the locations depicted on the weather forecasts. The treatment should be undertaken lane by lane except on roads where low traffic and narrow width permit full width spreading.

The average speed for gritters should be 20mph and never exceed 25mph whilst operating.

During prolonged falls of snow, it is preferred to plough continuously from the onset to prevent build up and compaction by traffic. At all times once passage is achieved on Priority 1 routes, it must be maintained wherever possible and in preference to treatment of other routes when necessary.

17. Media Communications

A standard messaging service will be provided to the Councils Communications team and disseminated as required.

18. Performance Monitoring

The Roads Support Manager will monitor generally, winter maintenance performance and expenditure, against the agreed specification and budget, and will notify the Roads and Environmental Services Manager of any variations.

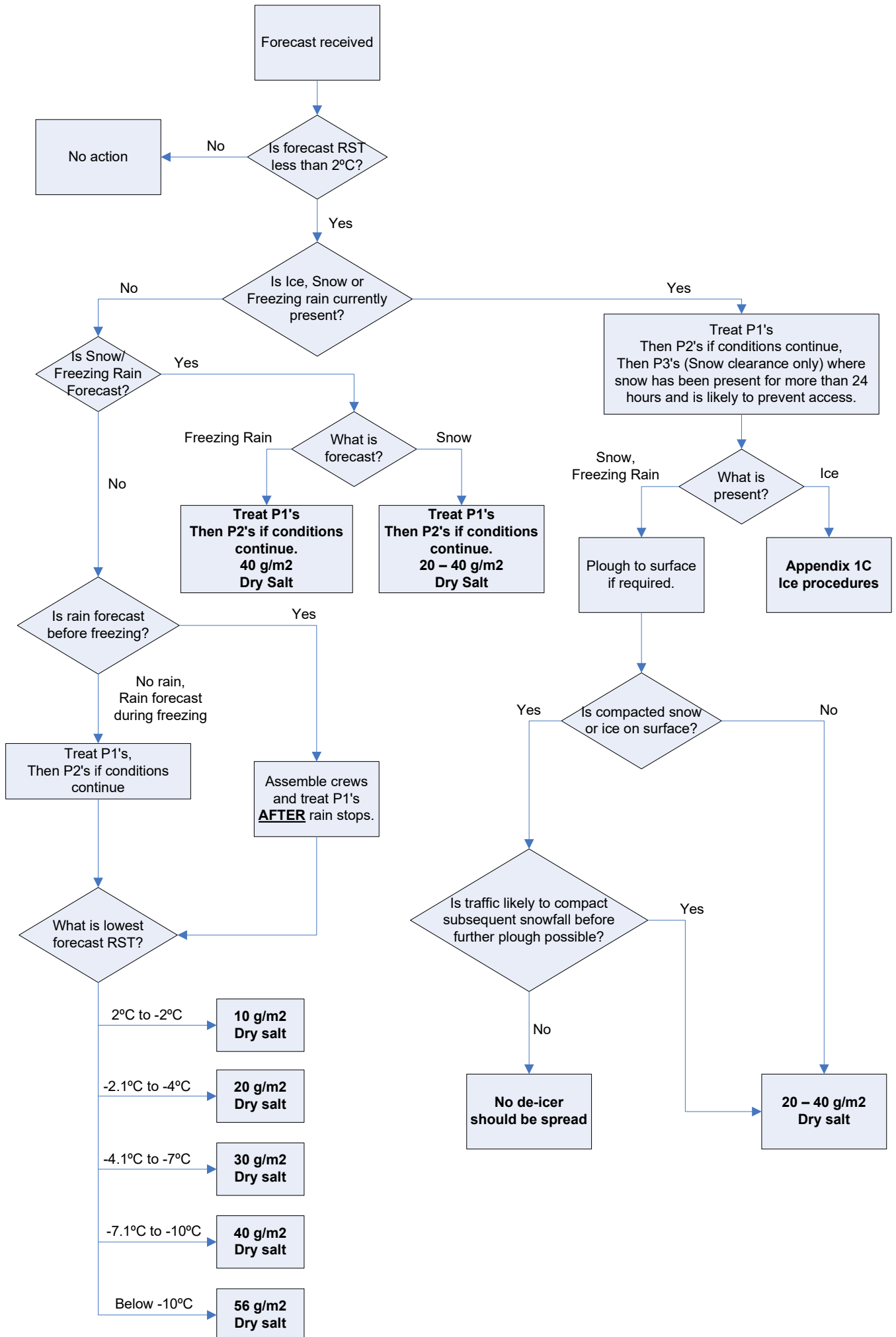
The Roads and Environmental Services Manager shall forward a report annually to the Interim Head of Roads, Fleet and Waste Services detailing the performance of the service against the agreed specification and budget. This will include details of the accuracy of the forecasting and ice prediction systems and performance of OIC Quarries in relation to the supply of salt and grit in accordance with Appendix 3.

