

# **Dun Laoghaire Rathdown County Council - Winter Service Plan 2024/2025**

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Winter Service Plan – 2024/2025

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# Preface

## Introduction and Purpose

This Winter Service Plan describes the policy, objectives, procedures, and operational arrangements for the delivery of winter service and details the alert procedures and actions in the event of winter weather on sections of the national road network within the administrative area of Dun Laoghaire Rathdown County Council. The document serves a number of more specific purposes:

## Policy Document

The Winter Service Plan sets out TII's policy and objectives in the context of Local Authority winter service delivery.

The Winter Service Plan outlines the key objectives of TII and the responsibilities of the Local Authority in the management and delivery of winter service on the national road network, including the monitoring and reporting of salt stock levels.

## Health and Safety Policy

All works associated with the delivery of the Winter Service Plan will be carried out in accordance with Dun Laoghaire Rathdown County Council's Health and Safety policies. A specific set of risk assessments for various tasks associated with the delivery of the Winter Service Plan have been developed and these are contained within Appendix A6.

## Reference Documents

1. TII Publication AM-PAV-06051, Winter Service Manual
2. A Framework for Major Emergency Management – Guidance Document 14 – A guide to Severe Weather Emergencies – Department of the Environment, Heritage & Local Government.
3. NWSRG Practical Guides to Winter Service.

## DOCUMENT CONTROL AND DISTRIBUTION

### Document Owner

Document Owner	Rob Mulhall, Senior Executive Engineer, Infrastructure and Climate Change – Road Maintenance
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The owner is responsible for maintenance, upkeep, and amendment.

### Document Control

This document defines the methodology by which Dun Laoghaire Rathdown County Council intends to deliver its Winter Maintenance Programme for the Winter season of 14<sup>th</sup> October 2024 – 30<sup>th</sup> April 2025.

Any issues relating to the content of this document should be referred to the Winter Services Manager for their attention.

Revision	Status	Issue/Revision Description	Issue Date
2.00	Final Draft	Issued for Signatures	11/10/2024

### Approval List

This document has been circulated internally to relevant Staff for review prior to final approval.

Role	Name	Signature	Date
Director of Infrastructure and Climate Change	Mr. Paul Kennedy		11/10/2024
Senior Engineer (Winter Services Manager)	Mr. James Phelan		11/10/2024

## Distribution

This document shall be circulated to the following people internally within Dun Laoghaire Rathdown County Council and externally to the following organisations:

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Mr. Declan Murphy	Winter Services Manager	M50 Concession Limited
Mr. Stephen Smyth	Winter Maintenance Manager	Transport Infrastructure Ireland

# 1. Introduction

## 1.1 General

This section of the Winter Service Plan outlines the scope of the services provided, responsibilities for provision of those services and details the extent of the local, regional, and national road network on which the service is provided.

Dun Laoghaire Rathdown County Council will ensure that the operational activities contained in this plan are communicated with the following neighbouring Local Authorities, and privately operated road networks (M50):

1. Dublin City Council
2. South Dublin County Council
3. Wicklow County Council
4. M50 Concession Limited
5. Transport Infrastructure Ireland

The operative period for the 2024 to 2025 winter maintenance programme commences on the 14<sup>th</sup> October 2024 and ends on the 30<sup>th</sup> April 2025 in accordance with TII Circular No. 05/2024 issued on the 1<sup>st</sup> October 2024.

## 1.2 Policy

Due to the length of the road network in Dun Laoghaire Rathdown, it is not feasible to treat all roads within the County during the Winter season. Accordingly, the treatment of roads by Dun Laoghaire Rathdown County Council during the Winter Service period is limited to the priority national, regional, and local routes that carry the most economic traffic.

Dun Laoghaire Rathdown County Council is responsible for 30km of National Primary and Secondary Roads, 113km of Regional Roads, and 647km of Local Primary, Secondary, and Tertiary Roads. Motorway (M11 and M50) winter gritting is carried out by contractors on behalf of Transport Infrastructure Ireland (TII). Dun Laoghaire Rathdown County Council's Winter Maintenance regime is confined to National Primary (NP) and National Secondary (NS) routes, and a percentage of regional routes and local routes as outlined below.

Dun Laoghaire Rathdown County Council directly treats 223km of the network using dry salt by deploying a fleet of 10 trucks complete with gritters to undertake this salting operation. A treatment run for each gritting truck would typically take approximately 2 hours to complete. Gritting normally take place at 7pm and/or 5am, depending on the weather conditions.

	Gritted (km)	Total Roads in County (km)	% Gritted
NP & NS	30	30	100%
Regional	97	113	85%
Local	96	647	15%

Dun Laoghaire Rathdown County Council will endeavour to ensure that total width of carriageways on the local, regional, and national road network that are part of the defined gritting routes are kept free of frost, ice and snow as far as is reasonably practicable.

The total width of carriageways can include:

- a) Main carriageway lanes
- b) Slip roads
- c) Hard shoulders
- d) Roundabout carriageway lanes
- e) Bus lanes
- f) Integrated cycleways

In addition to the work on the formalised gritting routes, the distances for which are highlighted above, additional work is completed by the Dun Laoghaire Rathdown winter maintenance team to assist residents in certain rural locations on minor roads (i.e. areas not on the defined gritting routes). Salt boxes have been provided in in these areas for use by residents to assist with keeping minor roads open. The Winter Maintenance Team makes every effort to ensure that these salt boxes are kept topped up, however it must be highlighted that the necessary resources may not always be in a position to do this. It largely depends on the availability of staff and workload at a particular time.

Salt boxes are provided at the following locations:

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

Dun Laoghaire Rathdown County Council currently uses dry rock salt as the primary anti-icing agent for preventing frost, ice or snow forming on or bonding with the pavement surface using precautionary treatment.

In the event of Dun Laoghaire Rathdown County Council failing to prevent ice or snow forming on or bonding to the pavement surface, reactionary (de-icing) treatments shall be undertaken if necessary.

## 1.2 Performance Levels

The performance levels for precautionary (anti-icing) and reactionary (de-icing) treatments are defined in the table below. In the event of Dun Laoghaire Rathdown County Council failing to prevent ice or snow forming on or bonding to the pavement surface, Dun Laoghaire Rathdown County Council shall undertake reactionary treatments:

Location	Treatment Type	Event	Performance Level
Main carriageway lanes, slip road, hard shoulder, roundabout carriageway lanes, bus lanes, integrated cycleways.	Precautionary Treatment (Anti-icing)	Frost	All national, regional, and local routes that are part of Dun Laoghaire Rathdown County Council's defined gritting routes, will be kept free of frost at all times as far as reasonably practicable.
		Ice (including Freezing Rain)	All national, regional, and local routes that are part of Dun Laoghaire Rathdown County Council's defined gritting routes, will be kept free of frost at all times as far as reasonably practicable.
		Snow	All national, regional, and local routes that are part of Dun Laoghaire Rathdown County Council's defined gritting routes, will be kept free of snow at all times as far as reasonably practicable.
	Reactionary Treatment (De-icing)	Routes/lanes abandoned due to snow or ice.	24 hours to restore all surfaces following cessation of snow (national and regional). It may take longer to restore rural roads at higher altitudes.  24 hours to restore all surfaces after the formation of ice. It may take longer to restore rural roads at higher altitudes.

By achieving the performance levels for winter service, Dun Laoghaire Rathdown County Council shall as far as reasonably practicable, ensure the conditions to allow the safe movement of economic traffic, on the national, regional, and local road network and keep to a minimum incidents and delays caused by winter weather.

It is not Dun Laoghaire Rathdown County Council policy to become engaged in gritting areas outside of the formalised gritting routes e.g. gritting/salting roads or footpaths in residential areas, unless exceptional circumstances arise. However, if these exceptional circumstances arise, the formalised gritting routes will be completed first, prior to the gritting of additional areas.

### 1.3 Preparation of the Winter Service Plan

It is the responsibility of the Winter Service Manager to prepare the Winter Service Plan and undertake the duties of the Winter Service Manager as set out in the TII Winter Service Manual. The Winter Service Manager may also act as a Decision Maker.

### 1.4 Weather Warning Systems

The decision makers will use a combination of the following weather warning systems to aid in the delivery of the winter service.

Weather Warning Systems
Public Service Severe Weather Warning from Met Éireann
General Met Éireann Weather Forecast or Alert
Warning from other agencies
TII's Road Weather Information System (RWIS) Vaisala
Decisions of Neighbouring Local Authorities/M50 Concessions Ltd.

### 1.5 Winter Service Definitions

The following weather definitions are provided:

Weather	Definition
Heavy Snow	More than 4cm per hour of snow for at least 2 hours
Blizzards/drifting snow	a. Moderate or heavy snow combined with winds of 50kph or more with visibility reduced to 200 metres or less or: - b. Drifting snow giving rise to similar conditions
Very heavy snowfall, blizzards or drifting snow	Expected to give depths of 15cm or more potentially resulting in widespread dislocation of communications. Blizzards are severe when visibility is reduced to near zero.
Freezing rain or fog / widespread icy roads	Any atmospheric condition or state which gives rise to the accretion of ice on road surfaces
Heavy rain	Expected to persist for at least 2 hours and to give more than 6mm of rain per hour
Strong Gales	Repeated gusts of 110kph or more over inland areas, with a risk to high-sided vehicles being blown over.
Storms	Repeated gusts of 130kph or more over inland areas, which could cause cars to be blown out of their lane on the carriageway.
Fog	The official definition of fog is visibility of less than 1000 metres. Whereas for a motorist; visibility of less than 200 metres is more realistic. Severe disruption to transport occurs when the visibility falls below 50 metres.

## 1.6 Winter Response Time

The Winter Response Time is defined as the time taken from the decision to begin the winter service response or snow clearance until the winter service vehicles are loaded, manned and ready to leave the DLR Operations Centre in Ballyogan, Dublin 18.

- The Winter Response Time for Precautionary Treatment on national, regional, and local routes shall be a maximum of one hour.
- The Winter Response Time for Reactionary Treatment including snow and ice clearance on national, regional, and local routes shall be a maximum of one hour.

The Winter Response Time shall not apply when the decision to mobilise is taken in advance as part of a Precautionary Treatment but in any case, shall not exceed one hour.

## 1.7 Winter Treatment Time

The Winter Treatment Time is defined as the time taken from leaving the DLR Operations Centre in Ballyogan, Dublin 18 through to returning to the Depot after completion of the Precautionary Treatment routes.

- The Winter Treatment Time for Precautionary Treatment shall be a maximum of 2 hours.

## 1.8 Winter Service Duties and Responsibilities

Winter service duties including precautionary salting, reactive salting, snow clearance and the management and maintenance of sufficient salt stock levels, are the responsibility of Dun Laoghaire Rathdown County Council.

Winter service duties including operational considerations, alert procedures and actions are the responsibility of Dun Laoghaire Rathdown County Council.

### 1.8.1 Role of TII

TII are responsible for the following:

- a) Setting the overall policy and objectives on the provision of winter services on the national road network and co-ordination of operations at a regional and national level at times of severe weather.
- b) Overseeing operations management and performance.
- c) Procurement of strategic salt supplies.
- d) Provision of some TII provided depots.
- e) Provision of some winter service vehicles and equipment to Local Authorities.
- f) Provision of a Road Weather Information System (RWIS) to assist Local Authorities in deciding when treatment for frost, ice or snow is required on the national road network.
- g) Liaison with the media.

## 1.8.2 Role of Dun Laoghaire Rathdown County Council

Dun Laoghaire Rathdown County Council are responsible for:

- a) Development of the Winter Service Plan.
- b) Implementation of the Winter Service Plan.
- c) Design of winter service treatment routes.
- d) Liaison with weather forecasting services.
- e) Day to day decision making and operational management.
- f) Provision of all necessary winter service vehicles and equipment, excluding those detailed as being supplied by TII, to undertake and deliver the winter service.
- g) Supply of plant, labour, and materials.
- h) Maintenance and operation of vehicles, depots, and equipment.
- i) Liaison with TII and Reporting to TII.
- j) Monitoring and reviewing performance.
- k) Monitoring salt stocks (and stocks of other appropriate materials).
- l) Liaison with neighbouring Winter Service Managing Organisations to promote a coordinated service.
- m) Advising the general public.
- n) Reporting to the general public through the elected council.
- o) Liaison with the media regarding local DLR updates.

## 1.9 Network

### 1.9.1 Description of Network

The administrative area of Dun Laoghaire Rathdown covers southeast County Dublin, and a total road network length of 790km approximately. The road network is predominantly situated in low-lying urban areas, however there is also a percentage of the network that is located in rural areas at higher altitudes, and in the Dublin Mountains. The Winter Service Plan is typically executed without issue in the low-lying urban areas, particularly those located along the coastline (e.g. Blackrock, Dun Laoghaire, Killiney, Dalkey, etc.).

However, the execution of the plan can be more challenging on the routes on higher ground and those in the Dublin Mountains (Glencullen, Devil's Elbow, Tibbradden, Stepside, etc.). Lower temperatures and snow accumulations are more common in these areas meaning that increased spread rates of salt are more common as is the deployment of snow ploughs. Manoeuvrability of gritting vehicles can be problematic on the gritting routes in the Dublin Mountains particularly those that are not on a looped route which means that reversing and turning of vehicles on small local roads is required. To minimise issues relating to manoeuvrability, smaller gritting trucks tend to be deployed to the gritting routes at higher altitudes.

There are two main national road networks within Dun Laoghaire Rathdown, with the N11 linking Donnybrook to Loughlinstown (22km), whilst the N31 linking Dun Laoghaire with Leopardstown (8km). The remaining 193km of gritted routes within the County are made up of Regional and Local roads.

### 1.9.2 Extent of Network

The extent of the national, regional, and local road network covered by this Winter Service Plan is shown in the following tables, with the detailed Network Map showing all of the different gritting routes included within Appendix A1. The following table outlines the total distance of each gritting route, and the breakdown in road classification for each route.

