

WINTER SERVICE POLICY

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FOREWORD

This document sets out the Council's policy and standards for its winter service.

This policy will be accompanied by operational plans and procedures containing the arrangements in place to deliver the policy, and detailed route plans showing how the roads included in the precautionary salting network will be treated.

1. Introduction

1.1 Winter service

The winter service is not an emergency service in the traditional sense in that low temperatures, ice and snow are regular and frequent occurrences. In these circumstances the winter service is subject to the same regime of planning and reviews as other aspects of the highway maintenance regime.

Although a specialised area, the winter service is a significant aspect of network management both financially and in terms of its perceived importance to users. It can also have significant environmental effects and the organisation of the service has considerable implications for the overall procurement and operational management of other highway maintenance services. This document should therefore be read in conjunction with the other documents which make up the wider infrastructure asset management framework.

1.2 Purpose, objectives and statutory basis

The winter service can contribute significantly to other highway maintenance objectives set out in the infrastructure asset management framework as follows:

Safety

- ❖ The procedures detail statutory obligations and users' needs. Safety is a prime consideration for winter service.

Serviceability

- ❖ Maintaining availability and reliability of the highway network is a key objective for the winter service and one where user judgements of performance will be immediate rather than longer term.

Sustainability

- ❖ Low temperatures and the formation of ice can cause serious damage to the fabric of running surfaces and the winter service can therefore make an important contribution to whole-life costs.

Given the scale of financial and other resources involved in delivering the winter service and the obvious difficulties in maintaining high levels of plant utilisation for specialist equipment it is not practicable either to:

- ❖ provide the service on all parts of the network; or
- ❖ ensure running surfaces are kept free of ice or snow at all times, even on the treated parts of the network.

Due to these limitations it is particularly important to:

- ❖ develop policies and operational plans defining the extent of the service, based on principles of risk assessment;

- ❖ ensure that the policies and plans are widely known and understood especially by users;
- ❖ ensure that relevant advice is made available on the safe use of the network; and
- ❖ continually monitor performance during service delivery and respond effectively to changing conditions or network incidents.

The statutory basis for winter service was revised by the Secretary of State for Transport in the Railways and Transport Safety Act (2003) which came into force on 31 October 2003.

Section 111 states:

After section 41(1) of the Highways Act (1980) (duty of highway authority to maintain highway) insert - "(1A) *In particular, a highway authority are under a duty to ensure, so far as is reasonably practicable, that safe passage along a highway is not endangered by snow or ice.*"

The Department for Transport has advised that it is for the Courts to decide what is reasonably practicable. However, the Department strongly recommends that local highway authorities continue to carry out winter maintenance in accordance with relevant national guidance.

The national guidance document a '*Well-managed Highway Infrastructure: A code of practice*' was revised in October 2016. The Council has reviewed this version and has implemented where required any changes to the policy and procedures.

Separately, adherence is made to the following:-

- increase salt holding at the beginning of the season to a benchmark level equating to 48 salting runs at a spread rate of 20g/m² as recommended in the final report *The Resilience of England's Transport Systems in Winter* published in October 2010;
- development of a minimum salting network where conditions exist which require a reduction in salt usage. This is in line with the UK Roads Liaison Group's recommendation following the severe weather in February 2009

2. SALTING

2.1 Precautionary salting

2.1.1 Precautionary salting network

The precautionary network has been developed to include consideration of the following roads:

- ❖ most heavily-trafficked roads in the county based on the maintenance hierarchy and resilient network developed for the Highway Maintenance Manual;
- ❖ wider transport policy such as abnormal load routing
- ❖ footway and cycleway requirements
- ❖ access roads to sites of strategic importance not included above, including but not limited to hospital minor injury units, health centres, major transport interchanges and most emergency service stations;
- ❖ access roads to all of the county's public and private secondary schools;
- ❖ public transport links
- ❖ access to main industrial and business centres

The precautionary network comprises about 1400km of roads, identified on the individual routes included within the detailed operational procedures. Each route has been designed to ensure that it can be completed within a treatment time of 3 hours for normal salting activities and to maximise route efficiency.