All activities carried out in accordance with this document will be summarised and recorded.

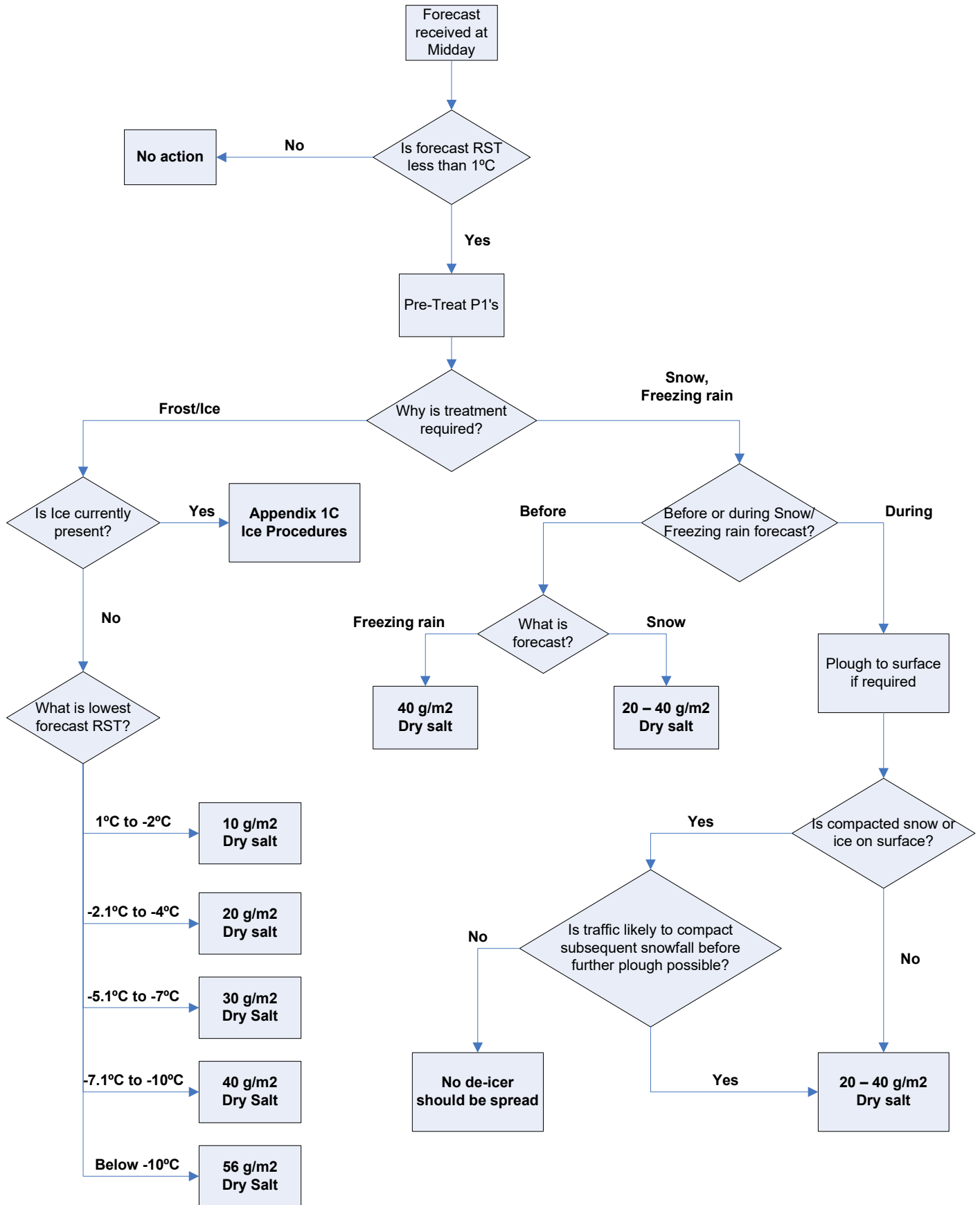
C - Appendices

- Appendix 1 – Carriageway Treatment Decision Making
- Appendix 2 – Footway Treatment Decision Making
- Appendix 3 - Salt Specification