<b>Salt Route Information</b>			
<b>Route Number</b>	<b>Length</b>		
	<i>Salted</i>	<i>Regional &amp; Local</i>	<i>National</i>
Gritting Route Number 1 (Orange/Red))	23845	23845	0
Gritting Route Number 2 (Cyan)	37286	15989	21386
Gritting Route Number 3 (Magenta)	28786	22795	6268
Gritting Route Number 4 (Purple)	19169	19169	0
Gritting Route Number 5 (Orange)	22333	22333	0
Gritting Route Number 6 (Green)	23533	23533	0
Gritting Route Number 7 (Blue)	12744	11551	1378
Gritting Route Number 8 (Brown)	24354	23111	1343
Gritting Route Number 9 (Yellow)	22399	22399	0
Gritting Route Number 10 (Grey)	8710	8710	0
<b>Total:</b>	<b>223159</b>	<b>193435</b>	<b>30375</b>

Under certain and very limited situations, winter service treatments may be undertaken on other adjacent networks outside of the remit of Dun Laoghaire Rathdown County Council to assist neighbouring Local Authorities or the M50/M11 operator if and when the need arises. It is expected that instances of mutual aid will be very limited in nature and would only be required in exceptional circumstances e.g. emergency situations.

### 1.9.3 Local Problem & Vulnerable Areas

The following areas along the formalised gritting routes are known to be particularly problematic, however mitigation measures are employed to reduce or eliminate the risks concerned.

<b>Location</b>	<b>Problem</b>	<b>Special consideration and mitigation measures</b>
Ticknock, Kilmashogue, Tibbradden, Pine Forest	Poor Mobile Phone Reception	Driver to have Helper in attendance at all times
Ballyedmonduff Road	Prone to mountain runoff	Water outlets/drainage cuttings serviced prior to the Winter Maintenance season commencing
Glencullen	Narrow roads prone to drifting	Employment of private contractors to use specialised machinery such as JCB's and bobcats
Devil's Elbow	Very steep gradient (stuck vehicles)	Salt boxes placed on route and spread manually

As noted in Section 1.2 above the Dun Laoghaire Rathdown Winter Maintenance Team does deposit additional salt in boxes to some of these problematic areas to assist residents.

## 2. Operations

### 2.1 Introduction

This section of the Winter Service Plan contains detailed operational procedures for delivery of winter services on the national, regional and local road network and details the alert procedures and actions in the event of winter weather on the network and includes arrangements for liaison and co-operation with Dublin City Council, South Dublin County Council, Wicklow County Council, and M50 Concession Limited in order to promote delivery of a consistent and co-ordinated service across all boundaries.

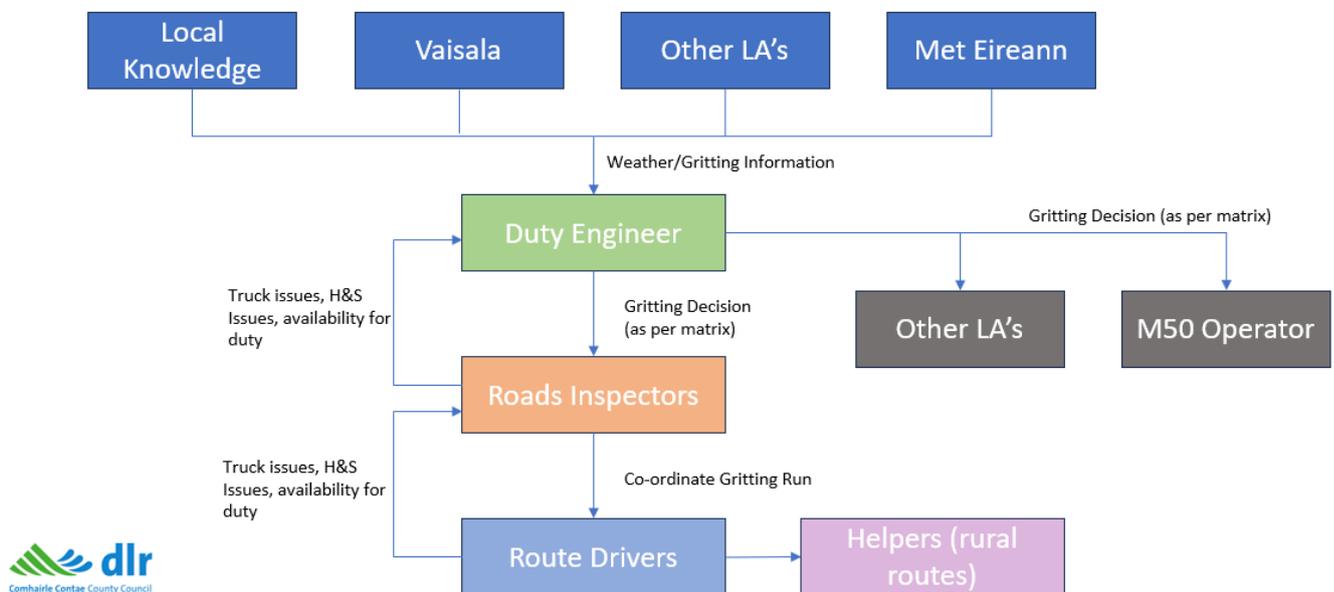
### 2.2 General Arrangements and Decision Making

#### 2.2.1 Process

Duty Engineers monitor the weather conditions every day on during the Winter Service Plan period using:

- TII's Road Weather Information System (RWIS) a.k.a Vaisala
- Weather reports from Met Eireann

Duty Engineers will also receive information relating to gritting decisions from neighbouring local authorities and the operator of the M50 and M11 motorways. All of this information will be used collectively in conjunction with any information they have based on local knowledge or past experiences of conditions in particular areas of the County in order to reach a decision on whether or not to grit.

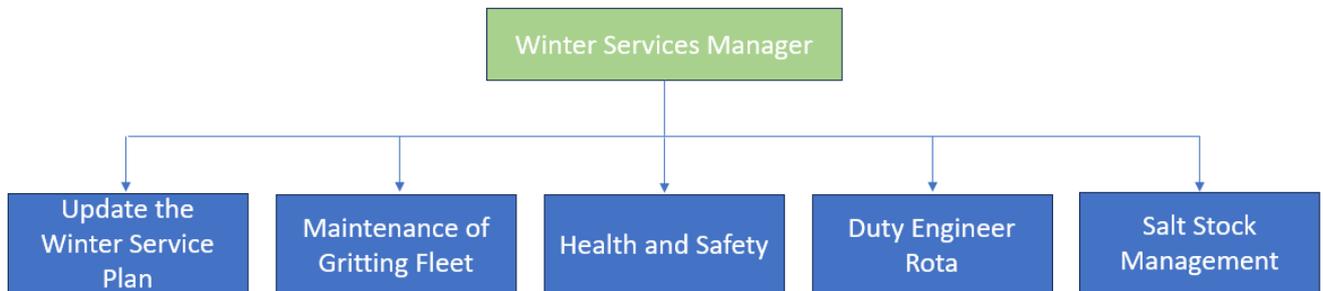


Once the appropriate gritting decision has been made by the Duty Engineer based on the weather information at the time, this decision is circulated to the relevant staff within Dun Laoghaire Rathdown County Council including the Roads Inspectors, Gritting Route Drivers, Helpers. This communication is normally a combination

of verbal and/or SMS text message. The gritting decision is also circulated externally to neighbouring Local Authorities and the operator of the M50 and M11 via the Vaisala system email.

## 2.2.2 Decision Making (Definition of Roles)

### 2.2.2.1 Winter Services Manager



The Winter Services Manager (WSM) is responsible for co-ordinating the overall delivery of Dun Laoghaire Rathdown's response to cold weather events, in particular the winter salting/gritting response. The role also includes responsibility for the maintenance and upkeep of the winter maintenance fleet and gritting equipment servicing.

The WSM is responsible for ensuring that the Winter Service Plan is updated as required. The WSM shall ensure that all personnel listed in the document are briefed on their roles and responsibilities and that correct details are validated.

The WSM shall ensure that all plant and equipment used in winter maintenance activities is properly maintained and fit for purpose. The WSM shall also arrange for the calibration of the necessary plant and equipment and maintain up to date records for same.

The WSM shall prepare a rota of Duty Engineers for the winter maintenance season. The WSM shall co-ordinate the activities of the Duty Engineers and provide support and training as required.

The WSM, using information supplied by the Duty Engineers, shall monitor salt stocks, and ensure that adequate stocks are maintained throughout the winter service season.

The WSM, with direct input from the Duty Engineers, the Inspectors and the Route Drivers shall be responsible for the overall management of the Health, Safety and Welfare of all Winter Maintenance operations. The Duty Engineers, Inspectors, and Route Drivers shall immediately report any problems or issues related to Health, Safety and Welfare issues to the WSM and to the Health and Safety Officer where appropriate.

Over the course of the 2024/2025 season, a review of the following items shall be prioritised:

- Communication and mobile phone coverage
- Depot improvements including loading equipment
- Lone working policy
- Working Time Act compliance

The WSM, based on the information supplied by the Duty Engineers, shall provide a weekly update to the Senior Engineer in Road Maintenance on the Winter Service activities. This update shall provide data for inclusion in the CE's monthly report to Elected Members on council activities.

#### 2.2.2.2 Duty Engineer

For the 2024/2025 Winter Maintenance season, Dun Laoghaire Rathdown County Council will maintain a roster of 5 nr. Duty Engineers who will operate the Transport Infrastructure Ireland (TII) Vaisala DSS Manager Weather Prediction System for Dun Laoghaire Rathdown County Council.

Name	Position	Location
Mr. Rob Mulhall	Senior Executive Engineer	Operations Centre, Ballyogan
Mr. John O'Connor	Executive Engineer	Operations Centre, Ballyogan
Ms. Katherine Beach	Assistant Engineer	Operations Centre, Ballyogan
Mr. Daniel Otero	Executive Engineer	Operations Centre, Ballyogan
Mr. Barry Davis	Supervising Inspector	Operations Centre, Ballyogan

It is the Duty Engineers' responsibility to act as the 'decision maker' in relation to the treatment of the roads that are included as part of the formal gritting routes. This decision making is given in accordance with the policies and procedures set out in the Winter Service Plan and is based on the forecasts and information available to the Duty Engineer on the Transport Infrastructure Ireland (TII) Vaisala DSS Manager Weather Prediction Software.

For the 2024/2025 winter service season, the Duty Engineers broadly operate a rota of two weeks on and eight weeks off but this may vary to ensure continuity of Duty Engineer through holiday periods. The rotation time between Duty Engineer duty periods is 09:00 Monday mornings or as otherwise agreed between Duty Engineers. The roster is agreed between the five Duty Engineers prior to the season commencing and senior management, Inspectors, Route Drivers are notified in advance of the roster arrangements. TII, Met Eireann, and neighbouring Local Authorities are also notified of the Duty Engineer rota. The rota will be included in Appendix A2.

In addition, the Duty Engineers will commit to the following duties & procedures in accordance with TII agreements:

- To be available outside normal working hours
- This means ANY TIME for the rostered period.
- Keep a log of activities, operations, decision-making, etc. and use the RoadDSS Manager module so that a complete picture of decision-making and operations can be inspected by TII if required.
- Supplement the information contained within the RoadDSS Manager if requested.
- Update the National Salt Management System (NSMS) on a weekly basis and coordinate salt deliveries/collections as required.

Outside of working hours from their home the Duty Engineer(s) will:

- Access the RoadDSS Manager system as required.
- Track the actual conditions over the area under their remit.
- Use the thermal maps to direct field operatives to the more vulnerable areas with emphasis on precautionary gritting/salting.

#### **2.2.2.3 Roads Inspectors**

The Roads Inspectors are responsible for the co-ordination of the Dun Laoghaire Rathdown County Council Winter Service Plan on the ground in their respective areas. They shall act on the instruction of the Duty Engineer in relation to the issues relating to the delivery of the Winter Service Plan. The Roads Inspectors shall endeavour to ensure that there are a sufficient number of drivers available for the delivery of the Winter Service Plan. Roads Inspectors should immediately report any Health, Safety and Welfare issues, and should also report any issues relating to Driver availability or gritting vehicles to the Duty Engineer.

#### **2.2.2.4 Gritting Route Drivers**

Gritting Route Drivers shall fulfil their duties with regard to vehicle walkaround checks prior to leaving the Central Operations Centre at Ballyogan, Dublin 18. Any issues with the gritting vehicles should be reported immediately to the Roads Inspectors and the Machinery Yard Mechanics, as should any issues with the gritting units. Gritting Route Drivers should immediately report any Health, Safety and Welfare issues to the Roads Inspectors, and should also report any issues relating to their availability for duty at the earliest convenience so that the Roads Inspectors and Duty Engineers can make alternative arrangements.

#### **2.2.2.5 Helpers**

For Health, Safety and Welfare reasons Helpers are employed to assist Gritting Route Drivers on the more problematic routes that traverse roads at higher altitudes. Helpers accompany the Drivers during their gritting runs and assist with mobilisation, loading, gritting and demobilisation activities.

### 2.2.2.6 Duty Rota

The Decision Maker/Duty Engineer Rota is included in Appendix A2.

## 2.3 Weather Forecasting and Road Weather Information System

### 2.3.1 General Arrangements

Dun Laoghaire Rathdown County Council obtains its weather forecasting service from TII's Road Weather Information System (RWIS).

The road condition forecasting system is provided by:

Vaisala TMI Ltd

Vaisala House

349 Bristol Road

Birmingham

Tel No: 0044 (0)121 683 1269

Email: [ice.technical.support@vaisala.com](mailto:ice.technical.support@vaisala.com)

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 DL RCC area are located at the M50 (Sandyford 'Master'), Ticknock, (Sandyford 'Slave'), and the M11 (Wilford interchange). Ground sensors have also been installed in the local and regional road network at the following locations to provide more accurate temperature predictions for the County overall;

1. Ballybrack Road, Glencullen R-116 - <https://maps.app.goo.gl/7QfBYgATodavjWJ49>
2. Killiney Hill Road R-119 - <https://maps.app.goo.gl/UmzMSbEWfcq3vKFD6>
3. Dun Laoghaire R-831 - <https://maps.app.goo.gl/knkKMUa9g5Uzw5Th9>

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.

