



WINTER SERVICE PLAN
FOR THE PERIOD
OCTOBER 2019 – APRIL 2020

ROADS MAINTENANCE SECTION
MUNICIPAL SERVICES
DÚN LAOGHAIRE-RATHDOWN COUNTY COUNCIL

October 2019 – For issue

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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 Dún 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 Service Plan 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 Section 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 in Appendix 1.

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 Council's 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.

There is very useful public information available on national 'Winter Ready' website (www.winterready.ie).

During normal working hours, the Council can be contacted through the Civic Hub via telephone on 01 2054700 and via email at info@dlrcoco.ie.

DLRCC operates an after-hours call service. In emergency situations the Council may be contacted via its Pageboy facility on 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 boxes are provided at the following locations:

- 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 Council's 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 DLRCC 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 or device 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°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 6 Risk assessments in place in relation to Winter Maintenance. These are denoted 006A to 006D and are included in Appendix 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 vehicles are fitted with GPS devices which further assists in providing a safe system of work for the drivers involved.

4. Responsible Persons

The Winter Maintenance Coordinator is Robert Burns, Senior Engineer.

4.1 Winter Service Duty Engineers

NAME	POSITION	LOCATION
John O'Connor	Area Engineer	Ballyogan Depot
Lei Jiang	Area Engineer	Ballyogan Depot/Rochestown Ave. Depot
John O'Malley	Executive Engineer	Ballyogan Depot
Stephen Byrne	Assistant Engineer	Ballyogan Depot

4.2 Depot Inspectors

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

5.0. Procedures and Rosters

A roster of Duty Engineers to give 24-hour coverage will be agreed to manage information from Met Éireann 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/m^2 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 15-30 g/m^2 , 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 30-40 g/m^2 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.

Appendices

Appendix 1: Winter Gritting Map

Appendix 2: Risk Assessments

Appendix 3: Duty Engineers' Roster.

Winter Service Duty Engineers' Roster for the Period 14th October 2019 to 30th April 2020
(For issue)

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
14/10/2019	SB	09/12/2019	LJ	03/02/2020	JOM	30/03/2020	JOM
21/10/2019	SB	16/12/2019	JOC	10/02/2020	JOM	06/04/2020	SB
28/10/2019	SB	23/12/2019	JOC	17/02/2020	SB	13/04/2020	LJ
04/11/2019	JOM	30/12/2019	JOC	24/02/2020	SB	20/04/2020	JOC
11/11/2019	JOM	06/01/2020	LJ	02/03/2020	SB	27/04/2020	JOC
18/11/2019	JOM	13/01/2020	LJ	09/03/2020	JOC		
25/11/2019	LJ	20/01/2020	LJ	16/03/2020	JOC		
02/12/2019	LJ	27/01/2020	JOM	23/03/2020	JOC		