

Kent County Council

Winter Service Policy

Highway Operations Policy for 2019/20 Winter
Service Period

HTW CV
V1. Sept 2019 C. Valentine



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1. INTRODUCTION

1.1 Winter Service - Statutory Duty

1.1.1 The statutory basis for Winter Service in England and Wales is Section 41(1A) of the Highways Act 1980, modified on 31st October 2003 by Section 111 of the Railways and Transport Act 2003

“(1A) In particular, a highway authority is under a duty to ensure, so far as is reasonably practicable, that safe passage along a highway is not endangered by snow or ice.

1.1.2 The County Council recognises that the winter service is essential in aiding the safe movement of highway users, maintaining communications, reducing delays and enabling everyday life to continue. It is very important to both road safety and the local economy. The winter service that the County Council provides is believed to be sufficient so far as is reasonably practical to discharge the duty imposed by the legislation.

1.1.3 The County Council, as highway authority, takes its winter service responsibilities extremely seriously. However, it is important to recognise that the council has to prioritise its response to deal with winter weather due to the logistics and available resources.

1.1.4 Highway Operations provides the winter service through a contractual arrangement between Kent County Council and Amey plc.

1.2 Winter Service Standards

1.2.1. In order to respond as quickly and efficiently as possible to its responsibilities Highway Operations has adopted policies and standards for each of the winter service activities and these are detailed within this document. The operational details for the winter service activities in Kent are detailed in the Winter Service Plan 2019/20 that complements this Policy Document.

1.2.2 Highway Operations provides a winter service which, as far as reasonably possible, will:

- Minimise accidents and injury to highway users, including pedestrians, and preventing damage to vehicles and other property
- Keep the highway free from obstruction and thereby avoiding unnecessary hindrance to passage

1.3 **County Council Maintained Highways**

1.3.1 KCC Highway Operations delivers the winter service on Kent County Council maintained highways.

1.3.2 Medway Council treats designated roads totalling 37.17km of the Kent network on behalf of Kent County Council. These roads are adjacent to and adjoining the Medway network on the north Kent borders. In return KCC provides Medway Council with the road weather forecast, access to our road weather station network and annual winter decision making training. A contract is in place detailing the arrangement.

1.4 **Motorways and Trunk Roads**

The Department for Transport (DfT) is the highway authority for motorways and all-purpose trunk roads in Kent and Highways England acts for the DfT in this respect. Responsibility for the operational maintenance of motorways and trunk roads lies with Highways England. Highway Operations therefore has no responsibility for winter service activities on these roads. However, close liaison exists between Highways England contractors over action taken during the winter service operational period within respective areas of responsibilities.

2. **WINTER SERVICE OBJECTIVES**

2.1 **Salting**

- 2.1.1
- To prevent the formation of ice on carriageways (precautionary salting)
 - To facilitate the removal of ice and snow from carriageways and footways (post salting).

2.1.2 **Roads to be Included within Primary Precautionary Salting Routes**

Routine precautionary salting will be carried out on pre-determined primary precautionary salting routes covering the following roads:

- Class 'A' and 'B' roads
- Other roads included in the top three tiers of the maintenance hierarchy as defined in the Kent Highway Asset Maintenance Plan. These are termed Major Strategic, Other Strategic and Locally Important roads.

- Other roads identified by Highway Managers (based on local knowledge and experience and input from relevant local stakeholders including district and parish councils), that are particularly hazardous in frosty/icy conditions.

2.1.3 It would be impractical and financially draining to carry out precautionary salting of footways, pedestrian precincts or cycle ways and therefore no provision has been made. However, there will be a certain amount of salt overspill onto footways and cycle ways when precautionary salting is being carried out on adjacent carriageways. Post salting of footways and cycle ways will be carried out on a priority basis during severe winter weather, as resources permit.

2.2 Minimum Winter Network

In the event of a prolonged snow event or other circumstances leading to a shortage of resources including salt, sand and vehicles, precautionary salting will be limited to the main strategic network, i.e. all A and B roads and some other locally important roads as identified in the highway network hierarchy. Essentially, these equate to the current primary routes minus the local roads and roads that go through estates etc.