Dun Laoghaire Rathdown County Council will notify TII of any faults or suspected faults on the RWIS at the latest by 9.00am of each day.

## 2.4 Health and Safety

All works associated with the delivery of the Winter Service Plan will be carried out in accordance with Dun Laoghaire Rathdown County Council’s Health and Safety policies. All staff engaged in the delivery of the plan have all received the required training for their particular roles, and throughout the winter maintenance season toolbox talks will be held with staff to remind them of the dangers associated with their roles. A specific set of risk assessments for various tasks associated with the delivery of the Winter Service Plan have been developed and these are contained within Appendix A6. All staff will be briefed on these risks assessments at regular intervals during the season.

## 2.5 Winter Service Timetable

The following table sets out key dates in the delivery of winter service.

Key Date	Action
14 <sup>th</sup> October 2024	Winter season commences
Weekly from 14 <sup>th</sup> October 2024	Local Authority to report weekly to TII via the RWIS diary portal and on the National Salt Management System
Monthly from 14 <sup>th</sup> October 2024	Monthly report to TII via the RWIS diary portal
31 <sup>st</sup> March 2025	Finalise list of key issues to feed into winter service workshops and/or conferences arranged by TII
30 <sup>th</sup> April 2025	Winter season concludes
31 <sup>st</sup> May 2025	Annual end of year Winter Service report to TII

### 3. Resources

#### 3.1 Introduction

This Section of the Winter Service Plan contains details of the resources available for delivery of winter services and the alert procedures and actions in the event of winter weather on the Dun Laoghaire Rathdown's road network including reserve and contingency arrangements.

#### 3.2 Human Resources

##### 3.2.1 Defined Personnel

The following table defines the key personnel responsible for delivery of the Winter Service Plan for the 2024/2025 season. In the event that there are changes in personnel over the course of the WSP period, this document will be updated accordingly, and all relevant parties notified of the changes. Please note that the Duty Engineer will be the 'decision maker' on whether or not gritting should take place on any given day.

Function	Title	Name
Winter Services Supervisor	Senior Engineer - ICC	Mr. James Phelan
Duty Engineer	Senior Executive Engineer - ICC	Mr. Rob Mulhall
Duty Engineer	Senior Executive Engineer - ICC	Mr. Gerry Flaherty
Duty Engineer	Executive Engineer - ICC	Mr. John O'Malley
Duty Engineer	Executive Engineer - ICC	Mr. John O'Connor
Duty Engineer	Assistant Engineer - ICC	Ms. Katherine Beach
Roads Inspector	Roads Inspector – Road Maint. Area West	Mr. John Plunkett
Roads Inspector	Roads Inspector – Road Maint. Area East	Mr. Derek O'Toole
Roads Inspector	Roads Inspector – Road Maint. Area East	Mr. Colm Heffernan
Gritting Route Driver	Driver – Road Maintenance Area West	Mr. Daniel Murphy
Gritting Route Driver	Driver – Road Maintenance Area West	Mr. Cathal Kelly
Gritting Route Driver	Driver – Road Maintenance Area West	Mr. Gary Burnett
Gritting Route Driver	Driver – Road Maintenance Area West	Mr. Mark Doyle
Gritting Route Driver	Driver – Road Maintenance Area West	Mr. Dave Scanlon
Gritting Route Driver	Driver – Road Maintenance Area East	Mr. Josh Cullen/David O'Neill
Gritting Route Driver	Driver – Road Maintenance Area East	Mr. Derek O'Toole
Gritting Route Driver	Driver – Road Maintenance Area West	Mr. Paul Blake
Gritting Route Driver	Driver – Road Maintenance Area West	Mr. Noel Dease
Gritting Route Driver	Driver – Road Maintenance Area West	Mr. Alan Mulvey
Spare Driver No.1	Driver – Spare	Mr. Josh Cullen/David O'Neill
Spare Driver No.2	Driver – Spare Water Section	Mr. John Murray/P. Hannigan
Spare Driver No.1	Driver – Spare (Cleansing)	Mr. Tony Farrell/Francisco Muniz
Spare Driver No.2	Driver – Spare (Parks)	Mr. Derek Butler/Gerry Maguire
Gritting Route Helper	Driver – Road Maintenance Area East	Mr. Shane O'Connor
Gritting Route Helper	Driver – Road Maintenance Area West	Mr. Alex Murray
Gritting Route Helper	Driver – Road Maintenance Area West	Mr. Tony Maher
Gritting Route Helper	Driver – Road Maintenance Area West	Mr. Joe Murray
Gritting Route Helper	Driver – Road Maintenance Area East	Mr. Tom Flood
Gritting Route Helper	Driver – Road Maintenance Area East	Mr. Gary Vela
Gritting Route Helper	Driver – Road Maintenance Area East	Mr. Stephen Dunphy
Gritting Route Helper	Driver – Road Maintenance Area East	Mr. Alan Saunders

Gritting Route Helper	Driver – Road Maintenance Area West	Mr. David Boylan
Gritting Route Helper	Driver – Road Maintenance Area West	Mr. Max Murphy

### 3.2.2 Training

All staff who are engaged in the delivery of the inter service plan have received the necessary training to enable them to carry out their functions competently. All office-based staff including the Winter Service Manager and the Duty Engineer’s have received formal training on the use of TII’s Road Weather Information System (RWIS) also known as the Vaisala system. Part of this training includes making decisions on whether to grit or not based on the current weather conditions.

In 2023, all Roads Inspectors, Gritting Route Drivers, and Helpers received formal training from Romaquip Limited who supply all our gritting units/trucks. In the coming months (Q4 2024) all winter service drivers are scheduled to complete the Winter Service Operator course delivered by the Local Authority Services National Training Group (LASNTG).

All of the Gritting Route Drivers who drive Class C gritting trucks, they have Class C driving licences and have successfully completed all of their Driver Certificate of Professional Competence (CPC) modules.

### 3.2.3 Driver Numbers

Dun Laoghaire Rathdown County Council has [12] qualified drivers for the delivery of the winter service operations as detailed in Section 3.2.1 above. Ten of these will be regular drivers with one being assigned to each route, whilst there will be at least two spare drivers who will be call in to cover for regular drivers when required.

## 3.3 Depots and Facilities

### 3.3.1 Depots

The Dun Laoghaire Rathdown County Council Winter Service Plan operation is based in the Operations Centre at Ballyogan, Dublin 18 (<https://maps.app.goo.gl/iEeUNZevENCWNLtQ6>). At this Operations Centre all of the gritting plant and equipment (including gritting trucks) are parked, and the rock salt barn is also located there. There are dedicated washdown facilities at the depot also for drivers to remove excess salt from vehicles following a gritting run. There are hardstanding areas throughout the operations centre and it is fully floodlit to ensure that winter gritting operations (i.e. loading of salt, washing down of vehicles, etc.) can be carried out safely and effectively.

## 3.4 Vehicles and Plant

### 3.4.1 Available Resources

A detailed schedule of vehicles and plant including operational spreaders, ploughs, loading shovels, snow blowers and reserve vehicles can be found in Appendix A3.

### 3.4.2 Reserve Vehicle Arrangements

There are three spare gritting trucks retained within the Ballyogan Operations Centre to act as cover for the regular gritting trucks that are assigned to each of the routes. In addition to this, there are three spare demountable gritting units retained at the Operations Centre and these will be used in the event that the regular gritting units encounters a mechanical breakdown. The complete list of gritting inventory including spares is contained within Appendix A3.

### 3.4.3 Vehicle Maintenance Arrangements

All of the winter gritting units have been successfully serviced and upgraded where necessary prior to the commencement of the 2024/2025 season. Upgrades have also been carried out to all of the snow plough units prior to the commencement of this upcoming season. All winter maintenance trucks (in DLR ownership) are part of a scheduled routine maintenance programme and will be serviced when required throughout the season. However, prior to the season commencing all vehicles have been checked for major faults/defects that could cause them to be off the road for a prolonged period and impact on our ability to deliver the Winter Service Plan.

In order to load the trucks with salt, Dun Laoghaire Rathdown County Council hire in a teleporter from a private hire company for the durations of the season. Prior to the teleporter being delivered it will be fully serviced by the hire company.

Dun Laoghaire Rathdown County Council normally engage a private haulier to deliver the salt to the salt barn at the Ballyogan Operations Centre from the supplier location. The private haulier engaged is responsible for the servicing of their own trucks.

### 3.4.4 Arrangements with supply chain partners

In times of severe weather, particularly with regard to snow events it may be necessary for Dun Laoghaire Rathdown County Council to engage the services of a private contractor(s) to assist with the removal of snow from road carriageways. Dun Laoghaire Rathdown County Council currently employs two contractors (JCB hire with driver) on a long-term contract to assist with normally day-to-day duties in the Road Maintenance Section. In the event that assistance is required with regard to the delivery of the Winter Service Plan, these contractors will be redeployed to assist with winter service duties. Both contractors reside locally and can respond quickly in the event of an emergency.

## 3.5 De-Icing Materials

### 3.5.1 Type and Specification

- 6.3mm salt, to UK BS3247:2011.
- Abrasives: 5 or 6mm sharp sand

### 3.5.2 Storage Locations

Dun Laoghaire Rathdown County Council only has one salt storage facility within the County. This is located at the Ballyogan Operations Centre, Dublin 18. This barn is completely sealed off from the elements and has a max capacity of approximately 1,400 tonnes.

De-icing Material (i.e. Dry salt/ABP)	Location	Type (barn)	Max (tonnes)	Min (tonnes)
Dry Rock Salt	Ballyogan Operations Centre, Dublin 18	Covered Barn	1,400	0

### 3.5.3 Supply Arrangements

All salt is procured centrally to the National Salt Management System (NSMS). Salt for Regional and Local roads is normally sourced from Loughran Stores in Co. Louth. Salt for the National routes is normally sourced through the NSMS and delivered from the source locations at the Motorway Depots in Kinnegad, Co. Westmeath or Balbriggan, Co. Dublin.

Once a request is logged on the National Saly Management System, Dun Laoghaire Rathdown County Council will make arrangements with a private haulier for collection and delivery of the salt to the salt barn referred to in the table above.

### 3.5.4 Reserve Arrangements

Dun Laoghaire Rathdown County Council shall ensure that it has sufficient provision of salt stock to ensure that stock and operational requirements are met at the start of the season and maintained with suitable provision re-stocking throughout the winter season.

The start of season stock levels, at a minimum, shall be sufficient for 20 full treatments of our entire 10 nr. gritting routes based on the maximum spread rate.

During the winter season minimum stock levels shall be sufficient for 20 full treatments of our entire 10 nr. gritting routes based on the maximum spread rate.

### 3.5.5 Monitoring and Reporting

Dun Laoghaire Rathdown County Council will monitor salt stocks (and stocks of other appropriate materials) weekly (daily when required during severe weather events) during the winter period and in accordance with the salt management requirements of TII and the Winter Service Manual. Dun Laoghaire Rathdown County Council will confirm salt stock profile for every week of the winter season on the National Salt Management System (NSMS). The reporting of the salt stocks will be communicated to NSMS by the latest on the Tuesday following the reporting week.

## 4. Delivery of the Winter Service

### 4.1 Treatment Methods

The treatment methods currently being employed by Dun Laoghaire Rathdown County Council is outlined in the following table:

Treatment type	Details
Dry Treatment	De-icer, most commonly sodium chloride salt, is spread in a dry form. Traditionally, this has been the main method utilised in the UK and Ireland for many years and this is still the method currently utilised by the majority of Local Authorities.

### 4.2 Decision Making and Treatment Matrices

Decisions are made primarily in the interest of service delivery and continuity and takes account of weather and decision information from neighbouring Managing Organisations (as detailed in the Introduction of this Plan).

All decisions shall be subject to verification, continuous monitoring, recording & review by the Winter Service Manager.

All winter decisions shall be evidence based and shall be made in accordance with the guidance contained within the following decision and treatment matrices.

Decision making and treatment matrices for Precautionary Treatment are shown in the following pages.

During periods of forecast severe winter weather Dun Laoghaire Rathdown County Council shall remain in contact with Met Eireann and shall also take account of information from its staff on the network and from CCTV in addition to information from TII's Road Weather Information System (RWIS) a.k.a Vaisala when making decisions.

#### 4.2.1 Decision Matrix Guide

		Predicted Road Conditions		
		Wet	Damp	Dry
Road Surface Temperature	Precipitation etc			
May fall below 1°C	No rain No hoar frost No fog	Salt before frost	Salt before frost (see note A)	Salt before frost (see note A)
	Expected hoar frost Expected frost		Salt before frost (see note B)	
Expected to fall below 1°C	Expected rain <b>BEFORE</b> freezing	Salt after rain stops (see note C)		
	Expected rain <b>DURING</b> freezing	Salt before frost and after rain stops (see note D)		
	Possible rain Possible hoar frost Possible fog	Salt before frost		Salt before frost
Expected snow		Salt before snow fall		
Freezing Rain	Before rain	Salt before rainfall (see note D)		
	During rain	Salt during rainfall (see note D)		
	After rain	Salt after rainfall (see note D)		
<p>The decision to undertake Precautionary Treatments shall, if appropriate, be adjusted to take account of surface moisture.</p> <p><b>All decisions shall be evidence based, recorded, and require careful monitoring and review.</b></p>				

- a) Particular attention shall be given to the possibility of water running across carriageways and other running surfaces e.g. surface water off adjacent fields after heavy rains, washing off salt previously deposited. Such locations shall be closely monitored and may require treating in the evening and morning and possibly other occasions. Ideally the source of the run-off shall be diverted from the roadway.
- b) When a weather warning contains reference to expected hoar frost, considerable deposits of frost can occur. Hoar frost usually occurs in the early morning and is difficult to cater for because of the probability that any salt deposited on a dry road too soon before its onset, may be dispersed before it can become effective. Careful monitoring is required under this forecast condition which shall ideally be treated just as the hoar frost is forming. Such action is usually not practicable and salt may have to be deposited on a dry road prior to but as close as possible to the expected time of the condition. Hoar frost may also be forecast at other times of the day, in which case the timing of salting operations shall be adjusted accordingly.
- c) If under these conditions, rain has not ceased by early morning, crews shall be called out and action initiated as rain ceases.
- d) Under these circumstances rain will freeze on contact with running surfaces and full Precautionary Treatment as necessary shall be provided even on dry roads. This is a most serious condition and shall be monitored closely and carefully throughout the danger period.

