



WINTER SERVICE PLAN
FOR THE PERIOD
OCT 2017 – APRIL 2018

ROADS MAINTENANCE DEPARTMENT
MUNICIPAL SERVICES
DUN LAOGHAIRE-RATHDOWN COUNTY COUNCIL

October 2017

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1. Purpose and Scope

Dun Laoghaire Rathdown County Council is responsible for 16km of National Primary and Secondary Roads, 106km of Regional Roads and 561km of Local Primary, Secondary & Tertiary Roads. Motorway (M1 and M50) gritting is being carried out motorway contractors on behalf of Transport Infrastructure Ireland (TII).

Winter maintenance is confined to National Primary (NP) and National Secondary (NS) Routes, Regional routes and 151km of Local roads. The percentages are summarized below:

	Gritted Km	Total Km	%
NP & NS	16	16	100%
Regional	106	106	100%
Local	151	561	27%

The purpose of this document is to identify the processes, procedures and control measures employed by Dun Laoghaire-Rathdown County Council (DLRCC), to ensure that Winter Maintenance works are carried out in accordance with Procedural and Health and Safety requirements.

All members of staff involved with Winter Maintenance shall be fully acquainted with this Winter Maintenance Strategy and will have access to copies of it.

1.1 Precautionary Gritting

DLRCC will endeavour, within the limitations of the available resources, to keep the major traffic routes in a passable condition, to allow commuter traffic to and from work flow efficiently.

It is important to state that a winter gritting operation does not guarantee that a gritted/salted road is free of frost / ice / snow hazards. *It is incumbent on all drivers to adjust their driving style to account for the road and prevailing weather or other environmental conditions.*

In order to do this, DLRCC Roads Maintenance Department spreads salt/grit on these roads before frost, ice or snow is expected (called Precautionary Gritting), this operation of pre-salting is timed, where practicable, to be completed before the onset of snowfall or freezing conditions.

Refer to attached gritting route map.

Each route should take approximately 2 hours to complete gritting during a normal gritting operation (i.e. no snow). Gritting generally takes place at 7pm and / or 5am, although this can change if the weather conditions dictate.

1.2 Emergency Scenarios

If snow or ice settles, during prolonged cold spells and snow fall, precautionary gritting is redundant, snow-ploughing, in addition to salting and gritting is put into action.

Other resources within the Councils control may be employed where possible to clear footways at strategic points within the County. Access routes to schools, DART, LUAS, bus stops etc.

The public and business communities may, in such severe weather events, also clear outside their own properties. It is recommended that any clearing of snow or ice, is carried out in a diligent manner, using shovel and brush to ensure the cleared pathway has sufficient grip and can be used safely by other members of the public.

Dun Laoghaire Rathdown operates an after-hours call service. In emergency situations the Council may be contacted at Pageboy (01)677 8844

1.3 Provision of Salt Boxes in the Glencullen Ward

Salt boxes have been provided in certain rural locations for use by residents to assist with keeping minor roads open.

However, the Road Maintenance Section does not intend to provide salt boxes in estates for the following reasons:

- It is not recommended to apply salt to concrete footpaths as it is corrosive and causes severe damage to them.
- This can lead to substantial reinstatement costs and personal injury claims.
- Salt also damages certain types of flooring

The Road Maintenance Section may not have the resources to keep these boxes filled up.

Salt Bin locations are as follows:

- Boranaraltry Lane
- Brockey Lane
- Fiery Lane
- Devil's Elbow
- Kilmashogue Lane
- Tibbradden Lane
- Ticknock Road(End Of)
- Bearna Way (filled by others)
- Kilgobbin Road
- Assumpta Park
- Barnaslingan Lane
- Corke Abbey
- Woodbrook Glen
- John Keane's Lane (near Blue Light Pub)
- Kingston Estate

1.4 Road Weather Information System

The road condition forecasting system is provided by:

Vaisala TMI Ltd
Vaisala House
349 Bristol Road
Birmingham
Tel No: 0044 (0)121 683 1265
0044 (0)121 683 1269
Fax No: 0044 (0)121 683 1299

The server for the network Winter Forecast System is housed at the Vaisala office in Birmingham.

Vaisala receives daily forecasts from Met Eireann, which are specifically detailed for Local authorities and other agencies. These forecasts are applied to local road conditions, and the results are provided to the Duty Engineers, via a map of the minimum expected road surface temperature and other weather data. The forecasting system polls the weather stations on the network at maximum intervals of one hour. This may be reduced to shorter intervals depending on conditions during the winter season.