2.3 Snow clearance

The only effective way to remove more than a few millimetres of snow is by ploughing. The purpose of ploughing is to move as much snow as possible away from the road surface as is practical for the given conditions though it will not always be possible to remove snow right down to the road surface

- 2.3.1
- To prevent injury or damage caused by snow
 - To remove obstructions caused by the accumulation of snow (section 150 of the Highways Act 1980)
 - To reduce delays and inconvenience caused by snow
- 2.3.2 Snow clearance on carriageways will be carried out on a priority basis as detailed in paragraph 6.2.
- 2.3.3 Snow clearance on certain minor route carriageways will be carried out by local farmers and plant operators, who are under agreement to the County Council, using agricultural snow ploughs and snow throwers/blowers. Snow clearance on other minor route carriageways will be carried out as resources permit. Some minor routes and cul-de-sacs will inevitably have to be left to thaw naturally.

- 2.3.4 Snow clearance on footways and cycle ways will be carried out on a priority basis as detailed in paragraph 6.3, utilising Highway Operations staff and district council staff where agreements exist.

2.4 Roadside Salt Bins

Salt Bins are provided to give motorists and pedestrians the means of salting small areas of carriageway or footway where ice is causing difficulty on roads not covered by primary precautionary salting routes.

3. WINTER SERVICE GENERAL

3.1 Winter Service Contracts

- 3.1.1 Winter service in Kent is included within the Term Maintenance Contract awarded to Amey plc. This contract was awarded in 2011 and is currently in place until 2020.

3.2 Winter Service Season

- 3.2.1 In Kent the weather can be unpredictable, and the occurrence and severity of winter conditions varies considerably through the season, and from year to year. To take account of all possible winter weather the County Council's Operational Winter Service Period runs from mid-October to mid-April. This year the season runs from the 25th October 2019 to the 25th April 2020. The core winter service operates between December and February and increased salting runs are planned for this period.

3.3 Salt usage and alternatives to Salt

Rock Salt will be used as the de-icing material for precautionary and post salting. H&T uses a pre-wet system which improves the effectiveness of treatment by reducing particle distribution, increasing adherence to the surface and increasing the speed of anti-icing or de-icing action. Dry salt is also used in appropriate conditions including when there is severe snow and ice.

In cases of severe snowfall, alternatives to salt will be used including sharp sand and other forms of grit, including a salt/sand mix up to 50/50 proportion.

- 3.3.1 A number of alternative materials to salt are now available which can be used for the precautionary and post treatment of ice and snow. The cost of these is extremely high and there are also environmental

disadvantages associated with most of them. However, developments are being made in this area, with some authorities in the UK now using liquid and brine treatments. Liquid treatments will be used on a few bridge decks in the county. Salt will for the time being, remain in use throughout Kent for the precautionary and post treatment of snow and ice.

- 3.3.2 A brine trial as started during the 2016/17 winter service period and will continue in the 2019/20 season. This will ensure that adequate data can be gathered to enable decisions on the suitability of brine only treatments for pre-cautionary treatment on parts of the Kent road network. Selected routes will be treated with a brine only solution. The trial is being supported by the Transport Research Laboratory and the site will be continuously monitored throughout the season. In the event of snow or heavy ice, salt will be used on these routes. Additionally, if during the trial the efficacy of the brine treatment is in any way unsatisfactory, pre wet and/or dry salt will be used.

3.4 **Winter resilience standard**

At the start of the winter service season H&T will have 23,000 tonnes of salt in stock in depots around the county. National guidance to local authorities suggests a resilience benchmark of 12 days/48 runs i.e. the authority would be able to continuously salt its winter network during its core winter period for 12 days. This equates to 16,800 tonnes therefore the level of salt in stock ensures that this number of runs can be carried out.

4. **WEATHER INFORMATION**

4.1 **Weather Information Systems**

- 4.1.1 An effective and efficient winter service is only possible with reliable and accurate information about weather conditions, at the appropriate times in the decision-making process. Highway Operations utilise the best weather forecast information currently available allied to the latest computer technology to ensure that decisions are based on the most accurate data available at the time. The current weather forecast provider is Met Desk. The ice prediction service is provided by Vaisala.