## 4.2.2 Treatment Matrices

The treatment matrices below provide target spread rates for precautionary salt spreading in response to predictions of ice and frost formation on the Dun Laoghaire Rathdown County Council network.

### Spread Rates for Dry Salting

Target Spread Rates – Dry Salting (g/m <sup>2</sup> ) Treatment Matrix				
Road Surface Temperature (RST) when frost/ice is predicted	Spreader Capability			
	Fair		Good	
	Dry/Damp Road	Wet Road	Dry/Damp Road	Wet Road
At or above -1.0°C	8	8	8	8
-1.1°C to -2.0°C	8	11	8	8
-2.1°C to -3.0°C	9	17	8	13
-3.1°C to -4.0°C	12	23	9	17
-4.1°C to -5.0°C	14	28	11	21
-5.1°C to -7.0°C	20	39	15	30
-7.1°C to -10.0°C	27	54	20	40
-10.1°C to -15.0°C	38	75	28	56

## 4.3 Treatments for Snow and Ice

### 4.3.1 General

It is impractical to spread sufficient salt to melt anything other than very thin layers of snow and ice. Ploughing is the only economical, efficient, effective and environmentally acceptable way to deal with all but very light snow.

### 4.3.2 Preparation before ice and snow

To prepare for and facilitate ice and snow treatments the following shall be considered:

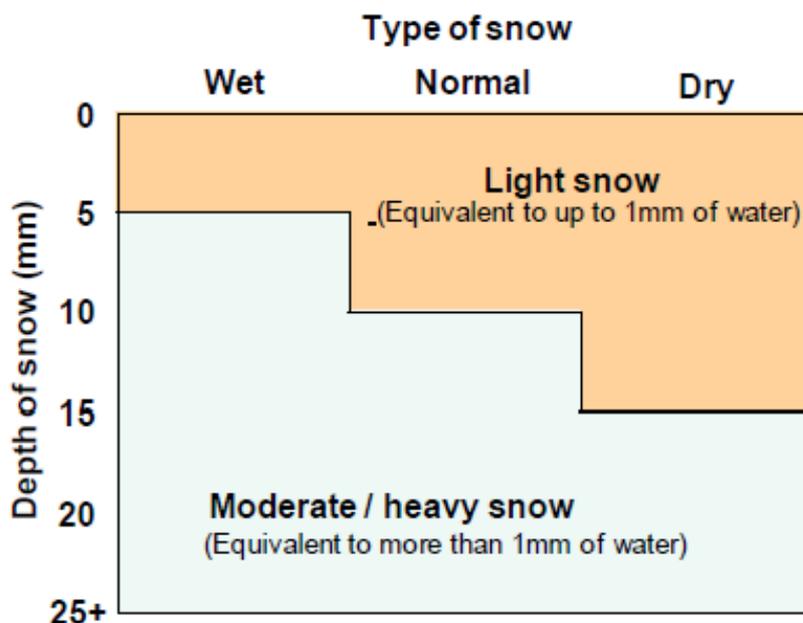
- When snow is forecast, ploughs and snow blowers shall be prepared and positioned in order that snow clearance can start without delay as and when required.
- To facilitate the breakup and dispersal of ice and snow by trafficking, treatments shall be made before snowfall or freezing rain so that sufficient de-icer is present on the surface to provide a debonding layer.
- Although it will increase salt usage, before snowfall and where practicable, consideration shall be given to spreading salt as close to the forecasted event on as much of national road network as possible. This will provide a debonding layer and facilitate the breakup and dispersal of snow by traffic before subsequent treatments take place.

### 4.3.3 Depths of snow (light snow, moderate to heavy snow)

Two main snowfall categories are defined here – ‘light’ snow and ‘moderate/heavy’ snow. ‘Light’ snow is taken to be snow equivalent to 1mm of water (or less) while snowfalls equivalent to more than 1mm are considered to be ‘moderate/heavy’, as shown in the diagram below.

The reasons for this are:

The highest *practicable* spread rates are considered to be 40g/m<sup>2</sup> of dry salt. When combined with the action of traffic, this is sufficient de-icer to melt snow depths which are equivalent to 1mm of water at temperatures down to -2°C. Generally, there is approximately 1mm of water in 5mm depth of wet snow, 10mm depth of 'normal' snow and 15mm depth of dry, powdery snow.



#### 4.3.4 Precautionary Treatments before snow or freezing rain

Spread rates for Precautionary Treatments before snow or freezing rain are given in the table below.

Treatments Before Snow or Freezing Rain	
Weather conditions	Spread Rates (g/m <sup>2</sup> )
Light to Moderate/Heavy snow forecast	Spread: <ul style="list-style-type: none"> <li>• 20-40g/m<sup>2</sup> of dry salt, or</li> <li>• 20-40g/m<sup>2</sup> of pre-wetted salt, or</li> <li>• 15-30g/m<sup>2</sup> of treated salt</li> </ul>
Freezing rain forecast	Spread: <ul style="list-style-type: none"> <li>• 20-40g/m<sup>2</sup> of dry salt, or</li> <li>• 20-40g/m<sup>2</sup> of pre-wetted salt, or</li> <li>• 15-30g/m<sup>2</sup> of treated salt</li> </ul>
Note 1: In situations where time constraints dictate, a treatment of 20g/m <sup>2</sup> across the whole of the scheduled network before the commencement of snowfall or freezing rain will typically prove more advantageous than a treatment of 40g/m <sup>2</sup> on only part of the network.	

#### 4.3.5 Treatments during snowfall or freezing rain

Spread rates for Precautionary Treatments during snowfall or freezing rain are given in the table below.

Treatments During Snowfall or Freezing Rain		
Plough to remove as much material as possible e.g. slush, snow, compacted snow Ploughing should be down to as close to the level of the road surface as possible Ploughing should start and, where necessary, be continuous to prevent a build-up of snow As snow melts under the action of salt, keep ploughing to remove slush		
No ice or compacted snow on surface	Ice or compacted snow on surface	
To provide a debonding layer, spread: <ul style="list-style-type: none"> <li>• 20-40g/m<sup>2</sup> of dry salt, or</li> <li>• 15-30g/m<sup>2</sup> of treated salt or</li> <li>• 20-40g/m<sup>2</sup> of pre-wetted salt</li> </ul>	Is traffic likely to compact subsequent snowfall before further ploughing is possible?	
	YES	NO
	To provide a debonding layer, spread: <ul style="list-style-type: none"> <li>• 20-40g/m<sup>2</sup> of dry salt, or</li> <li>• 15-30g/m<sup>2</sup> of treated salt or</li> <li>• 20-40g/m<sup>2</sup> of pre-wetted salt</li> </ul>	

#### 4.3.6 Treatment when thin layers of ice (up to 1mm) have formed

When a thin layer of ice has formed, including after freezing rain, treatments shall be made in accordance with the following table.

Treatment for Thin Layers of Ice (Less Than 1mm Thick)	
Forecast weather and road surface conditions	
<b>Lower of air or road surface temperature</b>  <b>Above -5°C</b>	<i>Spread:</i> <ul style="list-style-type: none"> <li>• 40g/m<sup>2</sup> of dry salt, treated salt or pre-wetted salt, or</li> <li>• 40g/m<sup>2</sup> of salt/abrasive mix</li> </ul>
<b>Lower of air or road surface temperature</b>  <b>At or below -5°C</b>	<i>Spread:</i> <ul style="list-style-type: none"> <li>• 40g/m<sup>2</sup> of salt/abrasive mix (50:50)</li> </ul>
<i>Note 1: Salt is ineffective in the short term at temperatures below -7°C. Abrasives only should be used when it is expected to be below -7°C for long periods. Other de-icers are available for low temperatures (refer to the 'Treatments for Extreme Cold' section of the NWSRG Practical Guide).</i>	

#### 4.3.7 Treatment for thicker layers of ice or compacted snow

When thicker layers of ice have formed, including after freezing rain, treatments shall be made in accordance with the following table.

Treatment for Layers of Compacted Snow and Ice	
Plough to remove as much material (e.g. slush, snow, compacted snow) as possible from the top of the compacted layer	
Medium Layer Thickness (1 to 5 mm)	High Layer Thickness (greater than 5mm)
<i>For initial treatment, spread:</i> <ul style="list-style-type: none"> <li>• 40g/m<sup>2</sup> of salt/abrasive mix (50:50)</li> </ul> <i>For successive treatments, spread:</i> <ul style="list-style-type: none"> <li>• 20g/m<sup>2</sup> of salt/abrasive mix (50:50)</li> </ul>	<i>For initial treatment, spread:</i> <ul style="list-style-type: none"> <li>• 40g/m<sup>2</sup> of abrasives only</li> </ul> <i>For successive treatments, spread:</i> <ul style="list-style-type: none"> <li>• 20g/m<sup>2</sup> of abrasives only</li> </ul> <i>After traffic has started breaking up the layer, spread:</i> <ul style="list-style-type: none"> <li>• 20g/m<sup>2</sup> of salt/abrasive mix (50:50) so salt can penetrate the layer and reach the road surface</li> </ul>

## 4.4 Snow Clearance

### 4.4.1 General

Ploughing down to the road surface is preferred as this minimises salt usage and makes salt treatments more effective. However, snow ploughs shall be set to avoid risk of damage to the plough, the road surface, street furniture and level crossings.

Where possible, snow shall be ploughed to the low side of the carriageway and the build-up of snow on the high side of the carriageway shall be avoided. This is to avoid the later run-off from windrows or piles of snow from entering the traffic lanes, where it may dilute treatments and/or refreeze.

Drainage shall not be obstructed when ploughing and windrows or piles of snow shall be removed or be positioned to allow melt water to reach the drains. Where possible, Dun Laoghaire Rathdown County Council shall remove piles of snow so that melted snow does not overload drainage systems or run back onto the road and refreeze to form sheet ice, particularly where drainage is blocked or piles of snow are to the high side of the road. Accumulations of snow at central reserves, especially those with vertical concrete barriers, shall be cleared where they create a hazard or impede drainage.

Windrows shall be avoided at junctions, entrances and level crossings. Dun Laoghaire Rathdown County Council shall contact Irish Rail before ploughing commences on roads that include level crossings. Windrows shall be removed or ploughed back when further periods of heavy snow are anticipated. This will provide space to plough the further snowfalls.

When planning and carrying out snow clearance on dual-carriageway routes, Dun Laoghaire Rathdown County Council shall ensure smooth merging/diverging of vehicles from the main carriageway can occur. Lanes shall be completely cleared and the windrows of snow remaining shall form a smooth and continuous line without sudden encroachments into the cleared path. Windrows may be left on hard shoulders but there shall be intermittent clear openings left in windrows at maximum intervals of 1km to provide refuge for broken down or abandoned vehicles.

All lanes shall be cleared by Dun Laoghaire Rathdown County Council as soon as possible and the hard shoulders, road markings and reflective studs cleared thereafter. Clearance work shall proceed continuously.

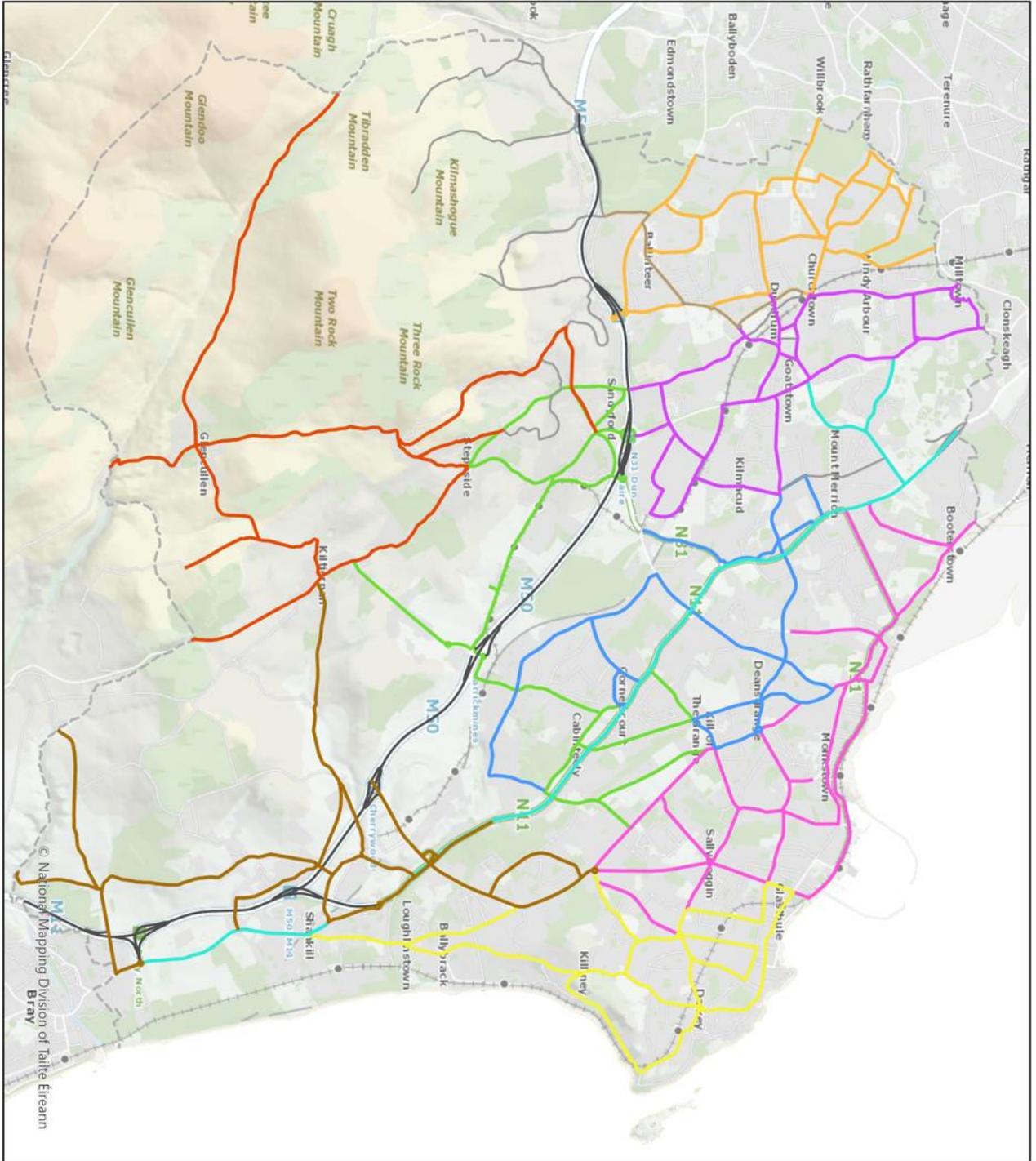
### 4.4.2 Ploughing & Clearance Techniques and Operational Considerations

The Duty Engineer shall make the call for the fitment of ploughs once snow has been forecast and the Vaisala and Met Eireann forecasts have been assessed. Ploughs will be set so as to avoid reflective studs where applicable.