The weather stations in the DL RCC area are located at the M50 (Sandyford Master), Ticknock, (Sandyford Slave), and the M11 (Wilford interchange). Predictions developed from weather station data are extrapolated to all other areas using Thermal Mapping.

Access to the Vaisala website is available to all the Duty Engineers, who can use any suitable computer with internet access.

The Duty Engineers assess the forecast information and then advise the relevant personnel, via email and SMS messaging.

Through experience it has been found that the conservative nature of the forecasting system means that a forecast $+1^{\circ}\text{C}$ to -1°C rarely, if ever, manifests in real time. Therefore the Duty engineers will not call out the gritting crews for a forecast within this range. The Duty Engineers may call out the gritting crews to one or more gritting areas, if the temperature predictions fall below -1°C and frost is likely in those areas. The call out decision will be made having considered the forecast, prevailing road conditions (e.g. wet, dry, or residual salt), and local information provided by the relevant Roads Engineers and Inspectors. If there is a reasonable likelihood of frost dissipating before 6am, the Duty engineer is not expected to instruct gritting to be carried out.

2. Depots

DLRCC currently operates Winter Maintenance operations from Ballyogan Depot, which commenced operation in 2012.

3. Health & Safety

DLRCC will ensure, so far as is reasonably practicable:

- Safe and healthy working conditions,
- Safe equipment and systems of work,
- Provision of appropriate information, instruction, training and supervision.

There are 3 Risk assessments in place in relation to Winter Maintenance. These are denoted 006, 006A, and 006B. See Appendix 6.2

3.1 Lone Working

9 of the 10 gritting routes are carried out with the driver operating alone in the cab. Due to the hilly nature of the terrain, the 'mountain' route is carried out with a driver and an assistant. The Inspectors are in ongoing contact with the drivers during gritting operations.

All drivers have access to a mobile phone system in the cab. In the event of an emergency, they will contact the Inspectors on Duty who will organise assistance. In the event that a driver does not return to the Depot within the allotted time for the gritting route; the Inspector will contact the driver by phone to assess the situation. If the driver is not contactable by phone, the Inspector will drive the route to locate the driver, assess the situation and call the emergency services if required.

The introduction of GPS in the vehicles will further assist in providing a safe system of work of the drivers involved.

4. Responsible Persons

The Winter Maintenance coordinator is William Horgan, Senior Engineer

4.1 Winter Service Duty Engineers

NAME	POSITION	LOCATION	PHONE
Ivar Blanker	Senior Executive Engineer	DLRCC Harbour Square	2047039
John O'Connor	Area Engineer	Ballyogan Depot	2904800
Lei Jiang	Area Engineer	Ballyogan Depot	2904800
Eoin Walsh	Assistant Engineer	Ballyogan Depot	2904800
John O'Malley	Assistant Engineer	Ballyogan Depot	2904800

The Winter Maintenance Duty Engineers' Roster is attached. See Appendix 6.3.

4.2 Depot Inspectors

NAME	DEPOT	DEPOT NUMBERS
Jimmy Doyle	Ballyogan	2904800
Declan Briggs	Ballyogan	2904800
Ger Reid	Rochestown Avenue	2024474
Derek O'Toole	Rochestown Avenue	2024474

5.0. Procedures and Rosters

A roster of Duty Engineers to give 24-hour coverage will be agreed to manage information from Met. Eireann and Vaisala. The Duty Engineer will have authority to instruct treatment as required. Consultation with the Winter Maintenance Coordinator will be carried out as necessary.

The Duty Engineer will also ensure plant and personnel are mobilized. The Duty Engineer will instruct the Inspector when a decision to treat has been made. The Inspector will ensure the drivers are instructed and ready to treat the road at the time required. The Inspector will take instruction from the Duty Engineer.

5.1 Duties of the Vaisala Duty Engineer

The Pre-salting Phase will be activated by the Duty Engineer in the event of an adverse weather prediction from Met Eireann and Vaisala services. This is normally issued before 2.30pm in the afternoon.

Pre-salting shall commence at the time determined by the Duty Engineer to ensure the completion of routes before the onset of icy conditions. As the Vaisala forecast and data is available at 2.30 pm therefore it is expected that the callout is given as early as possible particularly on a Friday in order that arrangements can be made.

