

West Sussex County Council
Highways, Transport &
Planning
Winter Service Policy
2020/21



Balfour Beatty

Working in partnership

This is West Sussex County Council's Winter Service Policy for 2020/21 as amended and should be read in conjunction with the Operational Contractor's Winter Service documents.

Prepared By:	R. Speller & B. Whiffin	Winter Service Manager & Highway Operations Manager
Checked By:	M.Hulme	Head of Local Highway Operations
Approved By:	M.Davey	Director of Highway, Transport and Planning

Contents

CHAPTER 1 INTRODUCTION	5
The Purpose of the Policy	5
The County Council’s Legal Duties and Powers for Winter Service .	5
CHAPTER 2 WINTER SERVICE POLICY	6
The Aim of Winter Service.....	6
The Winter Service	6
The Winter Service Network	7
Priorities for Maintaining Safety and Traffic Flow during Snowfall ..	8
The objective is to keep as much of the Winter Service Network open and safe as possible.	8
Road Closures	8
Clearing Snow Following Snowfall	9
Treatment and Response Times	9
The Environment	9
Health & Safety	10
CHAPTER 3 PREPARING FOR WINTER	11
Publication of Levels of Service	11
Contract Arrangements	11
Winter Service Operational Period	11
CHAPTER 4 PRECAUTIONARY SALTING	12
The Objectives of Precautionary Salting	12
Deciding to undertake Precautionary Salting. Placing the Operational Contractor’s Personnel on Standby	12
Spreading Salt and Rates of Spread	13
The Road Network	13
Instructions to undertake Precautionary Salting	13
Publicity and Media Communication.....	14
CHAPTER 5 DEALING WITH FALLING SNOW AND CLEARING UP....	15
Priorities	15
Carriageways	15
Salting and Snow Ploughing	16
Issuing Instructions to the Operational Contractor.....	16
Information Gathering.....	16

Calling in Additional Resources	17
Road Closures	17
Snow Clearance following Snowfall.....	17
Carriageways	17
Checking the Network for Damage	18
Keeping the Director of Highways, Transport and Planning informed and Monitoring Service Delivery.....	18
Central Co-ordination and Police Liaison.....	19
Short-term Adverse Weather Conditions and Emergencies.....	19
Publicity and Media Communications	20
CHAPTER 6 ENSURING AN EFFECTIVE QUALITY SERVICE	21
Planning for an Effective Quality Service	21
Monitoring Effectiveness and Quality	21
Best Use of Resources	21
ANNEX A.....	23
CRITERIA FOR INCLUSION IN THE WINTER SERVICE NETWORK	23
Criteria for Inclusion	23
WINTER RESILIENT NETWORK	23
ANNEX B ACTION DECISION GUIDANCE	25
The following policy guidance is issued to assist the Decision- Makers and other nominated decision-makers.	25
SALTING DECISION MATRIX	XXVI
Annex C.....	28
Annex D.....	29
Annex E.....	30

CHAPTER 1 INTRODUCTION

The Purpose of the Policy

The Policy has four key purposes:

1. To explain the County Council's Winter Service Duties, Policies and Powers.
2. To explain the means by which these are achieved.
3. To ensure all staff and contractors involved in Winter Service understand their roles and responsibilities in delivering Value For Money to West Sussex residents.
4. To inform anyone not normally involved or new to, Winter Service.

The County Council's Legal Duties and Powers for Winter Service

The County Council, as Highway Authority (West Sussex Highways), has a duty under s41 of the Highways Act 1980 (The Act) to maintain the public highways in West Sussex. These do not include the A23 and A27 trunk roads or the M23 that remain the responsibility of the Highways England

Section 150 of the Act also contains a duty to remove obstructions on the highway. No general duty (statute or common law) to prevent the formation of ice by salting, or to take preventative or ameliorative steps, existed prior to 31st October 2003. From that date there has been a statutory duty to ensure that: *'As far as is reasonably practicable, safe passage along a highway is not endangered by snow or ice'*. (Section 41(1A))

The duty is subject to the qualification of 'reasonable practicality' although, to date, this has not been tested in court. It is unclear how the courts will interpret this term – especially in the context of the statutory duty and its relationship to the statutory defence under s58 of the Act. It is therefore more important than ever to have, and enforce, robust Winter Service policies for both preventing and clearing snow and ice from the County's roads.