4.2 **Weather Reports**

4.2.1 During the operational winter service period Highway Operations will receive detailed daily weather forecasts and reports specifically dedicated to roads within Kent.

4.3 **Winter Duty Officers**

4.3.1 Experienced members of staff from KCC Highway Operations will act as Winter Duty Officers, throughout the operational winter service period, on a rota basis. The Officer on duty is responsible for the following:

- Receiving forecast information from the forecasting agency
- Monitoring current weather conditions
- Issuing countywide salting instructions for primary and secondary routes
- Issuing the Kent Road Weather Forecast (see para. 4.3.2)
- Recording all actions taken

4.3.2 The Kent Road Weather Forecast containing information about expected weather conditions together with any salting instructions will be issued daily via the weather forecast provider Met Desk. The Winter Duty Officer will be responsible for issuing forecast updates and any revised salting instructions when necessary. The Kent Road Weather Forecast will be sent to KCC Highway Operations, contractors, neighbouring highway authorities, and other relevant agencies.

5. **SALTING**

5.1 **Planning of Precautionary Salting Routes**

5.1.1 Primary precautionary salting routes will be developed from those lengths of highway that qualify for treatment, whenever ice, frost or snowfall is expected. Primary routes include the roads which will be precautionary salted or cleared when an instruction is given by the Winter Duty Officer. Currently the primary routes comprise a third of the total length of roads in Kent which is 1597 miles, 2571 km. Each primary precautionary salting route will have a vehicle assigned which can have a snow plough fixed to it, when required. In times of severe snowfall and/or extreme ice formation, dedicated vehicles will be assigned and instructed by the Winter Duty Officer or Highway

Manager to patrol key strategic routes by driving the route and applying treatment as necessary. Secondary routes have also been developed from other important highways for treatment only during severe winter weather conditions in line with paragraph 6.1.1. This currently equates to 15% of the total road network which is 843 miles, 1357 km.

5.2 **Innovation**

5.2.1 For the 2019/20 season, 23 primary salting routes will be utilizing in cab technology with digitised salting routes pre-programmed into a navigation unit. These will run on identified primary routes.

5.3 **Precautionary Salting**

5.3.1 Precautionary salting will take place on scheduled precautionary primary salting routes on a pre-planned basis to help prevent formation of ice, frost, and/or the accumulation of snow on carriageway surfaces.

5.4 **Post Salting**

5.4.1 Post salting will normally take place on scheduled precautionary salting routes to treat frost, ice and snow that has already formed on carriageway or footway surfaces.

5.5 **Spot Salting**

5.5.1 Spot salting will normally take place on parts or sections of scheduled precautionary salting routes either to help prevent formation of ice, frost and/or the accumulation of snow or as treatment to ice, frost and the accumulation of snow that has already formed on carriageway or footway surfaces. Spot salting may also be carried out on roads and footways, or sections thereof, beyond the scheduled precautionary salting routes.

5.6 **Instructions for Salting of Primary Routes**

5.6.1 Instructions for precautionary salting of primary routes will be issued if road surface temperatures are expected to fall below freezing and in line with the KCC winter treatment instruction matrix detailed in the KCC Winter Service Plan 2019/20.

5.6.2 Instructions for precautionary salting of primary routes will also be issued if snowfall is expected.

5.6.3 The Winter Duty Officer will issue routine instructions for precautionary salting of primary routes, for the whole of Kent, by means of the Kent Road Weather Forecast via Met Desk web-based system.

- 5.6.4 Observational data produced by sensors placed under the Smart Winter project will be used to validate pre-salting decisions.

The Winter Duty Officer or Highway Manager may issue instructions for post salting and spot salting.

6. SNOW CLEARANCE

6.1 Instructions for Snow Clearance

6.1.1 The Winter Duty Officer and/or the Highway Manager nominated representatives are responsible for issuing snow clearance instructions. Snow clearance will initially take place on scheduled primary precautionary salting routes, based on the priorities given in para. 6.2.1. Subsequently, when all primary routes are treated and if resources permit, snow clearance will take place on secondary salting routes and other roads, and footways, on a priority basis.