Snow can generally be stockpiled on green open spaces where available and at roadside ditches in rural areas. Dun Laoghaire Rathdown County Council will not stockpile snow on road over road bridges.

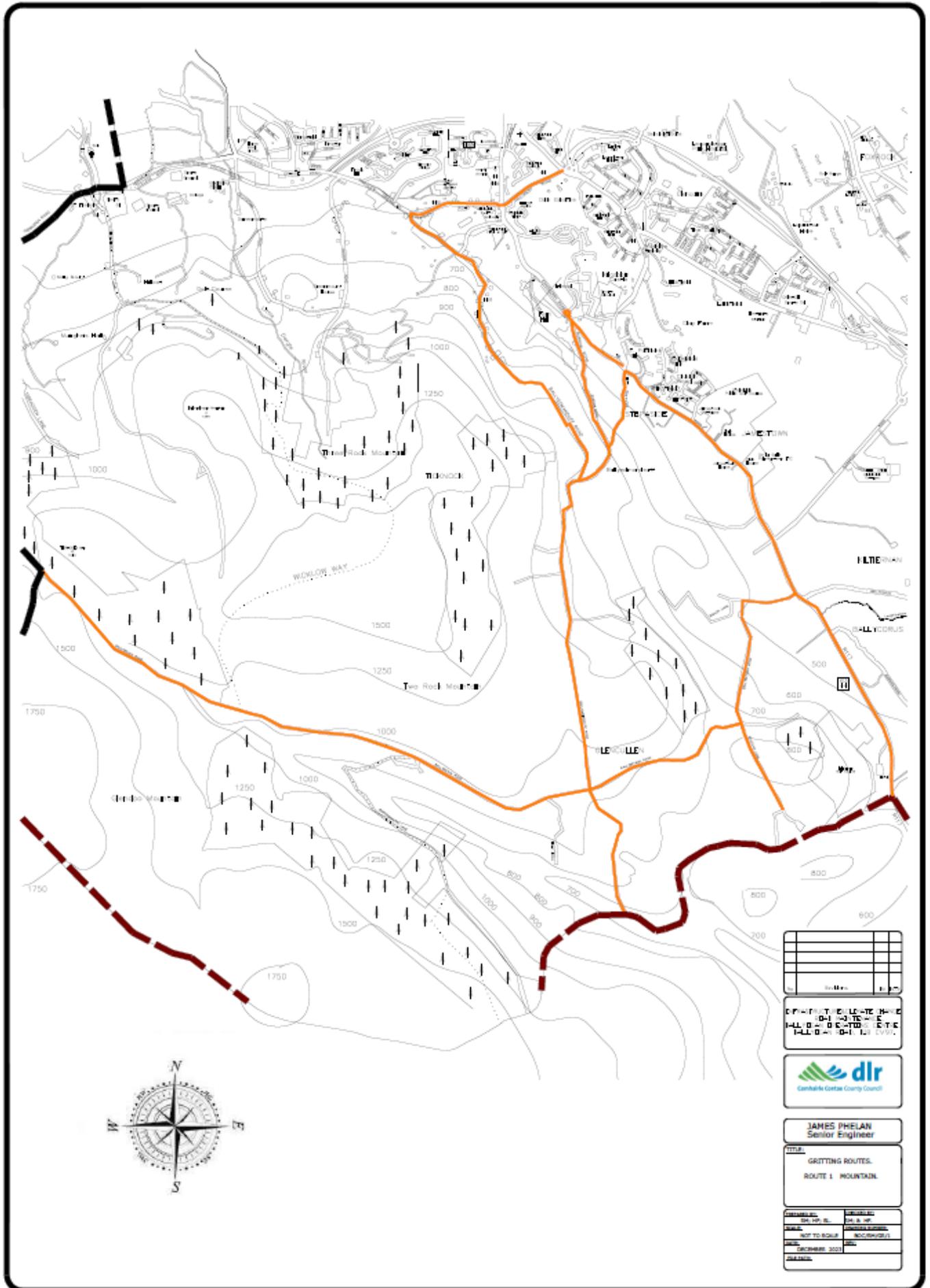
In all cases the defined treatment routes will be adhered to, and where conditions demand a more intensive treatment in specific areas, Dun Laoghaire Rathdown County Council shall achieve this by increasing the resources in use (if resources allow) or by contracting in additional assistance from the market.

# APPENDIX A1: Gritting Route Maps



- dlr Gritting Routes**
- Ballyogan
  - Booterstown - Dun Laoghaire
  - Churchtown
  - Dalkey - Killiney
  - Foxrock +
  - Infill Route
  - MARC Contract
  - Mountain
  - N11
  - Rathmichael
  - Sandyford +





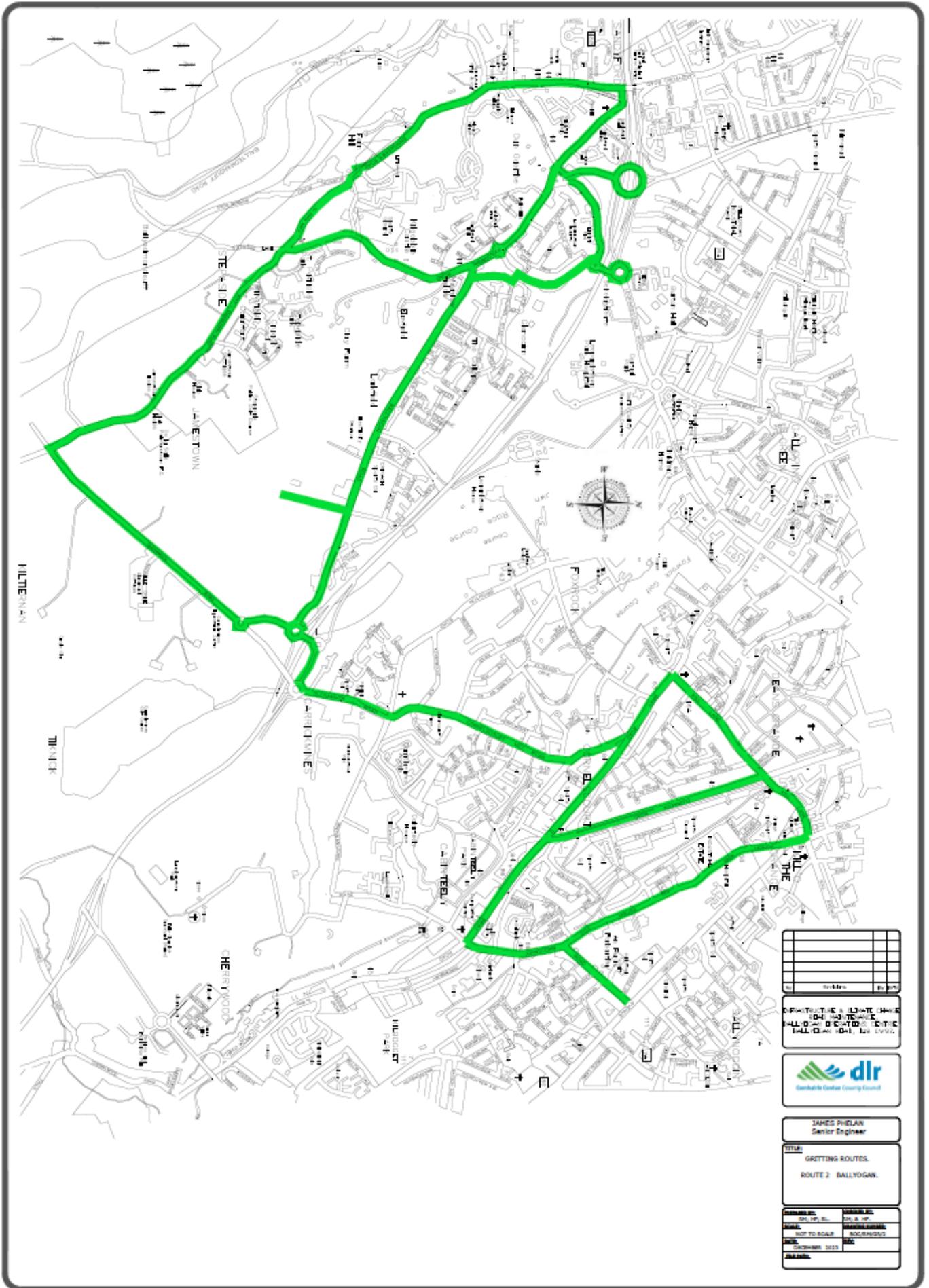

DPH/PT/EL/LE/TE/HAR/C  
 H/L/D/O/C/T/O/C/E/T/C  
 T/L/D/R/G/H/T/L/C/E/C



**JAMES PHELAN**  
Senior Engineer

**GRITTING ROUTES**  
ROUTE 1 MOUNTAIN

DATE:	15/11/2017
BY:	JAMES PHELAN
FOR:	GRITTING ROUTES
SCALE:	AS SHOWN
REVISIONS:	




© PHOTOCOME & LIDAR (IMAGE) AND DIGITISED BY THE ILLINOIS STATE GIS CENTER

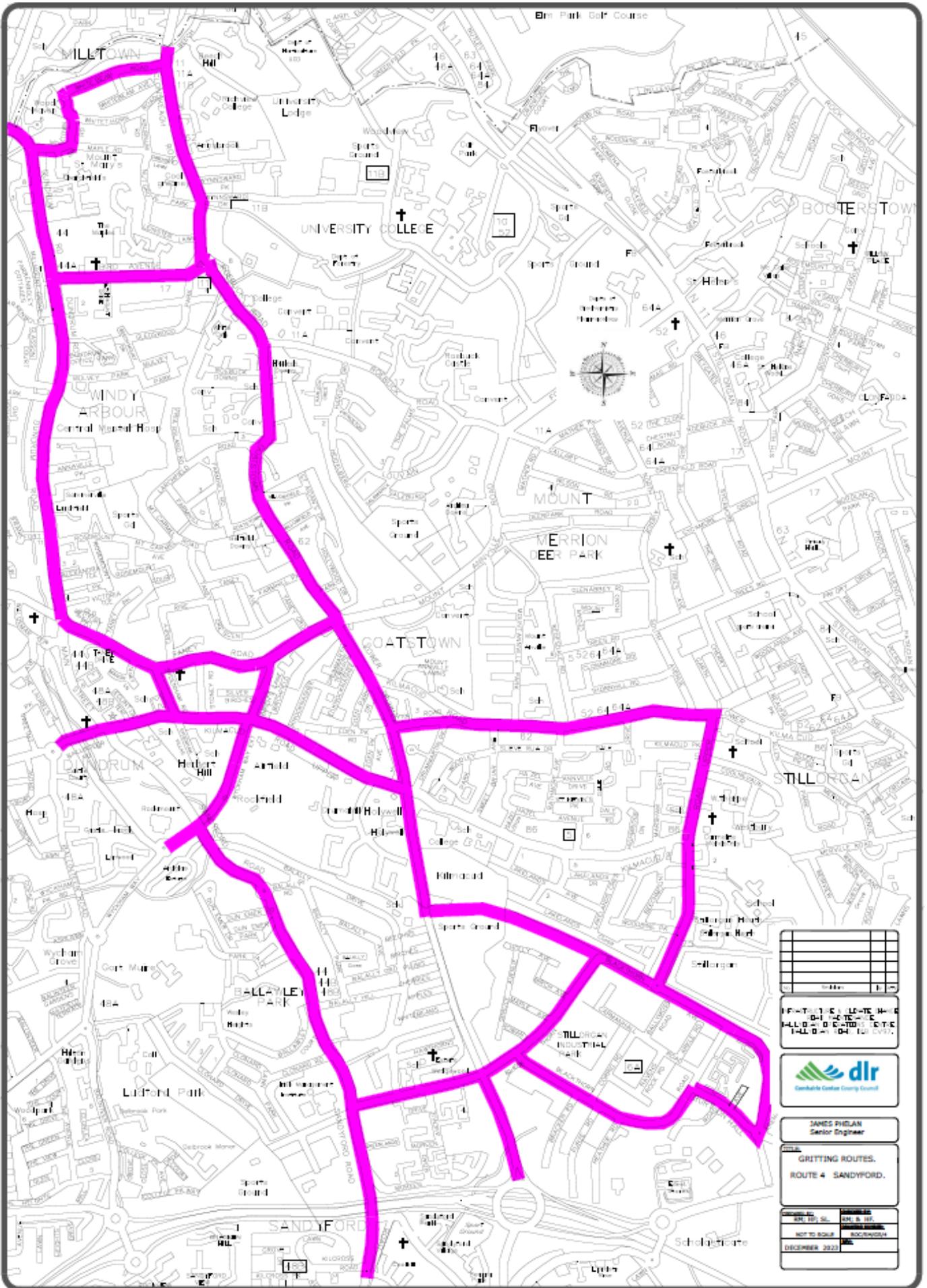


JAMES PHELAN  
Senior Engineer

TITLE  
GRITTING ROUTES  
ROUTE 2 BALLYOGAN.