Recommendations and advice for meeting our obligations with regard to Winter Service are contained in the Roads Liaison Group document 'Well-managed highway infrastructure' which superseded 'Well Maintained Highways – Code of Practice for Highway Maintenance Management'. These recommendations are designed to allow local

authorities to meet their obligations economically, efficiently and effectively and in determining our policy.

CHAPTER 2 WINTER SERVICE POLICY

The Aim of Winter Service

The overall aim of our Winter Service provision is to:

'Establish and implement appropriate policies and procedures to ensure that as far as reasonably practical a defined Winter Service Network shall not be rendered unsafe or hazardous by ice or snow, thus enabling essential traffic to move with reasonable speed and safety'

The County Council has established a policy for Winter Service that is reviewed each summer and approved for the following Winter Service period. The following sections sets out the key aims of the policy and provides some commentary around these aims.

The Winter Service

It is the policy of the County Council, via the Operational Contractor, to provide a service that:

1. Salts a network of identified carriageways (The Winter Service Network) to **prevent** ice forming or snow accumulating.
2. Spot salt other roads, selected footways and cycleways to **remove** the winter hazard where deemed necessary.
3. Maintain safety and traffic flows during snowfalls by salting and ploughing its Winter Resilient Network based on defined priorities.
4. Following snowfall restore normality on a priority basis to its carriageways, footways and cycleways as soon as possible.

Commentary:

The statutory duty to 'Ensure that, as far as is reasonably practicable, safe passage along a highway is not endangered by ice or snow' (Highways Act 1980. s41 (1a)) was introduced in October 2003. Prior to this time the County Council had carried out precautionary salting to prevent ice forming in the interests of community safety, communications, and the economy.

In the opinion of our Legal Services our current Winter Service provision falls within the commonly accepted limits of what may be considered 'reasonably practicable'.

Once snow is settling the County Council aims to maintain safety and communications for as many people as possible by treating highways on a 'Well-managed highway infrastructure' risk-based approach. Highways that meet the Resilient Network criteria (see Annex A) are given the highest priority.

The Winter Service Network

The Winter Service Network consists of roads that are salted to prevent ice forming or snow accumulating. Annex 'A' details the criteria for inclusion.

Heavily used important footways and cycleways may be treated in exceptional circumstances and at the discretion of the Head of Local Highways Operations, Winter Service Manager or nominated officer, when it is considered that icy conditions may persist. These footways are typically those in the vicinity of schools and hospitals, railway stations and approaches, pedestrian crossings and subways. Some footbridges may also be treated where there has been a proven historic need. Liaison with Borough and District Councils will be carried out at planning and operational stages as necessary.

The Head of Local Highways Operations, Winter Service Manager or nominated officer, will instruct the Operational Contractor to clear ice from selected footways, pedestrian precincts and cycleways, generally starting with those most heavily trafficked. Ice clearance from selected footways and cycleways will normally commence concurrently with clearance from carriageways but may be delayed for operational or logistical reasons.

The Head of Local Highways Operations, Winter Service Manager or nominated officer, will instruct the Operational Contractor to undertake 'spot salting' of areas in response to local conditions. Any decision to undertake 'spot salting' will be recorded and passed immediately to the Operational Contractor.

Given the scale of financial and other resources involved in delivering the Winter Service, it is not considered reasonable either to:

- *Provide the service on all parts of the network; and*
- *Ensure carriageways, footways and cycle routes are kept free of ice or snow at all times, even on treated parts of the network.*

Priorities for Maintaining Safety and Traffic Flow during Snowfall

Keeping the highway safe and passable during snowfalls is a dynamic situation that requires the Head of Local Highways Operation, Winter Service Manager, or nominated officer to constantly monitor and to ensure resources are mobilised in order to respond to changing circumstances. In extreme conditions when even driving a gritting lorry is considered hazardous salting operations may be temporarily suspended until conditions improve.