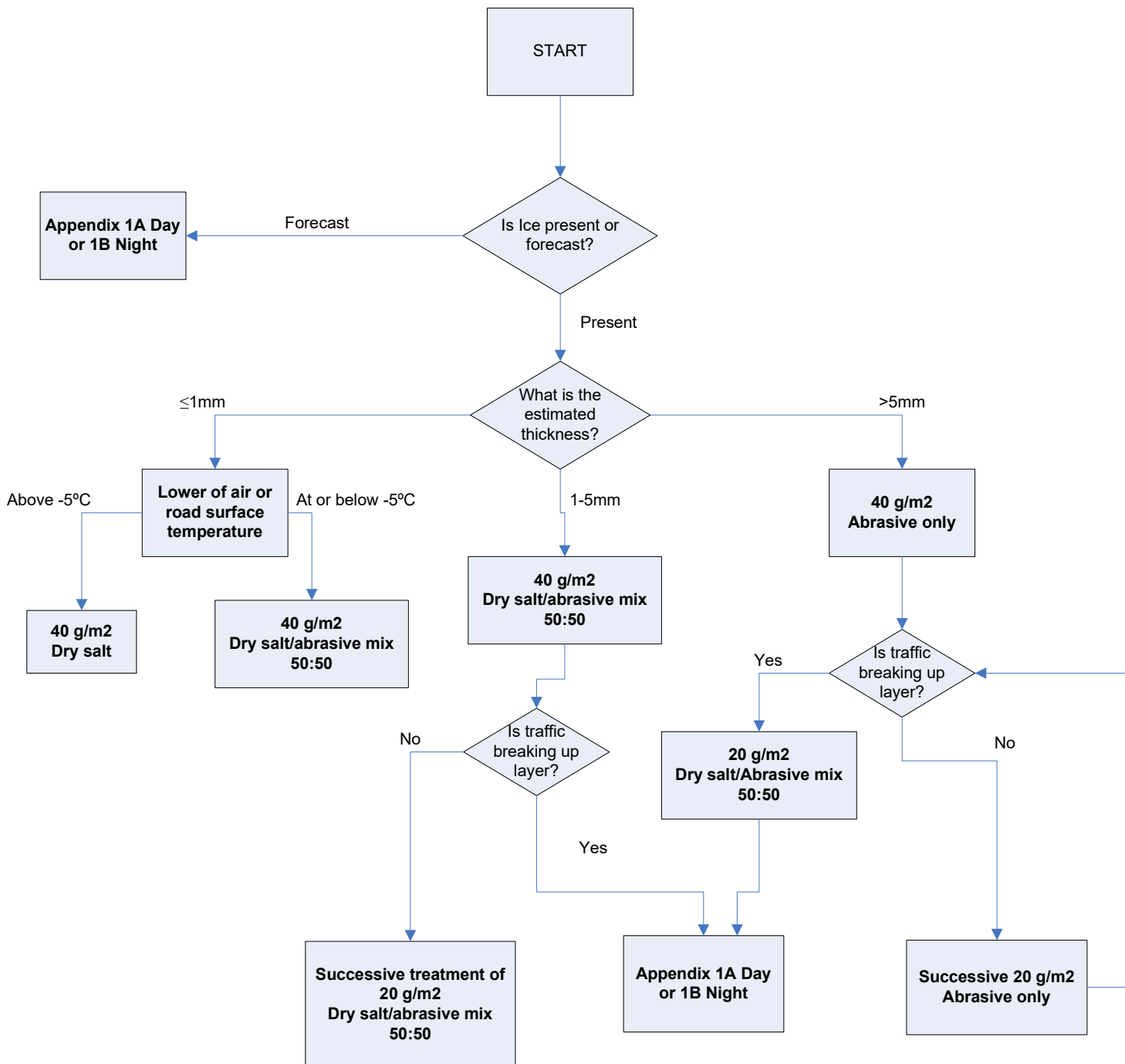
CARRIAGEWAY FORECAST PERIOD – DAY (06:00 – 18:00)