DATE: 2024-03-01	SCALE: 1:1000
BY: J.P.	CHECKED: J.P.
DATE: 2024-03-01	DATE: 2024-03-01



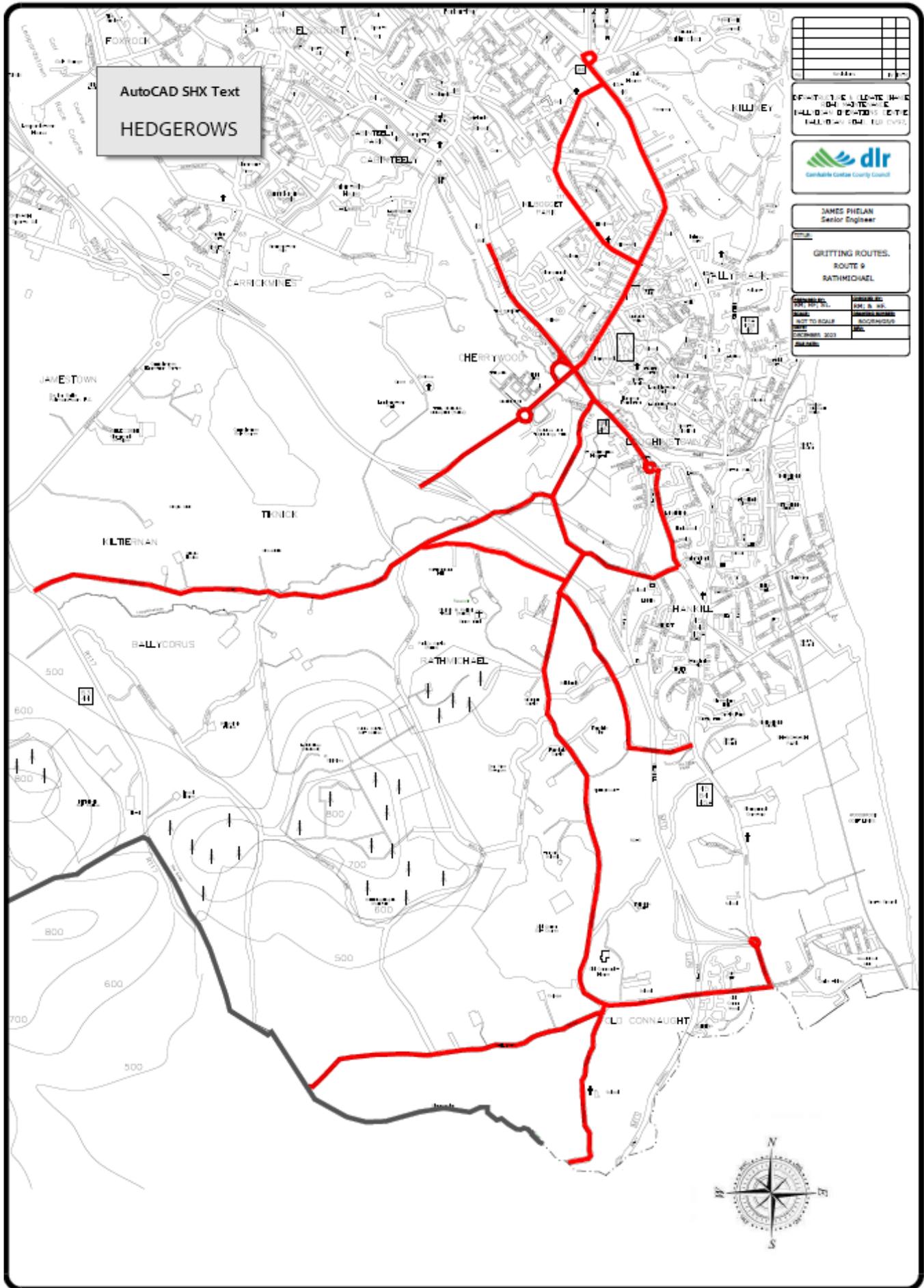












AutoCAD SHX Text  
HEDGEROWS


DATE: 14/12/2023  
SCALE: 1:1000  
PROJECT: RATHFRILAND

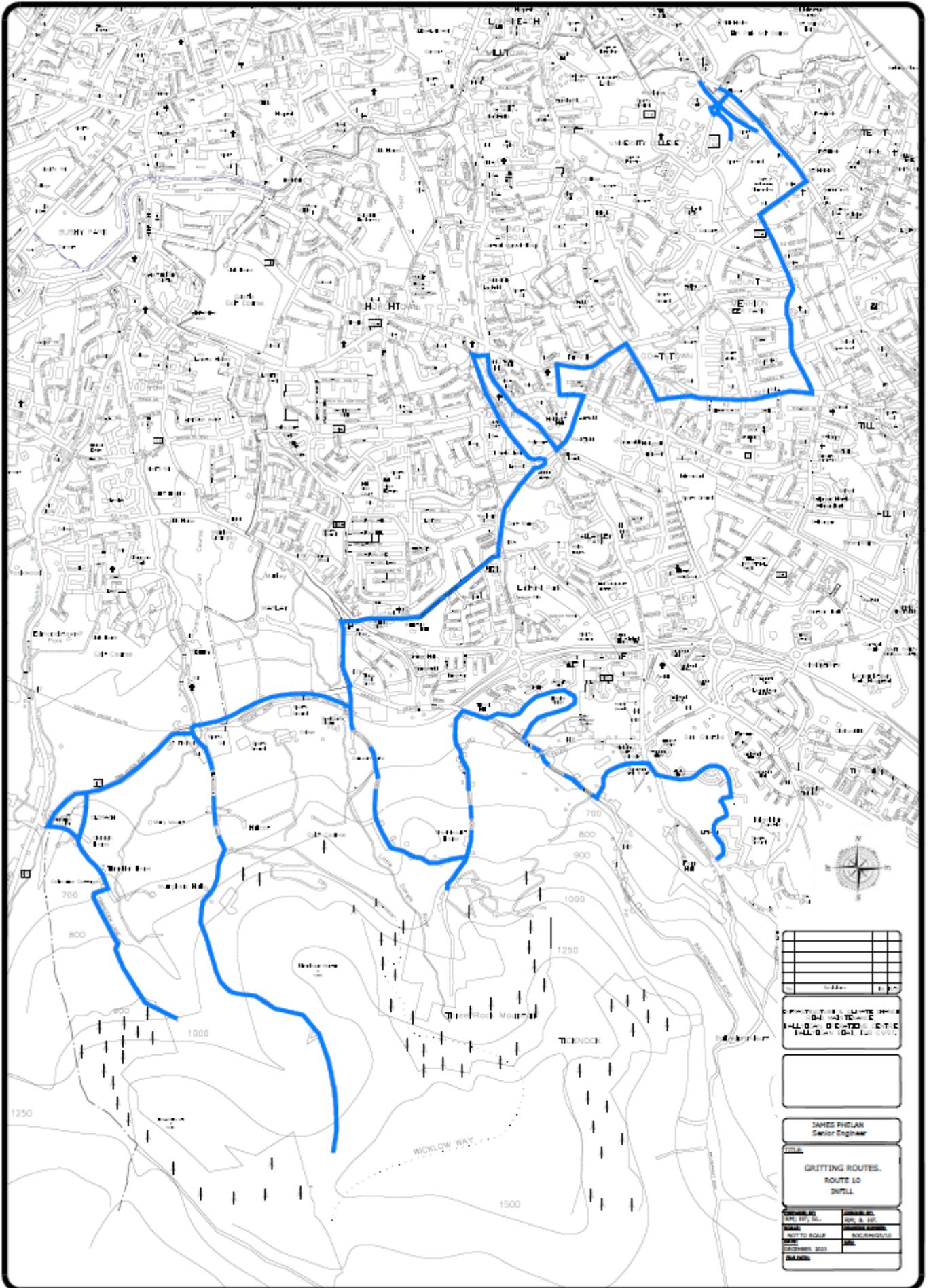


JAMES FHELAN  
Senior Engineer

GRITTING ROUTES  
ROUTE 9  
RATHFRILAND

DATE: 14/12/2023	SCALE: 1:1000
PROJECT: RATHFRILAND	PROJECT: RATHFRILAND
DATE: 14/12/2023	SCALE: 1:1000





## APPENDIX A2: Duty Engineer Rota

Winter Service Duty Engineers' Roster for the Period 14<sup>th</sup> October 2024 to 30<sup>th</sup> April 2025  
 Local Authority: DÚN LAOGHAIRE-RATHDOWN COUNTY COUNCIL

Week starting Monday	Duty Engineer's Initials								
14/10/2024	RM	09/12/2024	BD	03/02/2025	DO	31/03/2025	KB		
21/10/2024	KB	16/12/2024	BD	10/02/2025	DO	07/04/2025	DO		
28/10/2024	JOC	23/12/2024	RM	17/02/2025	BD	14/04/2025	DO		
04/11/2024	JOC	30/12/2024	RM	24/02/2025	BD	21/04/2025	BD		
11/11/2024	RM	06/01/2025	JOC	03/03/2025	RM	28/04/2025	BD		
18/11/2024	KB	13/01/2025	JOC	10/03/2025	JOC				
25/11/2024	DO	20/01/2025	KB	17/03/2025	JOC				
02/12/2024	DO	27/01/2025	KB	24/03/2025	KB				

Duty Engineer's Name & Initials	Office Phone No	Office E-mail Address	Mobile No
John O' Connor (JOC)		<a href="mailto:johnconnor@dirccoco.ie">johnconnor@dirccoco.ie</a>	086 8226181
Rob Mulhall		<a href="mailto:rmulhall@dirccoco.ie">rmulhall@dirccoco.ie</a>	086 7963531
Katherine Beach		<a href="mailto:kbeach@dirccoco.ie">kbeach@dirccoco.ie</a>	087 4889369
Daniel Otero		<a href="mailto:dotero@dirccoco.ie">dotero@dirccoco.ie</a>	083 8477712
Barry Davis		<a href="mailto:bdavis@dirccoco.ie">bdavis@dirccoco.ie</a>	087 9853107

Send to: CAFO, Met. Éireann, Glasnevin Hill, Dublin 9. Attention: Duty SMO.

Copy to: Owen Smith, Transport Infrastructure Ireland, Parkgate Business Centre, Parkgate St. Dublin 8.

[Email:forecasts@met.ie](mailto:Email:forecasts@met.ie)

[Email:owen.smith@tiii.ie](mailto:Email:owen.smith@tiii.ie)



## APPENDIX A3: Vehicles and Plant Schedule

Below is the list of trucks, permanently mounted gritting trucks (denoted by **(P)**), gritters, and smaller pickups that will be engaged in the delivery of the Winter Service Plan over the coming season.

Reg Number	Truck Type	Fuel Type	Make	Model
01 D 46634	Truck Large	Diesel	Renault	Midlum 210.16/C (spare)
01 D 48436	Truck Large	Diesel	Renault	Midlum 210.16/C (spare)
06 D 44544	Truck Large	Diesel	Renault	Premium 270-18R (spare)
06 D 72246	Pick Up	Diesel	Mitsubishi	Canter FE659
06 D 82408	Truck Large	Diesel	Hino	700 Series
08 D 23455	Pickup	Diesel	Isuzu	D-Max
09 D 8570	Pick Up	Diesel	Mitsubishi	Canter 7C15D
09 D 8592	Pick Up	Diesel	Mitsubishi	Canter
11 OY 2447	Truck Large	Diesel	Volvo	FL240 (P)
12 OY 1982	Truck Large	Diesel	Volvo	FL240 (P)
12 OY 1983	Truck Large	Diesel	Volvo	FL240 (P)
192 D 23951	Truck Large	Diesel	Renault	D
202 D 15797	Truck Large	Diesel	Renault	D 16 Med
202 D 15799	Truck Large	Diesel	Renault	D 16 Med
211 D 3072	Tractor	Diesel	Kubota	BX 231
211 D 3085	Tractor	Diesel	Kubota	ST 341
222 D 21184	Van - Mid sized	Electric	Peugeot	E-Expert
W SB 001			Snow Blade	H/D Snow Blade
W SB 002			Snow Blade	H/D Snow Blade
W SB 003			Snow Blade	H/D Snow Blade
W SB 004			Snow Blade	H/D Snow Blade
W SB 005			Snow Blade	H/D Snow Blade
W SB 006			Snow Blade	L/D Snow Blade
W SB 007			Snow Blade	L/D Snow Blade
W SB 008			Snow Blade	L/D Snow Blade
W SB 009			Snow Blade	L/D Snow Blade
W WG 001			Winter Gritter	RDS 2 Winter Gritter
W WG 002			Winter Gritter	RDS 2 Winter Gritter
W WG 003			Winter Gritter	RDS 2 Winter Gritter
W WG 004			Winter Gritter	RDS 5 Winter Gritter
W WG 005			Winter Gritter	RDS 5 Winter Gritter
W WG 006			Winter Gritter	RDS 5 Winter Gritter
W WG 007			Winter Gritter	RDS 6 Winter Gritter
W WG 008			Winter Gritter	RDS 6 Winter Gritter
W WG 009			Winter Gritter	RDS 6 Winter Gritter (spare)
W WG 010			Winter Gritter	RDS 6 Winter Gritter (spare)
W WG 011			Winter Gritter	RDS 9 Winter Gritter (spare)

## APPENDIX A4: Depots and Facilities Schedule

The entire winter maintenance operation for Dun Laoghaire Rathdown County Council is based out of the following location:

Depot and Facilities Schedule						
Depot or Facility Name	Owner /Lessor	Postal Address	Purpose	Access Arrangements	Contact Details	Facilities
Ballyogan Operations Centre	Dun Laoghaire Rathdown County Council	Ballyogan Road, Jamestown, Dublin 18	Outdoor Operations Centre	Vehicular entry via the red entrance	(01) 2054700	Storage of Winter Maintenance Vehicles and gritters, Salt Barn Location, Vehicle Maintenance, Vehicle wash down stations, staff welfare facilities

## APPENDIX A5: Internal Contact List

This table includes the contact information for the key personnel associated with the delivery of the Winter Service Plan within the organisation.