2.1.2 Minimum salting network

Following the severe weather in February 2009, the UK Roads Liaison Group recommended that all highway authorities develop a minimum salting network for contingency purposes where the conditions exist which require a reduction in salt usage. This will take effect in critical situations where there is a need to conserve salt stocks.

The minimum network comprises 646km of roads identified on individual routes included within the operational procedures. The minimum network represents 45% of the precautionary salting network.

2.1.3 Adjacent highway authorities

For reasons of route integrity, sections of Devon County Council's road network as detailed in the operational procedures are salted by Cornwall Council.

2.1.4 Exceptions

It should be noted that whilst the principles set out above have been used to determine the precautionary salting network, there remain short sections of road that would otherwise be included in the precautionary network which it is not practicable to include due to width and/or weight constraints.

Network Rail level crossings have equipment which is prone to signal failure when solutions high in salt exist. Lengths of road on the precautionary network between the STOP lines at level crossings will not be salted.

Known problems locations which are affected by significant gradients, exposed areas and other topological factors including climatic and thermal capacity differences within the area are dealt with by exception. Such exceptions must demonstrate a regular reactive response history which is best served by being added to the precautionary network AND only where an existing precautionary salting route can accommodate the additional length without impacting upon policy requirements.

2.2 Salting of other roads and requests for treatment

The Council will provide a reactive service to other roads when it is satisfied that the precautionary network is adequately treated. Should prolonged periods of cold weather occur, consideration will then be given to taking measures necessary to treat additional roads.

2.3 Salting of footways and cycleways

2.3.1 Precautionary salting

Precautionary salting of footways and cycleways will not be undertaken, but a reactive treatment of category 1 and 2 footways (in accordance with the hierarchy developed in the Highway Maintenance Manual) will be undertaken when the criteria in 2.3.2 apply.

2.3.2 Reactive salting

Reactive salting of footways and cycleways will be undertaken when the following apply:

- ❖ overnight forecast temperatures are below zero, and the forecast period of freezing extends beyond 10am (based on detailed forecasts);
- ❖ footway surfaces are likely to be damp or wet (based on detailed forecasts); and
- ❖ the deployment of the resources to undertake this work will not compromise the provision of the winter service to the precautionary salting network.

Should snow clearance be required from footways and cycleways, this will be undertaken in conjunction with snow clearance from carriageways, on a risk-based approach.

3. INFORMATION MANAGEMENT

3.1 Weather forecasting

During the period 1st October – 30th April the following detailed weather forecast information is provided by a specialist road weather forecasting provider:

- ❖ Preliminary forecast - issued in the morning, detailing likely weather for the next 24 hours with a diagnostic report on the ice detection system.
- ❖ 24 hour text forecast - detailed lunchtime forecast setting out the general synopsis, alert states and hazards with forecast minimum temperatures for the four weather domains.
- ❖ 2-5 day text forecast - detailed overview of the above for the next 2-5 days.
- ❖ Forecast groups - site specific forecasts for a selection of forecast sites. Each forecast site has ice detection equipment.
- ❖ Other forecast information - Radar, satellite and other predictive tools.
- ❖ Forecast updates - As required.

The forecasting organisation provides a 24/7 consultancy service to ensure that the most appropriate treatments are planned. This consultancy service ensures forecasts are updated should the overall situation change.

3.2 Ice detection system

Cornwall Council maintains a network of ice detection equipment which monitors:

- ❖ road surface temperature;
- ❖ road depth temperature (not all sites);
- ❖ air temperature;
- ❖ wind speed and direction; and
- ❖ surface condition.

Site-specific forecasts are provided for selected out stations. The locations of this equipment are detailed in the operational procedures that support this policy.

In addition data from the Highways England ice detection sites on the A30 and A38 Trunk Roads is available.