The objective is to keep as much of the Winter Service Network open and safe as possible.

When conditions are such that all of the network cannot be kept open resources will be focused where they will be of most benefit in terms of safety and communications. Decisions to re-focus resources are based on the following priorities:

- Network resilience;
- Treatment of facilities for public transport users;
- Treatment of facilities for road users;
- Treatment of facilities for walking and cycling;
- Treatment of transport interchanges;
- Treatment of promoted facilities such as community or leisure centres;
- Extent of priority for emergency services;
- Extent of priority for key public services and critical infrastructure;
- Extent of priority for vulnerable users;
- Resilience of Winter Service resources; and
- Other local circumstances.

Road Closures

It is the policy of the County Council to work with Sussex Police and the Traffic Manager (Streetworks) in closing roads when:

- Roads become impassable.
- Road conditions become excessively hazardous.
- Closing them would facilitate better overall achievement of Winter Service objectives.

Clearing Snow Following Snowfall

Carriageways

The objective is to keep as much of the network open and safe as possible. When conditions are such that all of the network cannot be kept open resources will be focused where they will be of most benefit in terms of safety and communications. Decisions to re-focus resources are based on keeping as many of the Primary Roads and the approaches to Hospitals, Ambulance and other Emergency Services passable first, then the remainder of the "A" and "B" Class road network before working to clear the rest of the Resilience and Winter network.

Salt Bins /Bulk Bags

Salt Bins are generally not provided, except where their contents and use can be managed locally, for example by partnerships with Parish Councils. Where the County Council has provided salt bins it will topped up to at least 75% full before the start of the winter period. 1 ton Bulk Bags of salt/ grit mix may be provided as an alternative solution for self-help where their contents and use can be managed locally in accordance with an approved Parish Local Winter Management Plan.

Treatment and Response Times

It is the policy of the County Council to be able to spread salt on the entire Winter Service Network within 4 hours in accordance with the daily instruction. The remaining network may be treated at the discretion of West Sussex Highways; treatment times are dependent on available resources and the assessed level of need.

The Environment

The County Council is mindful of the potential damage to the environment that may be caused by the use and storage of salt and other de-icing products. Consequently, its policy is to use as little salt as is reasonably practicable to ensure the safety of the treated network, and to take all reasonable steps to minimise the potential damage resulting from its storage.

Commentary:

The County Council has installed three salt barns and collector drainage around salt stockpiles at its depots to collect any saline water run-off. Salt Barns are an expensive option but allow the purchase, storage and use of drier salt thus using less salt during operations, and reducing the possibility of salt being wind-blown, thereby resulting in less pollution.

In partnership with its Winter Service Contractor, the County Council will seek to minimise the use and loss of salt through identifying and implementing effective, efficient salt storage systems. In line with Best Practice guidance this has resulted in specifying a reduction in spread rate from 15 gm/m² to 8 gm/m² where our rock salt stocks are stored under cover.

Health & Safety

The County Council places great importance on the health and safety of the public, its staff and Operational Contractors. It will do its utmost to ensure this is not jeopardised by, or during, Winter Service activities by ensuring safety requirements are regularly reviewed and all personnel are in possession of appropriate training and certification, and Lone Working protocols.

CHAPTER 3 PREPARING FOR WINTER

Publication of Levels of Service

The Winter Service Policy will be reviewed annually in line with the National and industry Codes of Practice and guidance with any changes to the Levels of Service being presented to the Cabinet Member for approval.

Up-to-date information on Levels of Service and contact arrangements will be issued to appropriate organisations and individuals and a copy on West Sussex County Council's web site.

Contract Arrangements

The County Council, through its Operational Contractor and in line with its policies, decides what Winter Service actions are to be taken on a day-to-day basis. Its Operational Contractor, supplemented by additional resources during severe weather when necessary, provides the core highway maintenance operations, including Winter Service.

