

HIGHWAY MAINTENANCE POLICY

LOCAL CODE OF PRACTICE

A GUIDE TO HIGHWAY POLICIES AND PROCEDURES

Highway Risk Management - Winter Gritting Operations



2017/18

Environmental Services

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1. Introduction

This policy is based on the National guidelines as set out in “Well maintained Highways – Code of Practice July 2005 (updated August 2013) (Appendix H) – Winter Service” and the “Well Managed Highway Infrastructure (28 October 2016)

The statutory basis for Winter Service varies in different parts of the UK.

There are some new key issues that are identified within this policy:

In England and Wales Section 41 (1A) of the Highways Act 1980 was modified on 31st October 2003, by Section 111 of the Railways and Transport Act 2003.

The first part of Section 41 now reads:

- “a) The authority who are for the time being the highway authority for a highway maintainable at the public expense are under a duty, subject to subsections (2) and (3) below, to maintain the highway.
- b) (1) 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.”

This is not an absolute duty, given the qualification of “reasonable practicability” but it does effectively overturn previous legal precedence, albeit not with retrospective affect. Section 150 of the Highways Act 1980 still imposes a duty upon authorities to remove any obstruction of the highway resulting from *“accumulation of snow or from the falling down of banks on the side of the highway, or from any other cause”*.

Given the scale of financial and other resources involved in delivering the Winter Service and the obvious difficulties in maintaining high levels of vehicle and plant utilisation for specialist equipment, it is therefore not practically possible either to:

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

In these circumstances, and in order to comply with the changes in legislation, it is therefore necessary to undertake risk assessments to establish which roads and routes should be included in a programme of treatment during inclement weather.

Tameside MBC also undertake the treatment of footways following this same risk criteria.

Key issues that have been taken into consideration are:

- treatment of facilities for road users
- treatment of facilities for walking and cycling
- treatment of facilities for public transport users
- treatment of transport interchanges
- treatment of promoted facilities
- extent of priority for emergency services
- level of service resilience required
- extent of priority for vulnerable users
- extent of priority for key public services and critical infrastructure
- other local circumstances (e.g. bridge decks, safe routes to schools etc.)

1.1 Weather predictions and Management Information

Clear and efficient decision making processes, supported by accurate weather predictions from the Metrological Office (Met Office) and information systems (Vaisala Manager), are the foundation for Tameside's effective Winter Service delivery.

Decision support systems for Tameside MBC include the following:

- Weather forecasts (Met Office)
- Ice detection and Weather Stations information (Foundry Street Dukinfield, Mossley Road Ashton-U-Lyne, Queens Road Manchester and Devil's Elbow Stockport)
- Weather radar, (Met Office) and Information on gritting operations from other Greater Manchester authorities via the AGMA web site.

Decision to salt the highway or not, will be based on the above information, Appendix H guidance and local knowledge. Tameside has appointed a Winter Service Officer (controller), supported by a team of Gritting Officers to help make this decision.

The Winter Service Officer and Gritting Officers will maintain close consultation with other agencies and advisors to help improve the decision making process (e.g. Met office, other LA's).

A decision-making framework, is identified in The Winter Service Operational Plan for guidance.

Note: The quality of decisions made by the Winter Service Officer will be the key factor in determining both the effectiveness, commercial viability of the Winter Service and also how it is perceived by users and residents.

In these difficult circumstances, a 'learning organisation' culture, rather than a tendency to allocate blame, is crucial to the delivery of a best value service.

To be both cost effective and efficient, salt should be spread before ice forms or snow settles on the carriageways. Anticipating these conditions and reacting correctly depends on a mixture of local knowledge and experience, interpretation of the Met Office 'Manchester Boroughs' weather forecast and knowledge of the state of the road and the temperatures at that time. Currently these are based on a 0°C forecast – (*Appendix H criteria currently dictates action at +1°C forecast.*) TMBC after careful consideration have decided to continue with an action level of 0°C.

The greatest safeguard for the protection of the travelling public must, therefore, be to instigate pre-salting treatment. The Met Office 'Manchester Boroughs' forecasts and on-line access systems are now exceedingly accurate, and salting operations can thus be planned and commenced in good time and with some confidence. Advanced arrangements for pre-gritting may be made during the day upon receipt of the forecast and to commence at a time determined from the forecast.

The Council also owns two weather stations, one based in a mean topographical area (Foundry Street, Dukinfield) of Tameside to give an average perspective of the pertaining weather, the other being situated in domain three (3) (Mossley Road, Ashton-U-Lyne). To aid an overall geographical picture we also take information from weather stations based at Devil's Elbow (Stockport) high ground and Queens Road (Manchester) low ground. We have the Vaisala Management software computer package that supports and records the winter maintenance decision making process.