3.3 Interpretation of weather forecasts

In order to plan treatments, forecasts will be interpreted to determine the appropriate action. Training is provided to key decision makers. On the basis of the forecast the following decisions will be made:

- ❖ need for and extent of any proposed action;
- ❖ timing of any proposed action; and
- ❖ arrangements for updates and/or monitoring of conditions.

3.4 Weather domains

The county has been divided into discrete weather domains for operational purposes, where the factors influencing the weather and minimum temperatures are consistent. These are used to identify different risk levels across the road network.

4. RESOURCE AND OPERATIONS ISSUES

4.1 Responsibility

The responsibility for decision making is set out in the detailed operational procedures that support the policy set out in this plan.

4.2 Treatments

The target treatment time for a route is 3 hours. This is the time from the lorry starting its first salting route to completing salting on its prescribed route. (It should be noted that the lorry may then return to depot.)

In normal circumstances the aim is to complete salting to the precautionary route at least 1 hour before the predicted time of freezing.

Lorry capacity is such that at spread rates in excess of 20g/m² it may be necessary to return to the depot to reload. In circumstances where this proves necessary the need to allow additional time to complete a route will be considered. In some cases it may be operationally more efficient to undertake the route twice spreading at a lower rate.

Where winter maintenance activities are required without advance notice the response time is 1½ hours. This is the maximum time from instructing the salting to the commencement of the salting route.

4.3 Responses and actions

A variety of actions may be instructed depending on climatic conditions, previous treatments and the condition of the road network. The decision-making tool in the operational procedures that support this policy should be followed. These include:

No planned action

No action required.

Monitoring

Where the forecast indicates temperatures close to freezing or varying surface conditions a monitoring procedure will be followed.

Inspect and Treat

Patrol and inspect to identify the extent of wet patches requiring treatment, or to verify that previous treatments have been successful.

Pre-salt

Planned treatment of the precautionary network.

4.4 Reports of freezing conditions

It is inevitable that reports of freezing conditions will be received. Whilst it is generally considered prudent to respond to these if reasonably practicable

this will not be done if the response is likely to compromise the effective planned treatment of the precautionary network.

4.5 Route development

Routes will be developed to ensure that operational efficiency is matched to the location of covered salt supplies, weather domains, and driver locations. In a number of instances alternative starting points are prescribed to ensure the route can be treated in the most efficient manner within the above constraints.

Where pre-planned treatment has been instructed outside normal working hours, drivers may start salting at any point on the prescribed route.

4.6 Treatment

For both ice and snow it is recognised that pre-treatment with a de-icing agent is the most effective course of action. Rates of spread will be in accordance with the treatment matrix guide in the operational procedures.

4.7 Training

Comprehensive training for staff involved in winter service provision is provided.

This includes:

- ❖ winter road meteorology for all key decision makers;
- ❖ winter maintenance awareness for other staff;
- ❖ competency-based training and accreditation for all operatives; and
- ❖ attendance by a selection of senior staff involved in delivery of the winter service at 'Cold Comfort', the industry's annual 'showcase', to keep abreast of national best practice.

5. MATERIALS AND PLANT

5.1 De-icing agents

The Council will use rock salt as a de-icing agent.

All salt will be tested throughout the winter to ensure compliance with the relevant British Standards.

Salt stockpiles will be monitored throughout the year and replenished as required to ensure sufficient salt is held in store.

5.2 Salt storage

Salt is stored at a number of strategically-located depots throughout the county, to ensure that both the response and treatment time can be achieved for the precautionary salting network.

The preferred means of salt storage is in covered barns, which reduces the environmental impact of leachates and improves the quality of handling and spreading.

5.3 Open storage

Open storage will only be used where operational needs require local storage facilities. All open storage will be managed to minimise any adverse environmental impact.

During winter emergencies, temporary stockpiles may be used to ensure adequate service provision. All such stockpiles will be located where the potential environmental impact can be minimised. When the emergency is over these areas will be cleared and reinstated.