Winter Service Operational Period

Full Winter Service arrangements operate from 1st October to 30th April the following year.

Outside the Winter Service period extraordinary Winter Service events are dealt with through normal contract procedures via the Head of Highways Operation or responsible officer. Twenty-four hour emergency contact and response is provided for, although not to the same scale.

CHAPTER 4 PRECAUTIONARY SALTING

The Objectives of Precautionary Salting

Precautionary salting is undertaken in order to:

- Prevent moisture on agreed routes turning to ice
- Prevent heavy deposits of Hoar Frost on agreed routes turning to ice
- Prevent the accumulation of snow and facilitate its subsequent removal on agreed routes

Deciding to undertake Precautionary Salting. Placing the Operational Contractor's Personnel on Standby

Following receipt of the mid-day weather forecast the Operational Contractor's Responsible Officer *in conjunction with* the Head of local Highway Operations, Winter Service Manager or nominated officer, is responsible for the decision whether to undertake Precautionary salting of the Winter Service Network or to place personnel on stand-by. In making this decision they will have access to weather and road information and be guided by the information given in Annex B.

If the weather information systems are non-operational and the temperature is seen to be falling, the Responsible Officer should notify the Head of Local Highway Operations, Winter Service Manager or nominated officer and instigate treatment based on experience and local knowledge. Where rain is forecast the decision to salt should be delayed as long as possible; however where there are specific forecasts of 'freezing rain' salting should be undertaken even on dry roads or during rain

The Operational Contractor's Responsible Officer shall record all daily decisions, and amendments, on the pro-forma shown in Annex C (or Web based system). The completed pro-forma should be e-mailed to those persons listed on the current Distribution List (see Winter Service Plan) and a signed hard copy of the document retained on file for future retrieval. At weekends, and for all out-of-hours actions, the document may need to be retrospectively processed on the first working day following the action.

Spreading Salt and Rates of Spread

For rates of spread for Rock Salt see appendix C.

The Road Network

Normal practice is to salt only the Winter Service Network. However, if prolonged or persistent ice or snow is expected, the salting of additional roads, where resources permit, will assist subsequent removal of snow cover.

Instructions to undertake Precautionary Salting

Instructions to undertake Precautionary Salting, or to initiate Stand-by procedures, should normally be issued by the Operational Contractor's Responsible Officer before 1500 hrs daily using the 'Daily Instruction' (Annex C) (or Web based system). To avoid doubt and confusion a 'No Action' instruction should be issued where applicable.

Subsequent changes to the Responsible Officer's instructions should be issued using the same procedure. Outside normal working hours instructions and modifications should be issued by telephone and then confirmed using the same pro-forma as soon as possible.

The Operation Contractor will forward a copy of the following data for each treated route the next working day to the Head of Local Highways Operations, Winter Service Manager or nominated officer.

Date / time of salting operation
Spread rate of salt used
Depot used
Vehicle Registration / Name of driver
Tonnes of salt loaded at start of run
Tonnes of salt unloaded at end of run
Time vehicle left Depot
Time salting operation started
Time salting operation completed
Time vehicle returned to depot
Time the driver left the depot to return home or other duties
Any notes, observations or additional activities required by the driver during salting observations (diversion routes following, untreated sections, blast treated sections etc).
Signature of driver

Publicity and Media Communication

The County Council [website](#) contains useful links to Winter Service information.

CHAPTER 5 DEALING WITH FALLING SNOW AND CLEARING UP

Priorities

Once snowfall starts the situation rapidly becomes dynamic and will require constant monitoring and redeployment of resources in order to respond to changing circumstances. In these situations a daily meeting (Snow Desk) or conference call will be arranged where all the key stakeholders will be briefed by the Head of local Highway Operations, Winter Service Manager or nominated officer on the following:

- Current state of the Network
- Any significant issues
- Weather forecast(s)
- Level of resources (No. of Gritting Lorries, Drivers & tonnes of Salt etc.)
- Proposed actions
- Communication Plan
- Date /time of next "Snow Desk" meeting

Key stakeholders (not an exhaustive list)

- Head of local Highway Operations, Winter Service Manager or nominated officer

Representatives from the following teams:

- Contractor(s)
- RET team (Resilience and Emergency Team)
- Press Office
- Communities and Parish Liaison Team
- Area Highway Managers

Carriageways

The objective is to keep as much of the Winter Service Network as safe and free flowing as possible.