5.2 Monday – Friday Procedure

- The Duty Engineer checks the Vaisala website and weather forecast before 2.30pm each day. In the event of the forecast of ice conditions the Duty Engineer notifies the Inspectors of routes to be pre-salted and time of commencement.
- The Inspector then notifies the drivers and the Machinery Yard Foreman, on call for that week.
- The drivers proceed to their parking depots at the end of their normal working day and fit the salt spreaders.
- The Inspector notifies the loader driver, proceeds to the Ballyogan salt depot at the end of normal working time, and prepares the depot for loading of salt.
- At the designated time, the drivers will collect their machines, load salt and pre-salt their prearranged routes, on completion the driver will wash down the truck and return the spreader to its parking location.
- The Inspector will be on standby in the event of breakdown.
- From the call out time the Inspector will monitor the operations and in the event of breakdown will call out a fitter, or activate the standby salt spreader which ever is appropriate.

5.3 Weekend (Sat - Sun) and Bank Holidays Procedure

- The pre-salting duty roster is as above
- The Duty Engineer checks the Vaisala website and weather forecast at or before 2.30pm each day.
- In the event of the forecast of ice conditions he notifies the Inspectors of routes to be pre-salted and time of commencement.
- The Inspector notifies the drivers and Machinery Yard Foreman, on call for that week, of the time of callout.
- The Inspector notifies the loader driver, proceeds to the Ballyogan salt depot at the time appointed and prepares the depot for loading of salt.
- The duty drivers proceed to the depot at the appointed time, load salt, drive and grit the assigned routes, and on completion the driver will wash down the truck and return the salt spreader to its parking location.

5.4 Rates of Spread for Precautionary Salting

Precautionary gritting forms the major part of winter operations.

For frost and road surface temperatures at or above -2°C salts shall be spread at 10-15 g/m² dependent on local conditions and the immediate forecast.

If freezing conditions are expected after rain or frost and the road surface temperature is below -2°C spread rates will be increased to 15-30g/m² according to the amount of moisture present and the temperature expected. Unless freezing conditions coincide with rainfall, salting shall be delayed as long as possible to reduce loss of salt by run-off.

If continuous snow is forecast, salt shall be spread at 30-40g/m² according to the anticipated severity of the snowfall. Every effort will be made to ensure enough salt is applied before snow starts to stick to the road to melt the initial snowfall and to provide a wet surface.

The spread rates for precautionary salt treatments are summarised below.

WEATHER CONDITIONS	DEFINITION	SALT SPREAD RATE (GRAM/SQUARE METRE)
LIGHT	Frost and/or light snow	10 to 15
MODERATE	Freezing conditions after rain	15 to 30
SEVERE	Continuous snow	30 to 40

5.5 Treatment of snow already on the road after Precautionary Salting

Snow ploughing will commence on major routes as shown in Gritting Map directed by the Duty Engineer. Each pass of the plough shall be supplemented by an application of salt at a rate as per the table above. Special salting may be necessary to deal with melted water from snow, which may freeze at night, and roads will be monitored for such conditions.

5.6 Treatment of Hard-Packed Snow and Ice

If the previous procedures are carried out successfully then the formation of hard-packed snow should be prevented. However, in cases where hard-packed snow and ice occur and provided that the ice is no more than 20mm thick and the air temperature is below -5°C , then removal shall be carried out by successive salt applications of 20-40g/m².

6. Appendices

6.1 Appendix 1: WINTER GRITTING MAP

6.2 Appendix 2: Risk assessments

6.3 Appendix 3: Duty Engineers Roster.

Winter Service Duty Engineers' Roster for the Period 16th October 2017 to 30th April 2018

Local Authority: **DUN LAOGHAIRE RATHDOWN COUNTY COUNCIL**

Week starting Monday	Duty Engineer's Initials	Week starting Monday	Duty Engineer's Initials	Week starting Monday	Duty Engineer's Initials	Week starting Monday	Duty Engineer's Initials
16/10/2017	IB	11/12/2017	LJ	05/02/2018	JOC	02/04/2018	IB
23/10/2017	IB	18/12/2017	JOM	12/02/2018	LJ	09/04/2018	JOC
30/10/2017	IB	25/12/2017	JOM	19/02/2018	LJ	16/04/2018	LJ
06/11/2017	JOC	01/01/2018	JOM	26/02/2018	JOM	23/04/2018	EW
13/11/2017	JOC	08/01/2018	EW	05/03/2018	JOM		
20/11/2017	JOC	15/01/2018	EW	12/03/2018	EW		
27/11/2017	LJ	22/01/2018	EW	19/03/2018	EW		
04/12/2017	LJ	29/01/2018	JOC	26/03/2018	IB		