5.4 Provision of salt to external bodies

Requests to provide salt to external commercial organisations will usually be refused.

Other Council departments, local councils, public services and the emergency services will be encouraged to develop their own resilience measures prior to the commencement of the winter season. To assist with this the Council will make salt/grit available on a non-profit basis to local councils and other public services.

5.5 Provision of salt bins

Salt bins do not form part of the infrastructure required by the Council in order to fulfil its statutory duty and will therefore not be provided by the Council.

Where Town and Parish Councils have provided their own salt bins in agreement with the Council, these will be filled by the Council at the start of each winter season. Thereafter the Council will provide salt "at cost" to the Town or Parish Council as resources permit.

5.6 Plant

The provision of high-quality maintenance plant is crucial in the provision of a quality service. The current winter fleet comprises the following:

- ❖ 28 road speed related bulk gritters.
- ❖ 28 snowploughs.
- ❖ 2 snowblowers for mounting on hired-in tractors (see 5.8 below).
- ❖ 9 towed gritters.
- ❖ 12 push-along gritters.

5.7 Calibration of spreaders

In the early part of the winter season all equipment will be calibrated to ensure that salt is spread in a consistent manner.

5.8 Hire of plant

In emergencies, areas may require additional plant. This will be ordered and paid for through the term contract.

The Council will seek to employ farmers, agricultural contractors and others who offer the use of their plant and operators during extended periods of snow and pay for them through the term contract.

5.9 Global positioning system (GPS)

GPS will be used to provide information on the location and activity of salting vehicles on the road, which is of benefit for operational and welfare purposes.

This will improve the quality of records kept on actual salting activities, and provide qualitative feedback on the efficiency of route treatment against the prescribed targets.

6. INFORMATION AND PUBLICITY

6.1 General

The Council will provide quality driver information prior to the winter and during adverse conditions to promote road safety and to help to ensure that motorists plan their journeys.

6.2 Pre-winter information

Press releases will be issued indicating the readiness for winter, and timely winter driving advice will be issued during the winter season in response to events.

6.3 During adverse weather

Operational staff will take a proactive role in providing information to the radio stations and other media organisations as work progresses.

For prolonged spells of adverse weather more involvement may be required, and those involved will take an active role in engaging with the media organisations.

6.4 Notification to others

A daily summary sheet showing the forecast conditions and the Council's decision as to what action (if any) is to be taken will be sent to adjoining highway authorities, the emergency services and the media. Details regarding where to find the daily decisions will be published on the Council's website www.cornwall.gov.uk.

7. ADJOINING HIGHWAY AUTHORITIES

The A30 and A38 Trunk Roads in Cornwall are the responsibility of the Highways England.

Good co-operation and exchange of information is essential to ensure a coordinated winter service. It must be noted that occasions will occur where different treatment regimes are planned for the two road networks.

Liaison with Devon County Council, Plymouth City Council and the Tamar Bridge Manager will take place in certain circumstances to ensure consistent treatment on roads of mutual concern.

8. SNOW

8.1 Duty to remove snow

Under Section 150 of the Highways Act 1980 there is a duty placed upon highway authorities to remove accumulations of snow from the highway.

In order to achieve this objective, snow clearance will be undertaken on the following priority basis:

- (1) Precautionary salting network.
- (2) A single access road into larger villages (initially those with a population in excess of 1000).
- (3) Other strategic roads including roads serving:
 - ❖ mainline rail stations.
 - ❖ main bus stations (and bus garages).
 - ❖ emergency services, operational facilities.
 - ❖ main commercial areas in towns.
- (4) Other roads.

Footways in the main urban areas will be cleared by hand as outlined in Policy 2.3 using a risk-based approach.

8.2 Post snow actions

Following snow falls there is an increased risk of flooding and there may be areas of road that have suffered excessive damage. Depending on the severity of the event the following will be considered:

- ❖ Inspect and repair drainage systems to minimise flood risk.
- ❖ Deal with reports of flooding.
- ❖ Advise bridge maintenance staff to inspect bridges and culverts.
- ❖ Review network for extent of frost damage. Carry out remedial works to pre-determined safety standards.