If conditions deteriorate to the extent that the entire Winter Service Network cannot be kept open, then a minimum winter network shall be adopted known as the Winter Resilient Network. This will be based on the Resilient Network, as defined in Well Managed Highway Infrastructure Code of Practice but will also include access to key locations such as hospitals, ambulance, fire and main police stations.

Salting and Snow Ploughing

In Snow conditions rates of Spread for rock salt are typically between 20 to 40 grams m² dependent on anticipated severity of snowfall dependent on ambient temperature.

Simultaneous ploughing and salting should begin when snow reaches a depth of 3-4 centimetres.

Lighter snowfall may require ploughing where local drifting has occurred. Ploughing may be required to remove snow not dispersed by traffic, for example in cases where there is a reluctance by traffic to use outside lanes or where traffic is light – at night for example.

Where ice has formed on the road surface as a result of snow, rock salt will be spread at a rate of 20-40 grams m² dependent on ambient temperature and the amount of ice to be removed.

Salt and grit mixtures will not generally be used on carriageways but up to 50% grit mixture may be used on footways and cycleways. 100% grit should be used on steel and concrete structures such as footbridges.

Issuing Instructions to the Operational Contractor

Once snow is settling on the carriageway, the Highway HUB will ensure constant communications are maintained with the Operational Contractor.

Information Gathering

Effective focusing and deployment of resources during snowfall demands good communications, including a constant flow of up-to-date information. The Head of local Highway Operations, Winter Service Manager or nominated officer, will use available staff to gather information, as well as other sources of relevant and available information including Sussex Police, District and Borough Councils neighbouring Local Highway Authorities.

The Operational Contractor is responsible for providing reports relating to:

- The depth of settling snow
- The location and extent of drifting snow

- Road closures and other restrictions to movement caused by drifting snow, abandoned vehicles or other reasons.

Calling in Additional Resources

Where prevailing conditions are such that resources available through the Operational Contractor are insufficient to deal effectively with the prevailing conditions, the Head of local Highway Operation, Winter Service Manager or nominated officer, will be responsible for calling-in and co-ordinating additional resources from Borough and District Councils, Supply Chain partners and other Contractors as necessary.

Road Closures

Section 64 of the Road Traffic Regulations Act, 1984 grants the Police power to impose restrictions on the movement of traffic. In the event of roads becoming blocked with snow the Highway Commissioning Manager, or an authorised representative, may, in conjunction with Sussex Police, consider the temporary closure of affected roads to allow snow clearance. Under more difficult conditions Sussex Police may be requested to hold back longer vehicles whilst ploughing or salting operations take place.

In all instances of road closures, the Head of Local Highways Operations, Winter Service Manager or nominated officer, will be responsible for arranging the provision and deployment of appropriate diversionary signing to facilitate minimum disruption to traffic flow.

Snow Clearance following Snowfall

In order to restore safety and communications once snowfall stops it is the County Council's policy to deploy its resources in the following priority order:

Carriageways

The objective is to keep as much of the network open and safe as possible. When conditions are such that all of the network cannot be kept open resources will be focused where they will be of most benefit in terms of safety and communications. Decisions to re-focus resources are based on keeping as many of the Primary Roads and the approaches to Hospitals, Ambulance and other Emergency Services passable first, then the remainder of the "A" and "B" Class road network before working to clear the rest of the Resilience and Winter network.

Checking the Network for Damage

The Head of Local Highway Operations, Winter Service Manager or nominated officer, is responsible for making arrangements to ensure drains and drainage channels are clear and able to cope with floodwater in the case of sudden thaws, particularly at known trouble spots.