Name	Role	Office E-mail Address	Mobile No
James Phelan	Winter Services Manager	<a href="mailto:jphelan@dlrcoco.ie">jphelan@dlrcoco.ie</a>	087 1166294
John O' Connor (JOC)	Duty Engineer	<a href="mailto:johnoconnor@dlrcoco.ie">johnoconnor@dlrcoco.ie</a>	086 8226181
Rob Mulhall	Duty Engineer	<a href="mailto:rmulhall@dlrcoco.ie">rmulhall@dlrcoco.ie</a>	086 7963531
Katherine Beach	Duty Engineer	<a href="mailto:kbeach@dlrcoco.ie">kbeach@dlrcoco.ie</a>	087 4889369
Daniel Otero	Duty Engineer	<a href="mailto:dotoero@dlrcoco.ie">dotoero@dlrcoco.ie</a>	083 8477712
Barry Davis	Duty Engineer	<a href="mailto:bdavis@dlrcoco.ie">bdavis@dlrcoco.ie</a>	087 9853107
John Plunkett	Roads Inspector	<a href="mailto:jplunkett@dlrcoco.ie">jplunkett@dlrcoco.ie</a>	086 7968109
Derek O'Toole	Roads Inspector	<a href="mailto:dotoole@dlrcoco.ie">dotoole@dlrcoco.ie</a>	086 6074089
Colm Heffernan	Roads Inspector	<a href="mailto:cheffernan@dlrcoco.ie">cheffernan@dlrcoco.ie</a>	086 0489185

# APPENDIX A6: Health and Safety

<b>Risk Assessment</b>	<b>Winter Maintenance-Gritter Cleaning</b>	<b>Task:</b>	<b>Gritter Cleaning</b>	<b>RA No.</b>	<b>DLR RM 006a</b>
<b>Dept / Section:</b>	<b>Road Maintenance</b>			<b>Rev No.</b>	<b>001</b>

Activity Details		Resources Needed (Bullet points)		Picture of task:	
<b>Description of Activity (Bullet points)</b> <p><b>Note:</b> This process should only be carried out during daylight hours</p> <ul style="list-style-type: none"> <li>Drive to assigned wash bay with empty <u>gritter</u></li> <li>Partly demount <u>gritter</u> and raise <u>tipper</u></li> <li>Slide in timber block to prevent <u>tipper</u> from falling without hands or arms under the body. The timber block should be long enough so that hands/arms do not come in contact with the <u>body</u></li> <li>Wash with low pressure water</li> <li>When chassis is clean remove timber block and lower <u>tipper</u></li> <li>Remount the <u>gritter</u></li> </ul>	<ul style="list-style-type: none"> <li>PPE defined below</li> <li>Fleet vehicle and <u>gritter</u></li> <li>Timber <u>block</u></li> </ul>	<p>Training Requirements / Competences for personnel undertaking this activity</p> <ul style="list-style-type: none"> <li>Rooming/gritter training</li> <li>Manual Handling</li> </ul>			
<b>PPE required</b> 					
<b>Particular issues to note</b>					

Consequence	Probability	Risk				
		P-1	P-2	P-3	P-4	P-5
1 Negligible	1 Rare (remote)	1	2	3	4	5
2 Minor	2 Low (unlikely)	2	4	6	8	10
3 Moderate	3 Medium (Possible)	3	6	9	12	15
4 Significant (Major)	4 High (likely)	4	8	12	16	20
5 Substantial (Severe)	5 Very High (almost certain)	5	10	15	20	25

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Risk Assessment		Winter Maintenance-Gritter Cleaning			Location:		RA No.	DLR RM 006a
Dept / Section:		Road Maintenance			Ballisodan Operations Depot		Rev No.	001
Description of task / operation being undertaken		Gritter Cleaning						
Hazard	Risk	Risk Group (those potentially affected)	Current Risk Rating		Control Measures	Responsible Person	Revised Risk Level	
			Prob x Cons	Risk Level				
Site traffic / plant	-Fatal / serious injury resulting from contact with site traffic (i.e. reversing truck in place)	Driver	2 x 4	8	Sling in place to stop gritter completely coming off truck for washing of belt and rollers. Buzzer on truck and in operation when reversing.	Driver	4	
Working at height when cleaning out gritter	Fatal serious injury resulting from fall	Driver	2 x 4	8	Railings in place	Driver	4	
Tipper dropping when cleaning out gritter	Fatal serious injury resulting from tipper dropping	Driver	2 x 5	10	Personnel must not go underneath tip body under any circumstances.	Driver	5	

Consequence	Probability	Prob Con	Risk Rating				
			P-1	P-2	P-3	P-4	P-5
1 Negligible	1 Rare (remote)	C-1	1	2	3	4	5
2 Minor	2 Low (unlikely)	C-2	2	4	6	8	10
3 Moderate	3 Medium (Possible)	C-3	3	6	9	12	15
4 Significant (Major)	4 High (likely)	C-4	4	8	12	16	20
5 Substantial (Severe)	5 Very High (almost certain)	C-5	5	10	15	20	25

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<b>Risk Assessment</b>	<b>Winter Maintenance-Mounting and Demounting Gritter and loading salt</b>	<b>Task:</b>	<b>Mounting and Demounting Gritter and loading salt</b>	<b>RA No.</b>	<b>DLR RM1 0066</b>
<b>Dept / Section:</b>	<b>Road Maintenance</b>			<b>Rev No.</b>	<b>001</b>

**Activity Details**

Description of Activity (Bullet points)	<ul style="list-style-type: none"> <li>Fit &amp; secure "gritter" to fleet trucks as per manufacturer's instructions</li> <li>Connect gritter to truck electrical supply</li> <li>Check operating features of the gritter while in the yard</li> <li>Lights including gritting in progress sign</li> <li>Spreader</li> <li>-All slings to be inspected prior to leaving depot</li> <li>Drivers to liaise with Mechanic on duty if any faults with gritter/truck</li> <li>Gritters to drive to salt barn, queue up and await salt to be loaded onto gritter.</li> <li>Drivers/General Operative to stand at footpath and observe, away from loader during loading operation and maintain communication with teleporter driver</li> <li>Demount gritter from fleet truck as per manufacturer's instructions</li> </ul>	Resources Needed (Bullet points)	<ul style="list-style-type: none"> <li>PPE defined below</li> <li>Fleet Truck / "Gritter" / Personnel to direct driver into position</li> <li>Gritter with safety bar &amp; four slings to secure gritter into position</li> <li>GPS, romaquip manual</li> <li>Teleporter</li> </ul>	Training Requirements / Competences for personnel undertaking this activity	<ul style="list-style-type: none"> <li>- Training re system of Work</li> <li>- Romaquip training</li> <li>- Manual Handling</li> <li>- CPC training</li> </ul> <p>CSCS training -Teleporter driving</p>	Picture of task:	
Particular issues to note							

Consequence	Probability	Prob Con	P-1	P-2	P-3	P-4	P-5
1 Negligible	1 Rare (remote)	C1	1	2	3	4	5
2 Minor	2 Low (unfrequent)	C2	2	4	6	8	10
3 Moderate	3 Medium (Possible)	C3	3	6	9	12	15
4 Significant (Major)	4 High (likely)	C4	4	8	12	16	20
5 Substantial (Severe)	5 Very High (almost certain)	C5	5	10	15	20	25

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Risk Assessment		Winter Maintenance-Mounting and Dismounting Gritters and Loading salt				RA No.	DLR RM 006b
Dept / Section:		Road Maintenance		Location:	Ballyogan Operations Depot		
Description of task / operation being undertaken		Mounting and Dismounting Gritter					
Hazard	Risk	Risk Group (those potentially affected)	Current Risk Rating Prob x Cons	Risk Level	Control Measures	Responsible Person	Revised Risk Level
Site traffic / plant	-Fatal / serious injury resulting from contact with site traffic (i.e. reversing truck in place)	DLR Personnel Contractor	3 x 5	15	All personnel to wear high visibility vests at all times to alert drivers to their presence	All personnel	10
Site environment	Work in dark conditions (on rare occasion)	DLR personnel	2 x 4	8	Loading and unloading of gritter to fleet trucks usually takes place during daylight hours	Inspector/Foreman	4
Physical contact between person and plant (truck and gritter)	Fatal / serious injury resulting from contact with gritter/truck when mounting/dismounting	Driver Contractor	3 x 4	12	Personnel maintain a safe distance from plant when mounting and dismounting gritter but maintain a means of communication	Driver/helper	8
Loading of salt into gritter	Fatal/serious injury from contact with teleporter. Serious injury from salt blocks falling from a height	Contractor DLR personnel	3 x 5	15	All personnel remain in the cab during loading operations at Ballyogan – where personnel alight from cab, they should stand on footpath and observe, away from loader and maintain communication with teleporter driver	Driver/helper	10
Exposure to salt/dust while loading	Eye irritation and inhalation	DLR Personnel	4 x 3	12	Personnel must wear goggles and dust mask	All personnel Inspector/Foreman (ensuring wearing of goggles and mask)	9

Consequence	Probability	Prob Con	Risk Level				
			P-1	P-2	P-3	P-4	P-5
1 Negligible	1 Rare (remote)	C1	1	2	3	4	5
2 Minor	2 Low (unlikely)	C2	2	4	6	8	10
3 Moderate	3 Medium (Possible)	C3	3	6	9	12	15
4 Significant (Major)	4 High (likely)	C4	4	8	12	16	20
5 Substantial (Severe)	5 Very High (almost certain)	C5	5	10	15	20	25

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Risk Assessment		Winter Maintenance-Salt Deliveries		Location:		Ballyegan Operations Depot		RA No.		DLR RM 006c					
Dept / Section:		Road Maintenance		Rev No.		001									
Description of task / operation being undertaken		Salt Deliveries		Current Risk Rating		Risk Level		Control Measures		Revised Risk Level					
Hazard		Risk		Risk Group (those potentially affected)		Prob x Cons		Responsible Person		Revised Risk Level					
Site traffic / plant		Fatal / serious injury resulting from contact with site traffic (i.e. reversing truck in place, movement of teleporter)		DLR Personnel Contractors Members of the public		3 x 5		15		-Signage in place to warn personnel of heavy plant movements operating in and around salt barn -pedestrian barriers around work area		Depot Mgt		10	
Exposure to exhaust fumes in barn		Exposure to danger gases (carbon monoxide, CO <sub>2</sub> etc)		Driver		3 x 4		12		Ensure suitable means of ventilation is in operation		Depot Mgt		8	

Consequence	Probability	Prob Con	P-1	P-2	P-3	P-4	P-5
1 Negligible	1 Rare (remote)	C-1	1	2	3	4	5
2 Minor	2 Low (unfrequent)	C-2	2	4	6	8	10
3 Moderate	3 Medium (Possible)	C-3	3	6	9	12	15
4 Significant (Major)	4 High (likely)	C-4	4	8	12	16	20
5 Substantial (Severe)	5 Very High (almost certain)	C-5	5	10	15	20	25

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<b>Risk Assessment</b>	<b>Operating a Gritter</b>	<b>RA No.</b>	<b>DLR RM 0060</b>
<b>Dept / Section:</b>	<b>Road Maintenance</b>	<b>Task:</b>	<b>Operating a Gritter</b>
		<b>Rev No.</b>	<b>001</b>

**Activity Details**

<b>Description of Activity (Bullet points)</b>	<ul style="list-style-type: none"> <li>Gritter is loaded during daylight hours where possible</li> <li>Preuse checks to be done prior to leaving depot</li> <li>Drivers leave depot to grit their assigned route</li> <li>Controls in truck to operate the dispersal of salt</li> <li>Belt in gritter is speed operated (this stops the spreader when at traffic lights)</li> <li>When finished assigned route, drive back to depot</li> </ul>	<b>Resources Needed (Bullet points)</b>	<ul style="list-style-type: none"> <li>PPE defined below</li> <li>Mobile phone/hands free kit</li> </ul>	<b>Picture of task:</b>	
<b>PPE required</b>	 <input checked="" type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input checked="" type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>	<b>Training Requirements / Competences for personnel undertaking this activity</b>	<ul style="list-style-type: none"> <li>Training re system of Work</li> <li>CPC training</li> <li>Romaquip training</li> </ul>		
<b>Particular issues to note</b>					

Consequence	Probability	Prob Con	P-1	P-2	P-3	P-4	P-5
1 Negligible	1 Rare (remote)	C-1	1	2	3	4	5
2 Minor	2 Low (unlikely)	C-2	2	4	6	8	10
3 Moderate	3 Medium (Possible)	C-3	3	6	9	12	15
4 Significant (Major)	4 High (likely)	C-4	4	8	12	16	20
5 Substantial (Severe)	5 Very High (almost certain)	C-5	5	10	15	20	25