In other situations, an additional aid to decision making would be to undertake an ice patrol where local road temperature readings are undertaken manually. This is included as part of the Operational Plan.

The exact details of this Winter Service policy can also be found on the Council's web site, and updates will be entered as appropriate throughout the winter period to ensure a quality management system of working.

2. Council Resources

Tameside MBC has six multi-lift vehicles with dedicated salt spreading chassis units. Each vehicle has access to polymer snowploughs for use in severe winter conditions. In addition there are two 3 tonne and one 2 tonne Midi Gritter bodies mounted on 7.5 tonne vehicles. The council also has one mobile 'husky' 4 wheel drive units and 3 Multihog vehicles, one used for footway salting and two for brine spraying across the Borough.

There are 370 grit boxes deployed across the whole of the Borough for residents to use as demanded on the highway. We also place out 60 strategic salt piles in rural locations

A team of drivers are employed on shift system rotas to ensure sufficient resources are always available and response times are kept to a minimum. In situations where snow is forecasted over a weekend period extra shifts will be placed on call to cover any eventuality.

In line with good practice Gritting Officers are 6159 City and Guilds Health and Safety, Vaisala systems and Met Office trained.

The City and Guilds Vocational Qualification 6159 for drivers includes all types of winter service vehicles.

Transport Workshops staff are available between 0630 - 2100 Monday to Saturday and 'stand-by' arrangements are in place to deal with any breakdowns outside of their normal operational hours. The Gritting Officer will ensure he/she is aware of the mechanics call-out rota prior to commencement of his/her own duties, this can also be found on Vaisala Manager system.

Salt used for gritting the Boroughs network is stored at Tame Street depot, Stalybridge. Approximately 4,500 Tonnes are stored. 2500 tonnes inside and 2000 tonnes outside protected by sheeting. A partnership arrangement has been developed with Compass Minerals to ensure deliveries are made in a timely manner to maintain sufficient salt stocks even during extreme weather conditions and high salt usage. During a typical winter up to 3,000 tonnes of salt can be deployed on the Borough's highways.

3. Snow and Ice Treatment.

Objective;- to provide a winter service which, as far as reasonably practicable, will permit the safer movement of vehicular traffic on the more important parts of the highway network whilst minimising delays and accidents directly attributable to any adverse weather conditions.

Priority will be given to the following routes, based on a risk assessment and road network hierarchy.

Priority Routes:-

Carriageway Strategic Routes and Main Distributor roads of known susceptibility in adverse conditions, other Carriageway Strategic Routes, Main Distributor and Secondary Distributor (including bus routes) and those with particularly “difficult” characteristics i.e. steep gradients together with footways that fall generally within prestige walking zones, primary and secondary walking routes that are considered important to provide pedestrian route access for the general public (e.g. school routes / transport interchanges / Doctors surgeries locations etc.)

Other Routes: -

Other Strategic routes, linking significant housing and/or industrial estates. These routes are generally remote from typical large mechanical treatments and are treated as conditions; resources dictate or permit **in line with a request from the Head of Service.**

3.1 Response Times

The Council's response time is a maximum of one hour to mobilise resources and the anticipated target treatment time for each Priority route will be within 4 hours from commencement of the gritting routes. Typically all routes should be treated within 4 hours

Invariably the requirement to grit the Council's highway network is based on weather predictions received early morning (with updates at around 11am and early evening around 5pm), therefore the Council will mobilise it's workforce and commence an early evening or overnight gritting service and will endeavour to complete all Priority routes before the road surface temperature (RST) reaches 0°C.

Response times are monitored to ensure we are meeting the criteria set out in section 11 of this document

4. Salt Bins

Salt Bins are provided in areas, which are not normally subject to mechanical treatment, and are located at difficult hilly situations and/or dangerous road junctions. There are approximately 370 locations for these salt bins currently in use. Bins are normally left insitu throughout the year (in order to save on collection and placement costs) these are re stocked within the month of October/November and again after the first major ice/snow event. Ongoing and further re filling of Salt bins is undertaken on a strategic decision. Details of locations and criteria for placement are available on the Council's web site.

5. Method of Operational Service Delivery

During normal working hours it will be the responsibility of the Winter Service Officer to discuss with the Gritting Officer and decide the expected required operations. One Gritting Officer (an ice patrol and/or supervisory experienced officer), will during normal circumstances, be on Stand-By where pre-gritting operations only are expected. However,

the Winter Service Officer will on occasions, supplement the Gritting Service with an additional officer on stand by, to deal with periods of abnormal/severe weather conditions (e.g. where snow fall is expected). Both officers will be called to share duties in order that best value services are provided during these periods. Details are included in the Winter Service Operational Plan.

6. Gritting Officer Rota

The callout rota will be organised with a Gritting Officer together with a reserve officer to be on call at the request of the Winter Service Manager.