During severe weather conditions grit that has been deposited on the highway may be construed as litter under the terms of the Environmental Protection Act, 1990. However, spreading salt and grit is considered a legitimate and reasonable duty of a Highway Authority and therefore is not actionable under the terms of the Act. The responsibility to clear these materials therefore rests with District or Borough Councils as part of their street cleansing duties.

There will be circumstances though, when residual salt and grit may cause potentially hazardous situations, such as slopes to footways with high pedestrian usage or where there has been significant local spillage of materials during operations. These excessive amounts will be removed as part of normal Winter Service operations in the interests of safety.

Roads shall be regularly checked for frost heave or other damage. In the event of frost heave arrangements should be made to close the affected roads to heavy traffic in order to prevent further damage.

Keeping the Director of Highways, Transport and Planning informed and Monitoring Service Delivery

The Head of Local Highways Operations, Winter Service Manager or nominated officer, will be responsible for e-mailing a daily summary of all resources used during snow clearance, including any requirements for continuous salting, to the Director of Highways, Transport and Planning.

During prolonged periods of wintry weather, or when the severity of the weather necessitates or is likely to necessitate, continuous salting the Head of Local Highways Operations, Winter Service Manager or nominated officer, should report conditions on the highway to the Director of Highways, Transport and Planning as follows:

- On request
- Where temperatures have fallen, or are likely to fall, below freezing for more than 48 hours
- By 0930 hrs when snow has fallen or settled overnight

These reports, together with other weather and other pertinent information, will enable the Director of Highways, Transport and Planning to make informed judgements as to whether the Winter Service Network is to be reduced to the Winter Resilient Network based on available resources and risk assessment.

Central Co-ordination and Police Liaison

The Director of Highways, Transport and Planning or nominated Deputy, may decide it is necessary to open the Emergency Control Centre (ECC) at County Hall when there is a need to re-distribute resources across the County, or when network availability is greatly reduced.

When deciding to reduce the network to the Winter Resilient Network, the Director of Highways, Transport and Planning may decide to prepare the ECC as the base from which Winter Service operations may be controlled. The Director of Highways, Transport and Planning will be responsible for liaison with the County Emergency Planning Officer under these circumstances. Liaison with the Contact Centre throughout the operational phase will also be required.

The Director of Highways, Transport and Planning will remain responsible for the overall operation of the ECC. Assistance will be provided by members of the Highways Operations staff, during normal working hours and at other times as directed by the Director of Highways, Transport and Planning throughout the period of the emergency.

In the event of the scale of the emergency escalating so as to affect other County Council services overall responsibility may devolve to the County Emergency Planning Officer.

Short-term Adverse Weather Conditions and Emergencies

Adverse weather may be defined as conditions that are insufficiently severe, or not expected to last for long enough, to require the use of the Emergency Control Centre, but are over and above those normally experienced on a daily basis. To ensure continuity of information between the Operational Contractor, Sussex Police and Director of Highways, Transport and Planning during periods of adverse weather, the Head of Local highways Operation, Winter Service Manager or nominated officer will be the Liaison Officer and are to report to Sussex Police as appropriate throughout the period these conditions prevail.

Publicity and Media Communications

During periods of heavy snowfall when control of the Snow Network is centralised in the Emergency Control Room the County Press Officer will remain the point of contact for the media. The County Press Officer will gather current and accurate information from as many sources as possible, including the ECC, Sussex Police and motoring organisations. Information will be updated at least four times in 24 hours. The Winter Service Manager will facilitate the exchange of information in the event of significant issues or problems. Information on road conditions will be exchanged with Hampshire County Council, East Sussex County Council, Surrey County Council, Brighton & Hove Council and the Highway England at a frequency appropriate to the severity of prevailing conditions. The Contact Centre should be kept informed of any developments in order to deal with initial enquiries from members of the public.