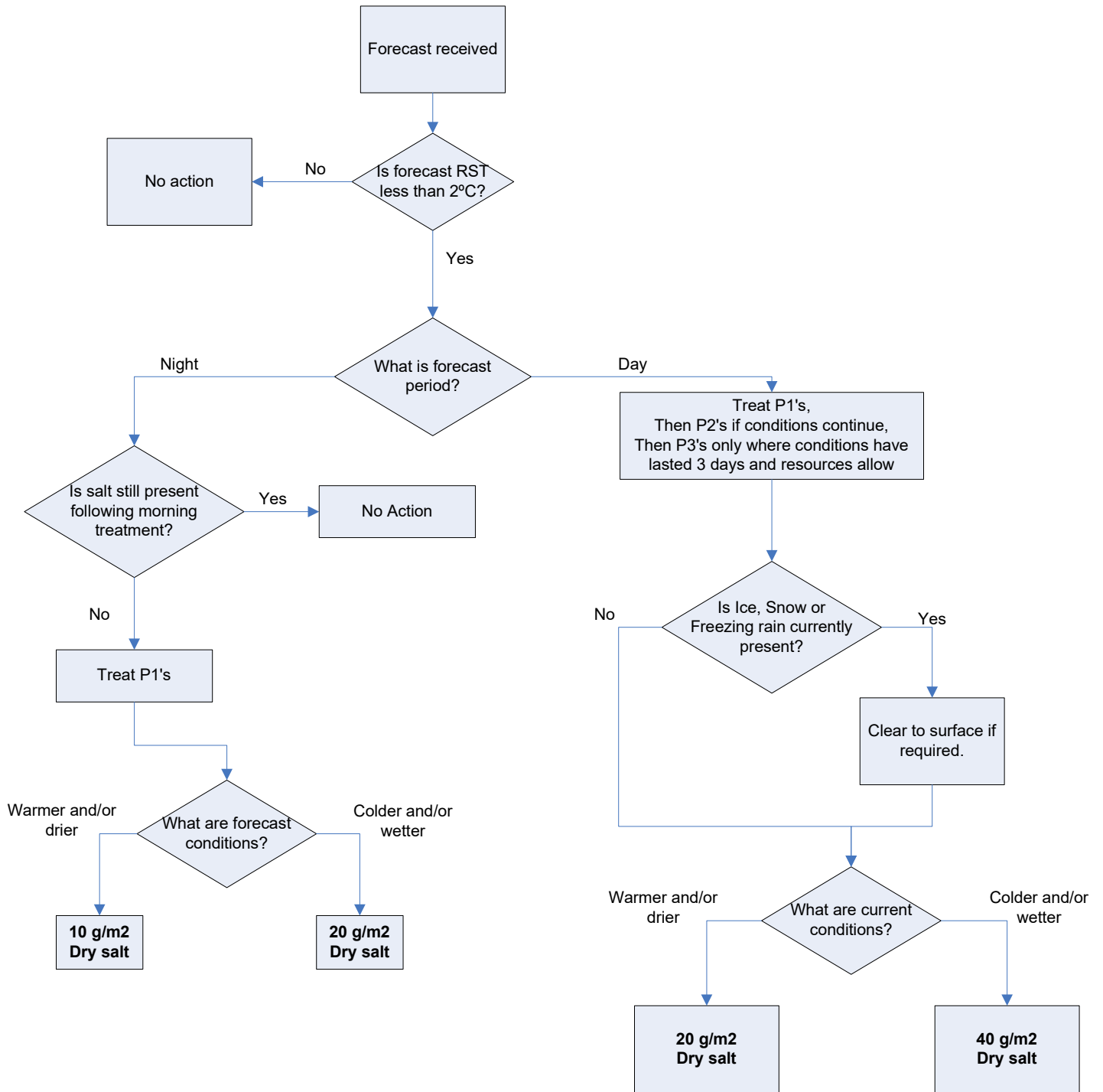
CARRIAGEWAY FORECAST PERIOD – NIGHT (18:00 – 06:00)



CARRIAGEWAY ICE PROCEDURES



FOOTWAY TREATMENT



Salt Specification

1. Supply of salt

Salt shall be fully compliant with BS 3247:2011 “Specification for salt for spreading on highways for winter maintenance”. Alternatives may be considered, upon approval.