6.1.2 Snow ploughing shall not take place on carriageways where there are physical restrictions due to traffic calming measures, unless it has been deemed safe to do so following a formal risk assessment and a safe method of operation documented.

6.1.3 Where hard packed snow and ice have formed and cannot be removed by ploughing, a salt/sand mixture or other appropriate grit material will be used in successive treatments. This aids vehicular traction and acts to break up the snow and ice.

6.2 Snow Clearance Priorities on Carriageways

6.2.1 Snow clearance on carriageways should be based on the priorities given below:

- A229 between M20 and M2, A249 between M20 and M2, A299, A260 (Whitehorse Hill & Spitfire Way) and the B2011 (Dover Hill), A252 Charing Hill, A251 Faversham Road, A252 Canterbury Road to the A251 junction/roundabout at The Halfway House at Challock, (NB: continuous treatment & clearance will be carried out in the event of a snow emergency)
- Other "A" class roads;
- All other roads included within primary precautionary salting routes;
- One link to other urban centres, villages and hamlets with priority given to bus routes;
- Links to hospitals and police, fire and ambulance stations;

- Links to schools (in term time), railway stations, medical centres, doctor's surgeries, and care homes, cemeteries, crematoria and industrial, commercial and shopping centres
 - With the approval of Highway Manager, other routes as resources permit.

6.3 Snow Clearance Priorities on Footways

6.3.1 Snow clearance will be carried out on footways where practicable, based on the priorities given below:

- One footway providing access to shopping centres, railway stations, bus stops, hospitals, medical centres, doctors surgeries, care homes, industrial and commercial centres and on steep gradients elsewhere and in the immediate vicinity of schools (in term time).
- One footway on main arteries in residential areas and the second footway in and around local shopping centres;
- With the approval of Highway Managers, other footways, walking bus routes and cycle ways as resources permit;
- District council staff will be commissioned to clear agreed priority footways in their local areas. Arrangements are in place between the Director of HT&W and district council Chief Executive Officers.

6.4 Agricultural Snowploughs for Snow Clearance

6.4.1 Agreements are in place whereby snowploughs are provided and maintained by Highway Operations and assigned to 114 local farmers and plant operators for snow clearance operations, generally on the more rural parts of the highway.

6.4.2 For 2019/20 a trial will be carried out in Sevenoaks and Maidstone involving some farmers treating parts of the secondary routes identified by the local district manager in addition to their pre-arranged routes utilising ploughs and towable spreaders spreading salt provided by Kent County Council.

6.5 Snow Throwers/Blowers for Snow Clearance

6.5.1 KCC Highway Operations also has several snow throwers/blowers, which are allocated to operators on a similar basis to the arrangements for agricultural snowploughs.

7. SEVERE WEATHER CONDITIONS

7.1 Persistent Ice on Minor Roads

7.1.1 During longer periods of cold weather Highway Managers may instruct salting action to deal with persistent ice on minor roads which are not included within the precautionary salting routes and invoke arrangements with district and parish councils to take action in their local area. Such instruction will only be issued when all primary routes are clear and if resources permit.

7.2 Ice and Snow Emergencies

7.2.1 During prolonged periods of severe and persistent icing, or significant snow fall, delegated officers may declare an ice or snow emergency covering all or part of the County. In this event Highway Managers will establish a "Snow Desk" usually within the Highway Management Centre and implement a course of action to manage the situation in either of these events.

8. ROADSIDE SALTBINS

8.1 Provision of Roadside Salt Bins

8.1.1 Roadside salt bins can be sited at potentially hazardous locations for use by the public, to treat ice and snow on small areas of the carriageway or footway.

8.1.2 Salt bins will be filled using a mixture of sharp sand or other grit material and salt and will be filled at the beginning of the winter season. In the event of severe weather further refills will be carried out as time and resources permit.

Assessment criteria for installing a new salt bin have been devised and are shown at Appendix A. The form will be used by Highway Operations staff to assess requests from parish councils, community groups etc. Once the site assessment has been made and the decision taken to install a bin the local Highway Steward will establish the best location for the bin. This will include safe access to the bin for use and filling as well as proximity to the area of the road or pavement where the salt is needed. Whilst aesthetic factors, such as visibility of the salt bin from adjacent properties will be considered, the priority is to ensure safe access and use of the salt bin. In cases where there is local concern on the siting of a bin the Highway Steward will liaise with the local County Member and Parish Council to seek a consensus.