CHAPTER 6 ENSURING AN EFFECTIVE QUALITY SERVICE

Planning for an Effective Quality Service

Planning and preparation are the foundations of an effective quality service. Previous chapters demonstrate that we have undertaken extensive planning and preparation to ensure that adverse winter weather will not affect the delivery of quality services.

Monitoring Effectiveness and Quality

To ensure that the service is implementing the Winter Service Policy effectively and is continuing to deliver the aims of the County Strategy, Highways and Transport have developed a suite of 'Service Delivery Monitors'.

These monitors have been sub-divided into three groups with nominated officers or groups allocated responsibility for carrying out the relevant checks.

The three groups of monitors are as follows:

1. Getting Ready for Winter (Operation Snowflake)
2. Operating During Winter (Key Performance Indicators), and
3. Being Effective (Achieved the aims of this Policy)

Best Use of Resources

Securing best use of resources is a theme that underpins the Service's planning for, and carrying out of, Winter Service. Examples of this are:

- Salting routes are planned so as to minimise wasted travel and ensure response time targets may be consistently met.
- Three salt barns have been built to reduce salt loss by keeping stock dry and thus enable more efficient spreading.
- Salt bins will only be filled before the start of winter and managed locally.
- Bulk bags of salt / grit mix filled and managed locally

- Local Parish & Town Councils operate “Local Winter Management Plans” further details can be found on our [website](#).
- A process of annual reviews, and membership of Performance Improvement Groups allows us to compare our practices and performance with our peers, and keep abreast of current best practice, innovation and legislation.
- Operation Watershed has removed many of the long standing surface water problems

ANNEX A

CRITERIA FOR INCLUSION IN THE WINTER SERVICE NETWORK

Criteria for Inclusion

The National Code of Practice says that authorities should formally approve and adopt policies and priorities for Winter Service, which are coherent with wider objectives for transport, integration, accessibility and network management, including strategies for public transport, walking and cycling. They should also take into account the wider strategic objectives of the authority.

Issues for consideration in developing policy should include:

- Network resilience;
- Treatment of facilities for public transport users;
- Treatment of facilities for road users;
- Treatment of facilities for walking and cycling;
- Treatment of transport interchanges;
- Treatment of promoted facilities such as community or leisure centres;
- Extent of priority for emergency services;
- Extent of priority for key public services and critical infrastructure;
- Extent of priority for vulnerable users;
- Resilience of Winter Service resources; and
- Other local circumstances.

WINTER RESILIENT NETWORK

As part of their contingency planning, authorities should define a minimum winter network. This network is likely to have a close relationship to the Resilient Network and may be a subset of their normal treatment network.

The Resilient Winter Network is the extent of the network that will be treated/ploughed in the event of heavy snowfall, 5cm +. This network will be driven in both directions on all roads with only the nearside lane being driven on dual carriageways/multi-lane roads.

The Resilient Winter Network is based on the Resilient Network has regard to:

- Connectivity between major communities;

- Links to the strategic highway network;
- Connectivity across authority boundaries where appropriate
- Links to transport interchanges;
- Access to emergency facilities including Fire and Rescue, Police, Ambulance Services and Hospitals;
- Links to critical infrastructure (ports, power stations, water treatment works etc.);
- Principle public transport routes, access to rail and bus stations, and to bus garages and other depots; and
- Other locally important facilities.

Given the scale of financial and other resources involved in delivering the Winter Service, it is not considered reasonable either to:

- Provide the service on all parts of the network; and
- Ensure carriageways, footways and cycle routes are kept free of ice or snow at all times, even on treated parts of the network.

Notes

- 1 For operational reasons gritting routes may not treat up to and beyond a main gate or entrance*
- 2 Hospital car parks may be treated as part of gritting operations if instructed by the Head of Local Highways Operations or Winter Service Manager (see Annex B).*

ANNEX B ACTION DECISION GUIDANCE

The following policy guidance is issued to assist the Decision-Makers and other nominated decision-makers.

Confidence in forecast

Forecast of hazards is now given a 'confidence' rating. 'High' and 'Moderate' ratings should generally result in planned salting whilst 'Low' confidence should normally result in 'Standby' situations with a reassessment as appropriate. Reassessment is no longer undertaken by site inspection but by using the ICECAST system and other forecast information.