Grade

Grading of the salt should be as per Table 1, below.

BS 410 test sieve	Percentage (m/m) passing test sieve
6.3 mm	100
2.36 mm	30 to 80
300 µm	0 to 20

Table 1 – Grading of salt. (BS 3247:2011)

Moisture content

The moisture content of all supplied salt shall be in accordance with BS3247:2011, and when sampled and tested on delivery shall not fall outside the optimum range identified in table 2. These moisture content values shall be consistent and representative of each delivered load. Alternative moisture contents may be considered, upon receipt of written request for approval.

Salt Type	Technology	Optimum Range
UK Rock Salt. Maximum fines content (<0.3mm particle size) is less than or equal to 7.5%	Dry Salting	1.5 to 4%
UK Rock Salt. Maximum fines content is above 7.5%	Dry Salting	2 to 4%

Should moisture content rise above 4%, the effectiveness of the salt is greatly reduced, therefore consideration must be made for increasing spread rates to compensate.

Chemical composition

The chemical composition of all salt supplied shall be in accordance with BS3247:2011 and as such, the following analysis upon delivery shall be as follows:

- Soluble chloride compounds (including sodium chloride (NaCl), magnesium chloride (MgCl₂), calcium chloride (CaCl₂) etc. expressed as sodium chloride): not less than 90%.
- Soluble sulphate compounds [expressed as calcium sulphate (CaSO₄)]: not more than 2.5%
- Material insoluble in water (at 20 ± 2°C): not more than 7.5%
- In addition to the above requirements, no substances should be present in such an amount as to be a hazard to human beings, animals (including fish) or plant life under normal conditions of use of the salt.

Alternative chemical compositions may be considered, upon approval.

Anti-caking additive

The minimum amount of anti-caking additive shall be used in order to prevent degradation of the quality of the salt and also ensure that after 18 months of covered/sheeted storage, all salt within a stock pile of at least 1 metre in height and the correct angle of repose shall remain loose and useable.

Full sampling and testing of the salt shall take place upon delivery as per the requirements of BS EN 932-1:1996 and BS 3247:2011. As such, the following test suite shall be completed, and results passed on to the Employer or its representative:

- Particle size analysis
- Moisture content analysis
- Concentration of anti-caking additive
- Chloride content

Samples taken for testing should be as representative as is practicable, (in accordance with BS EN 932-1:1996), and three test suites per shipment should be undertaken. This sampling and testing shall be undertaken at the Quarry Manager's cost.

2. Salt storage

Storage shall be provided for the purposes of stockpiling salt for a duration to be agreed between the Quarry Manager and the Roads and Environmental Services Manager or a duly appointed representative.

Consideration shall be given to the following:

1. Access. The Storage Site shall be readily accessible by public highway. The storage site shall be accessible by any sized articulated lorry permitted to be used on public highway (without special order), with sufficient turning space provided. Consideration shall be given to the possibility of queuing vehicles.
2. The storage site shall be accessible on all days (with access provision on public holidays to be discussed between the Quarry Manager and the Roads and Environmental Services Manager or a duly appointed representative) between the hours of 05:30am and 18:30pm.
3. The storage site shall have a hard standing on all areas to be used for the stockpiling of salt. The hard standing shall be in good condition and shall not allow leachate from the salt stockpile to permeate the ground beneath.
4. Where the storage site is not directly on the coast, it shall have sufficient bunding to prevent leachate and run-off from the salt stockpile from polluting the surrounding environment.
5. The storage site should have interceptors to contain the leachate and run-off from the stockpile and other pollutants. Where interceptors are not present, a consent to discharge chlorides to the foul sewer network shall be provided to the Roads and Environmental Services Manager or a duly appointed representative.
6. The storage site shall have a secure boundary wall or fence to prevent any unauthorised access and any security issues arising from the use of the site for salt stockpiling.
7. The storage site should have provision for weighbridge facilities. The ticketing output from such facilities shall allow for the collection of information relating to:
 - Origin
 - Destination
 - Load (mass)
 - Customer
 - Haulier
 - Time and date

The Quarry Manager shall provide resources to staff such weighing facilities.