9. WINTER PLANNING

9.1 Review of winter network

In June/July a review of the salted network is undertaken to take account of:

- ❖ network changes;
- ❖ new development patterns;
- ❖ developments in winter service plant and facilities; and
- ❖ developments in winter service practice and legislation.

9.2 Preparation for winter

The winter season is from 1st October – 30th April. However, this will be extended if necessary.

Before the commencement of the winter season the following will be undertaken:

- ❖ Ice detection system will be calibrated and maintained.
- ❖ Gritting fleet will be in place including renewals.
- ❖ Ploughs will be serviced and accessible.
- ❖ Winter standby rotas will be agreed.
- ❖ All gritting vehicles and routes will be adequately resourced with accredited operatives.
- ❖ Calibration of gritting fleet will be arranged before the end of October.
- ❖ Salt stockpiles will be surveyed and replenished to agreed storage profile.
- ❖ Forecast arrangements will be agreed, including communication protocol.
- ❖ Contingency plans will be agreed and put in place for snow removal.
- ❖ Contact details for contractors able to assist in severe conditions will be confirmed.

9.3 Winter review

The effectiveness of the winter service will be monitored on the following basis:

- ❖ forecasts – accuracy and timeliness;
- ❖ response and treatment times;
- ❖ salt usage;
- ❖ financial monitoring; and
- ❖ reported road traffic collisions.

9.4 Post winter review

On completion of the winter season a review of the overall effectiveness and efficiency of the season's activities will be undertaken. This will involve:

- ❖ meeting with forecast provider; and
- ❖ a meeting to review performance and develop an action list for inclusion in next year's winter service policy and procedures.

10. OTHER EMERGENCIES/ADVERSE WEATHER

10.1 General

Most emergencies that affect a highway authority tend to be weather related and include:

- ❖ high winds;
- ❖ high rainfall and flooding; and/or
- ❖ high temperatures.

In addition other potential emergencies include dealing with road accidents, spillages, land slips and structural collapses. There will also be a requirement to work with Cornwall Council service providers, Resilience & Emergency Management and other professional partners via the Local Resilience Forum (LRF), Tactical Co-ordinating Group (TCG), based in Truro, feeding into the Strategic Co-ordinating Group (SCG) based at Middlemoor, Exeter.

10.2 Planning for emergencies

The preparation for emergencies involves:

- ❖ arrangements for standby and out of hours calls;
- ❖ arrangements for responding to incidents through standby rotas;
- ❖ 24 hour emergency phone line (provided by Critical Control out of normal working hours);
- ❖ facilities to open up operational centres;
- ❖ weather consultancy service; and
- ❖ liaison with other agencies, including:
 - emergency services;
 - Environment Agency;
 - Highways England (and its agent/contractors);
 - utility companies; and/or
 - media.

10.3 Priorities for emergencies

During an emergency, requests for action will often exceed the capacity to deal with them with the resources available. In these circumstances priority will be given to:

- (1) Road safety issues on the most important roads (based on winter precautionary salting network).
- (2) Threats of damage to property.
- (3) Other requests for action.

10.4 Management of emergencies

In the event of emergency situations the Council's emergency management procedures will take effect, and the winter service operations will fall under the direction of a co-ordinated approach alongside emergency services.

When an emergency situation or incident is declared, that exceeds our resources and/or impacts our professional partner services, then a Tactical Co-ordinating Group (TCG) will be convened and a decision made as to whether a Strategic Co-ordinating Group (SCG) is required. These groups are normally chaired by a Police Incident Commander however, they can be chaired by the Executive representative of the most appropriate agency/organisation. Recovery actions are also led by the Local Authority.

Communications will be co-ordinated and provided through the Council's communication resource and processes, and they will liaise with the professional partner agencies Communications teams. The lead agency will have primacy over communications and joint message dissemination.