Timing of salting

Hazards, other than snow, predicted to occur before midnight should ordinarily result in salting being undertaken in the evening. Wherever possible this will be undertaken after the evening peak traffic flow but must be completed before the predicted onset of the hazard, even if this means salting before the peak traffic flow begins.

Hazards other than snow, predicted to occur after midnight should normally result in salting in the early morning; however, salting must be completed before the predicted onset.

Salting for snow should be timed for completion just before its onset.

Salting should be delayed until any forecast rain has ceased unless rain is predicted during periods of freezing.

Residual salt

The Decision Maker may take account of the presence of residual salt in making their decision.

Impact on normal working

The Decision-Makers will be aware that timing affects an Operative's availability for normal work under the Working Time Directive. In general disruption will be negligible if salting is carried out at 18.00 hrs.

These matters should be considered wherever possible but not at the expense of safety.

All decisions require continuous monitoring, recording and review.

SALTING DECISION MATRIX

Salting Decision Matrix	Road Surface Temperature - may fall below freezing	Road Surface Temperature - expected to fall below freezing				
		<u>No Rain, No Hoar Frost, No Fog</u>	<u>Expected Hoar Frost, Expected Fog</u>	<u>Expected Rain before freezing</u>	<u>Expected Rain during freezing</u>	<u>Possible Rain, Possible Hoar Frost, Possible Fog</u>
Wet	Salt before frost	Salt before frost	Salt before frost	Salt after rain stops (See note C)	Salt before frost (See note D)	Salt before frost
Wet Patches	Salt wet patches before frost (See note A)	Salt wet patches before frost (See note A)	Salt wet patches before frost (See note B)	Salt after rain stops (See note C)	Salt before frost (See note D)	Salt before frost
Dry	No action (See note A)	No action (See note A)	Salt before frost (See note B)	Salt after rain stops (See note C)	Salt before frost (See note D)	Supervisor to make decision based on latest data and local knowledge, crews stood-by in depots awaiting instructions
Pre-salted within last 24 hours with no rain since	No action (See note A)	No action (See note A)	Supervisor to make decision based on latest data and local knowledge (See note A)	Salt after rain stops (See note C)	Salt before frost or Supervisor to make decision based on latest data and local knowledge, crews stood-by in depots awaiting instructions (See note D)	Supervisor to make decision based on latest data and local knowledge, crews stood-by in depots awaiting instructions

Notes

- A. Possibility of water running across carriageways washing off previously deposited salt, from fields for example. Monitor and consider salting at other times e.g. evenings and mornings
- B. Hoarfrost may result in considerable deposits of frost, generally in early morning. Salt deposited prior to onset may be dispersed and thus become non-effective. Ideally treat just as hoarfrost is forming but it is recognised this is not always possible. May require salting on a dry road prior to, and as close as possible to, the expected onset of the condition. Where hoarfrost is forecast at other times then timing of salting operations may need to be adjusted accordingly
- C. If, under these conditions, rain has not ceased by early morning then crews should be called out and action initiated as the rain ceases
- D. This is a most serious condition as rain will freeze on contact with running surfaces and full pre-treatment is required even on dry roads. Close and continuous monitoring is required throughout the danger period
- E. Weather warnings are often qualified by altitude. Different actions may be required from various depots

Annex C

Recommended Spread Rates – Dry Salting (gram/m²)

Spreader Capability

Road surface temperature (RST) when frost/ice is predicted	Dry/Damp Road	Wet Road
At or above 1.0°C	8	8
-1.1°C to -2.0°C	8	8
-2.1°C to - 3.0°C	8	13
-3.1°C to -4.0°C	9	17
-4.1°C to -5.0°C	11	21
-5.1°C to -6.0°C	15	30
-6.1°C to -7.0°C	15	30
-7.1°C to -10.0°C	20	40
-10.1°C to -15.0°C	28	56

Annex D