The weight of all salt material extracted/removed from the storage site is to be obtained by the Quarry Manager.

The Quarry Manager shall make available within 24 hours of receiving a request, provision for the reloading of vehicles making dispatches from the storage site. This shall include making available loading shovels and associated resources to be able to dispatch salt. Similarly, such provision shall be made available within 24 hours of receiving a request, for the stockpiling and profiling of salt delivered to storage site.

8. It is preferable for the salt to be stored within a building such as a salt barn or other suitable structure in order to protect the salt from the effects of the weather
9. All sites shall have requisite environmental and planning consents for the bulk storage of salt. These shall be sought by the Quarry Manager at their cost.

3. Sheeting

Where enclosed 'roofed' storage is not available, waterproof sheeting shall be provided and installed to protect the salt from the elements and the effects of leaching, run-off, and wind. Sheeting shall be of sufficient quality to protect the salt stockpile for two years but shall be maintained during that period.

The Quarry Manager shall ensure that sheeting shall be weighted down sufficiently so as to prevent the sheeting from coming free or blowing off. Any damage to sheeting caused by weather shall be repaired or replaced as soon as is practicable at the Quarry Manager's cost.

The working face of each stockpile shall also be re-sheeted following stock removal or addition. The sheeting that is cut away at the time of excavation as well as off cuts from the installation process shall be disposed of efficiently and in a way, which minimises environmental impact.

Any material used for sheeting shall be designed specifically for the purposes of protecting bulk materials from wet conditions.

4. Transportation of salt

Once the salt has been stored, the Quarry Manager shall deliver salt as and when instructed in the OIC Winter Service Policy requirements from each of the locations to destinations specified by the Roads and Environmental Services Manager or a duly appointed representative. Vehicles transporting the material shall be fit for purpose to prevent loss of salt material or contamination to the salt material. Proof of delivery receipts shall be collated by the Quarry Manager from hauliers and provided to the Roads and Environmental Services Manager or a duly appointed representative by email within one week of dispatch.

5. Additional testing of supplied salt

The following test suite shall be available to the Roads and Environmental Services Manager or a duly appointed representative for the testing of any salt stockpile. Analysis shall be undertaken in accordance with BS3247:2011. Once analysis has been completed, results in the form of test certificates shall be passed on to the Roads and Environmental Services Manager or a duly appointed representative.

- Particle size analysis
- Moisture content analysis
- Concentration of anti-caking additive
- Chloride content

The Quarry Manager shall be responsible for the representative sampling of the stockpile to be sampled and will sample in accordance with BS EN 932-1:1996, as well as for the arrangement of courier services to transport test samples to the testing facility.

Additional analysis will be carried out monthly, during the winter season, from October to April.

6. Management of Storage Sites and provision of a logistics service

The Quarry Manager shall provide on-site resources (at the storage site) to monitor dispatches and deliveries and supervise the condition and security of the stockpile. On-site resources (the site supervisor) shall be provided during the operational hours at each storage site. Operational hours shall be defined as days of expected delivery and dispatch. In addition, the site supervisor shall undertake inspections of a frequency to ensure maintained security, quality of the salt and sheeting (site specific), and health and safety requirements of the storage site, the salt stockpile and the condition of the sheeting. Such inspections shall not be any less frequent than weekly and shall be carried out at all times throughout the year, irrespective of whether operational hours are affected.

The Quarry Manager shall, at the request of the Roads and Environmental Services Manager, provide the following logistic service:

- Arranging distribution and advising distributors/receiving authorities of what loads are to be delivered and when
- Ensuring distributors book vehicles in and providing them with unique loading reference
- Monitoring vehicles arriving at stockpile for loading
- Managing daily collection of weighbridge tickets at stockpile
- Collecting and collating all Proof of Deliveries (PODs).

Reports on deliveries and dispatches taking place from the storage site shall be prepared on request for the Roads and Environmental Services Manager or a duly appointed representative. Such reports shall include elements relating to site security, sheeting condition, health and safety, environmental concerns and any other matters deemed relevant.

Salt will be supplied to Roads and Environmental Services by the Quarry Manager at Curister Quarry. In addition, the Quarry Manager will maintain a standby rota during the winter period.