7. Ice Patrol

Ice Patrols are undertaken when necessary to:

- Verify accuracy of forecast by comparing actual temperatures (particularly road surface temperatures) against Met. Office graph predictions
- Provide visual check of road surface conditions (dry, wet, snow, ice, wet spots etc.)
- Determine need or otherwise for gritting if not already actioned.
- Determine effectiveness of gritting

Ice Patrol is to be undertaken when directed by the Gritting Officer:

- During a pre-grit of Primary routes when all vehicles have first left the depot, a brief patrol may be undertaken and temperatures recorded at the locations indicated with an asterisk on the ice patrol route sheets. Contact by mobile phone to drivers should be maintained to determine when the patrol should be terminated and a return made to the depot.
- When the forecast does not suggest/demand a pre-gritting operation locally, but there is doubt about the accuracy of that forecast, the Winter Service Officer may instruct the Gritting Officer to undertake an ice patrol between certain hours.
- When, after completion of a priority pre-gritting operation, there is concern that conditions may deteriorate (further advice can be sought by telephone to 'The Manchester Boroughs' forecaster for Tameside at the Met. Office to assist)
- When called by Tameside Control in response to Met. Office update or report of accidents alleged to be due to ice.

Use of the Engineering Service Emergency Call Out officer may also be used at the discretion of the Winter Gritting officer to assist in specific road temperature readings to supplement the weather information available or for any other duty deemed necessary i.e. road closures, driver duties (if trained).

8. Gritting Routes

Copies of gritting routes are available on the Council's Web site and are detailed in The Winter Service Operational Plan.

Each route must be followed strictly in accordance with the schedule unless specifically otherwise instructed by the Gritting Officer to ensure that the full area is covered, these routes will be digitised and GPS guidance will be implemented during 2017/2018 season. The route sign off sheet on the Gritting Officers and must be signed and accurately timed and dated by the driver as a record of treatment. Subsequent treatment will be in priority order. The completed route sheets must be returned to the Winter Service Officer at the end of each duty.

Separate routes may be issued from time to time to deal with spot gritting requirements to roads other than formal priority routes in periods of continuously severe weather. However, this will not be arranged until all priority gritting routes have been attended to or are in control and resources become available.

9. Treatment of Footways

Priority of treatment shall be given (in addition to prestige and main walking routes as laid down in the Council's Highway Network hierarchy). These are split into two Priority routes (see Winter Service Operational Plan). They cover:

- Town Centre Streets/Main Pedestrian Routes
- Shopping Frontages
- Busy Pedestrian Routes
- Hospitals and Doctor's Surgeries
- School Frontages/Routes
- Community Centre frontages/Routes
- Bridge decks
- Steep sections of footways and paths
- Predominately Elderly Residential Areas
- Any agreed priority for vulnerable users

10. 'Transport Weather Manager' (TWM) Weather Forecasts

Arrangements have been made to receive by on-line web access, and/or daily Emails, weather forecast from the Met Office normally received around 07:30, 11:00 and 17:00hrs. This will be made available to the Gritting Officer as a guide and/or weather warning as appropriate.

The graphs received with these forecasts, showing temperature profile curves, should be marked up with the actual road surface temperature readings recorded. This will be a useful guide in determining whether standby crews should be called out as a precaution, or indeed additional crews, if gritting is in progress. Vaisala Manager Software is also used to aid Supervision, Planning, Decision Making and for recording purposes.

Updated Forecasts maybe received from the Met Office during a shift period at any time.

11. Performance Monitoring

The effectiveness of many of the operational issues previously described is measured nationally and locally by a series of performance indicators. The two most significant are:-

- Response Time. This is the period between the operatives being called out from standby at home or from their normal daily duties to vehicles leaving the depot fully loaded to commence gritting. This shall be no greater than one hour.
- Roads Gritted Before Formation of Ice. This is the percentage of occasions that all Priority Routes (including Principal A class Roads) were treated before the formation of ice.

The information to support these measures is gathered from Gritting Officers' reports, Vaisala Manager Software, Drivers routes, Met Office forecasts, etc.

Ice Patrol Reports and Routes can be found at Appendix J.

Additional Information to this Local Code

<i>EngPo_1</i>	<i>Operational Activities for Risk Management on the Highway</i>
<i>EngPo_2</i>	<i>Risk Management Legal Procedures and Policies</i>
<i>EngPo_3</i>	<i>Winter Gritting Local Code of Practice</i>
<i>EngPo_8</i>	<i>Highway Cleansing Activities</i>
<i>Doc1</i>	<i>Well maintained Highways – Code of Practice July 2005 (updated August 2013) – Winter Service”</i>

TAMESIDE MBC 2017/18