- 8.1.3 A sum of money will be allocated from Highway Operations to provide these salt bins. All KCC salt bins are labelled. From October 2019 all salt bins will have a unique number that will be utilised by the contractor for filling and will assist members of the public to accurately report empty bins.

8.2 Payment for salt bins

- 8.2.1 Once a salt bin has been approved by the assessment criteria, the cost of installation, filling and maintenance will be borne by Highway Operations.

- 8.2.2 Additionally, one tonne bags of a salt/sand mix will be provided to parish councils who request them at the start of the winter season for use in their local area.

8.2.3 Combined Member Grant

Members can purchase salt bins using their Combined Member Grant in line with the usual application process.

8.2.4 Parish councils

- 8.2.4.1 Parish councils are permitted to purchase salt bins and place them on the highway once a suitable location has been approved by a qualified engineer from Highway Operations. These salt bins ideally should not be yellow and should be clearly identified by a label as being the property of the parish council. Highway Operations will have no obligation to fill or maintain these salt bins. However, the Highway Manager may agree to refill parish-owned salt bins upon request, subject to availability of salt and staff resources and the payment by the parish of an appropriate charge.

9. BUDGETS

9.1 Winter Service Budget

9.1.1 The budget for the annual operational winter service period is based on salting the primary precautionary salting routes on 66 occasions. The main budget is managed by the Head of Highways Asset Management as a countywide budget.

9.1.2 Any future winter service budget underspend will be treated as a committed roll forward, so that additional funding is available in the following financial year for the pressures a mild winter places on highway soft landscaping maintenance.

9.2 Ice and Snow Emergencies

9.2.1 There is no specific budget allocation within Highway Operations for ice or snow emergencies. The cost of dealing with periods of icy conditions or significant snowfalls will be met by virement from other planned programmes of work on the highway or from special contingency funds for emergencies.

10. PUBLIC AND MEDIA COMMUNICATIONS

10.1 Neighbouring Authorities and other Agencies

10.1.1 The Kent Road Weather Forecast containing details of the winter service action for Kent will be transmitted daily to neighbouring highway authorities and other agencies so that activities can be co-ordinated regionally.

10.2 The Media

10.2.1 Communicating with communities, businesses and emergency services during winter is essential to delivering an effective service. Local media organisations will be informed when instructions for salting of primary precautionary salting are issued. The Kent County Council Internet site will be updated regularly, and the Highway Management Centre will issue road updates. Social media will also be updated within information.

10.3 Pre-Season Publicity

10.3.1 It is important that the public are aware of and understand the Highway Operations approach to winter service. The Kent County Council website will have practical advice and guidance including information on the location of salt bins and self-help for communities to encourage local action where appropriate. Social media including Twitter and Facebook will also be utilised.

10.4. Publicity during Ice or Snow Emergencies

10.4.1 Liaison with the news media, particularly local radio stations, is of the utmost importance and links will be established and maintained particularly during ice or snow emergencies. Social media will also be used to provide information to news agencies and the public.

Appendix A - SALT BIN ASSESSMENT FORM

Location of Salt Bin	Assessment Date	Assessed by
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Characteristic	Severity	Standard Score	Actual Score
Gradient	Greater than 1 in 15	75	
	1 in 15 to 1 in 29	40	
	Less than 1 in 30	Nil	
Severe Bend	Yes	60	
	No	Nil	
Close proximity to and falling towards	Heavy trafficked road	90	
	Moderately trafficked road	75	
	Lightly trafficked road	30	
Assessed traffic density at peak times	Moderate (traffic group 5)	40	
	Light (traffic group 6)	Nil	
Number of premises for which only access	Over 50	30	
	20 - 50	20	
	0 – 20	Nil	
(vi) Is there a substantial population of either disabled or elderly people	Yes	20	
	No	Nil	
TOTAL			

* N.B. Any industrial or shop premises for which this is the only access is to be automatically promoted to the next higher category within characteristic (V).