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Risk Assessment		Operating a Gritter					RA No.	DLR RM
Dept / Section:		Road Maintenance		Location:		Administrative Area of DLR		
Description of task / operation being undertaken				Rev No.		001		
Hazard	Risk	Risk Group (those potentially affected)	Current Risk Rating Prob x Cons		Risk Level	Control Measures	Responsible Person	Revised Risk Level
Environment: Working in low light / darkness	Personal injury due to exposure to other hazards that are obscured due to low light environment	Driver	2	5	10	<ul style="list-style-type: none"> <li>- DLR personnel shall comply with PPE requirements</li> <li>- Works are largely undertaken in well-lit urban environment</li> <li>- Where operations are undertaken in rural environment, personnel shall use vehicle lights and flashing beacons</li> </ul>	Driver	5
Vehicle: unfit for use	Personal injury resulting from involvement in Road Traffic Accident	Driver Other 3 <sup>rd</sup> parties	3	5	15	<ul style="list-style-type: none"> <li>- Where personnel have to leave the vehicle for any reason, they shall wear appropriate PPE</li> <li>- Vehicle/gritter shall be serviced prior to start of season</li> <li>- Driver shall undertake daily vehicle checklist inspection</li> </ul>	Driver	6
Lone working	Personal injury	Driver	4	4	16	<ul style="list-style-type: none"> <li>- Mobile phone provided should be with operative at all times. Hands free kit fitted to truck.</li> </ul>	Driver/supervisor on duty	8
Consequence	Probability	Prob Con	P-1	P-2	P-3	P-4	P-5	
1 Negligible	1 Rare (remote)	C-1	1	2	3	4	5	
2 Minor	2 Low (unlikely)	C-2	2	4	6	8	10	
3 Moderate	3 Medium (Possible)	C-3	3	6	9	12	15	
4 Significant (Major)	4 High (likely)	C-4	4	8	12	16	20	
5 Substantial (Severe)	5 Very High (almost certain)	C-5	5	10	15	20	25	

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Risk Assessment		Operating a Gritter		RA No.	DLR RM 006D	
Dept / Section:	Road Maintenance <th>Location:</th> <td>Administrative Area of DLR <th>Rev No.</th> <td>001</td> </td>	Location:	Administrative Area of DLR <th>Rev No.</th> <td>001</td>	Rev No.	001	
Description of task / operation being undertaken		Risk Group (those potentially affected)		Control Measures		
Hazard	Risk	Current Risk Rating Prob x Cons	Risk Level	Responsible Person	Revised Risk Level	
Driving in inclement weather	Collision with other vehicles/pedestrians	DLR Personnel Other 3 <sup>rd</sup> parties	2 x 5	10	Driver	5
Salt caught between door and belt	Cuts when removing salt Slip, fall Contact with salt result in skin irritation	Driver	4 x 3	12	Driver	6
				Flashing beacons in use during gritting operation, reversing buzzer installed on trucks. Driver to adjust their driving to suit the road conditions. Driver to adhere to speed limit of 40-50km/h Gloves safety boots and safety glasses worn. Do not attempt to clear blockages when machinery is in operation. Proceed with caution when removing salt		

Consequence	Probability	Prob Con	P-1	P-2	P-3	P-4	P-5
1 Negligible	1 Rare (remote)	C-1	1	2	3	4	5
2 Minor	2 Low (unlikely)	C-2	2	4	6	8	10
3 Moderate	3 Medium (Possible)	C-3	3	6	9	12	15
4 Significant (Major)	4 High (likely)	C-4	4	8	12	16	20
5 Substantial (Severe)	5 Very High (almost certain)	C-5	5	10	15	20	25

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<b>Risk Assessment</b>	<b>Operating a snow plough</b>	<b>Task:</b>	<b>Operating a Snow Plough</b>	<b>RA No.</b>	<b>DLR RM 005e</b>
<b>Dept / Section:</b>	<b>Road Maintenance</b>			<b>Rev No.</b>	<b>001</b>

**Activity Details**

<b>Description of Activity (Bullet points)</b>	<ul style="list-style-type: none"> <li>Snow Plough is loaded as per manufacturer's instructions during daylight hours where possible</li> <li>Always drive with the blade angled to the right. This will prevent it from accidentally catching on the curb. This Can be adjusted</li> <li>Drivers leave depot to plough their assigned route</li> </ul>	<b>Resources Needed (Bullet points)</b>	<ul style="list-style-type: none"> <li>PPE defined below</li> <li>Mobile phone/hands free kit</li> <li>Stick (removing jams)</li> </ul>	<b>Training Requirements / Competences for personnel undertaking this activity</b>	<ul style="list-style-type: none"> <li>Training re system of Work</li> <li>CPC training</li> <li>Romaguip training</li> </ul>	<b>Picture of task:</b>	
<b>PPE required</b>							
<b>Particular issues to note</b>							

Consequence	Probability	Prob Con	Risk Rating				
			P-1	P-2	P-3	P-4	P-5
1 Negligible	1 Rare (remote)	C-1	1	2	3	4	5
2 Minor	2 Low (unlikely)	C-2	2	4	6	8	10
3 Moderate	3 Medium (Possible)	C-3	3	6	9	12	15
4 Significant (Major)	4 High (likely)	C-4	4	8	12	16	20
5 Substantial (Severe)	5 Very High (almost certain)	C-5	5	10	15	20	25

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Risk Assessment		Operating a snow plough			RA No.	DLR RM 0066	
Dept / Section:		Road Maintenance			Rev No.	001	
Description of task / operation being undertaken		Location: Administrative Area of DLR					
Hazard	Risk	Risk Group (those potentially affected)	Current Risk Prob x Cons	Risk Rating Risk Level	Control Measures	Responsible Person	Revised Risk Level
Environment: Working in low light / darkness	Personal injury due to exposure to other hazards that are obscured due to low light environment	Driver	2 x 5	10	DLR personnel shall comply with PPE requirements Works are largely undertaken in well-lit urban environment Where operations are undertaken in rural environment, personnel shall use vehicle lights and flashing beacons Where personnel have to leave the vehicle for any reason, they shall wear appropriate PPE	Driver	5
Vehicle: unfit for use	Personal injury resulting from involvement in Road Traffic Accident	Driver Other 3 <sup>rd</sup> parties	3 x 5	15	Vehicle/snow plough shall be serviced prior to start of season Driver shall undertake daily vehicle checklist inspection	Driver	10
Lone working	Personal injury	Driver	4 x 4	16	Mobile phone provided should be with operative at all times. Hands free kit fitted to truck. GPS installed on vehicles. Route monitored by supervisor on duty. In rural areas a helper is assigned	Driver/supervisor on duty	12

Consequence	Probability	Prob Con	Risk Rating				
			P-1	P-2	P-3	P-4	P-5
1 Negligible	1 Rare (remote)	C-1	1	2	3	4	5
2 Minor	2 Low (unlikely)	C-2	2	4	6	8	10
3 Moderate	3 Medium (Possible)	C-3	3	6	9	12	15
4 Significant (Major)	4 High (likely)	C-4	4	8	12	16	20
5 Substantial (Severe)	5 Very High (almost certain)	C-5	5	10	15	20	25

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Risk Assessment		Operating a snow plough		Location:		Administrative Area of DLR		RA No.		DLR RM 006e	
Dept / Section:		Road Maintenance		Rev No.		001					
Description of task / operation being undertaken		Risk		Risk Group (those potentially affected)		Current Risk Rating Prob x Cons		Risk Level		Control Measures	
Hazard		Risk		Risk Group (those potentially affected)		Prob x Cons		Risk Level		Control Measures	
Driving in inclement/hazardous weather conditions	Reduced visibility resulting in collision with other vehicles/pedestrians	DLR Personnel Other 3 <sup>rd</sup> parties	2 x 5	10	Flashing beacons in use during snow plough operation, reversing buzzer installed on trucks. Driver to adjust their driving to suit the road conditions.	Driver	5				
Parked vehicles along road	Collision with vehicle	DLR personnel Other 3 <sup>rd</sup> parties	3 x 4	12	Driver to adhere to speed limit of 40-50km/h	Driver	8				
Pedestrians walking/standing near the road	Collision with pedestrians	DLR Personnel Members of the public	3 x 5	15	Driver must be alert to people walking/standing near the road	Driver	10				
Snow/debris caught in snow blades	Lacerations/amputations	DLR Personnel	3 x 4	12	Never attempt to clear a jam by hand. First, turn the snow blower off and wait for all moving parts to stop, and then use a long stick to clear wet snow or debris from the machine. Keep your hands and feet away from moving parts.	Driver	8				
Contact with kerbs	Damage to vehicle and plough/kerb	DLR personnel	3 x 3	9	Driver to maintain a safe distance from footpath	Driver	6				

Consequence	Probability	Prob Con	P-1	P-2	P-3	P-4	P-5
1 Negligible	1 Rare (remote)	C-1	1	2	3	4	5
2 Minor	2 Low (unlikely)	C-2	2	4	6	8	10
3 Moderate	3 Medium (Possible)	C-3	3	6	9	12	15
4 Significant (Major)	4 High (likely)	C-4	4	8	12	16	20
5 Substantial (Severe)	5 Very High (almost certain)	C-5	5	10	15	20	25

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Risk Assessment		Location:		RA No.	DLR RM 006f			
Dept / Section:		Ballyogan Operations Depot		Rev No.	001			
Description of task / operation being undertaken		Mounting snow plough to vehicle						
Hazard		Risk	Risk Group (those potentially affected)	Current Risk Rating Prob x Cons	Risk Level	Control Measures	Responsible Person	Revised Risk Level
Site traffic / plant		Fatal / serious injury resulting from contact with site traffic	DLR Personnel			All personnel to wear high visibility vests at all times to alert drivers to their presence	All personnel	
Slippery site conditions due to frozen or frosty ground.		Slip or fall	DLR Personnel			Appropriate safety boots must be worn	All personnel	
Snowplough not fitted correctly		Damage to vehicle, plough and third party property	DLR Personnel Members of public			Snowplough fitting must be inspected prior to use. Drivers to liaise with Mechanic on duty if any issues with snow plough.	Mechanics	
No safety lock over hydraulic ram		Serious injury to hand/arm during mounting/dismounting the ploughs.	DLR Personnel			All ploughs are fitted with safety lock	Mechanics	

Consequence	Probability	Prob Con	P-1	P-2	P-3	P-4	P-5
1 Negligible	1 Rare (remote)	C-1	1	2	3	4	5
2 Minor	2 Low (unlikely)	C-2	2	4	6	8	10
3 Moderate	3 Medium (Possible)	C-3	3	6	9	12	15
4 Significant (Major)	4 High (Risky)	C-4	4	8	12	16	20
5 Substantial (Severe)	5 Very High (almost certain)	C-5	5	10	15	20	25

DLR\_RA001b\_Task / Activity Risk Assessment

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Rev. 001

## APPENDIX A7: Route Cards

<b>ROUTE CARD FOR PRECAUTIONARY TREATMENT ROUTE No. 1</b>							
<b>Route Description:</b>	orange - Mountain						
<b>Depot:</b>	Ballyogan Operations Centre						
<b>Driver/Helper:</b>	name of driver & helper - can change						
<b>Vehicle:</b>	tonnes, registration plate - can change						
Road	From	To	Route Risks / Hazards	Action	Free run (m)	Spreading Distance (m)	Time (mins)
	Depot Ballyogan Operations Centre	Ballyogan Road		Travel	130	--	
L-2026-1	turn left on Ballyogan Road	drive for 1.55km		Travel	1550	--	
L-2026-1	go left towards Kilgobbin Road	drive for 115m junction with Kilgobbin Road		Travel	115	--	
L-2024-1	turn left to Kilgobbin Road	drive for 1.23km junction with Enniskerry Road		Travel	1230	--	
R-117-4	turn right to Enniskerry Road	roundabout after 650m		Salt	--	650	
L-3018-1	take the same exit & take the first turn right on Burrow Road	drive for 1.1km junction with Stepside Lane		Salt	--	1240	
L-3018-1	turn slightly right to stay on Burrow Road	drive for 390m next junction with Ballymanduff Road		Salt	--	390	
L-3018-1	turn around and drive back	junction with Stepside Lane		Salt	--	390	
L-3091-1	stay straight for Stepside Lane	drive for 674m junction with Enniskerry Road	Steep incline	Salt	--	674	
R-117-4	turn right to Enniskerry Road	drive for 4.4km there will be the Knock House on the left-hand side		Salt	--	4400	
R-117-4	turn around and drive back	drive for 1.9km there is a Circle K on the right-hand side		Salt	--	1900	
R-116-2	turn left on R116	drive for 1.3km (after 500m it takes a turn left) junction with Glencullen		Salt	--	1300	
L-30202-1	keep going straight ahead, now on Glencullen and not on R116	drive for 1.06km stop just before the street takes a sharp turn		Salt	--	1060	
L-30202-1	turn around and drive back	till the junction with R116		Salt	--	1060	
R-116-2	turn left, you are back on R116/Ballybetagh Road	drive for 1.66m junction near Johnnie Fox's Pub		Salt	--	1664	
L-3020-1	turn left to Barrack Road (Ballyedmonduff Road)	drive for 950m there will be a street on the left-hand side (Bridge Road)	narrow street	Salt	--	950	
L-3020-1	turn around and drive back	to the junction with the Pub	narrow street	Salt	--	950	
R-116-1	turn left to Ballybrack Road/R116	drive for 6.09km there is a stop sign and the R116 takes a sharp left turn	narrow street	Salt	--	6088	
R-116-1	turn around and drive back	to the junction with the Pub	narrow street	Salt	--	6088	
L-3020-1	turn left to Ballyedmonduff Road	drive for 3.2km junction with Burrow Road		Salt	--	3198	
L-3020-1	stay left to stay on Ballyedmonduff Road	for another 990m then road name changes		Salt	--	990	
L-3017-1	Woodside Road	drive for 1.96km junction with Blackglan Road/R113		Salt	--	1962	
L-20146-1	turn right to Blackglan Road/R113	drive for 795m junction with Enniskerry Road/R117		Salt	--	795	
L-20145-1	stay straight for Hillcrest Road	drive for 600m 70m before junction with Kilgobbin/R113/R133		Salt	--	600	
L-20145-1	rest of Hillcrest Road	junction with Kilgobbin/R113/R133		Travel	77	--	
L-2024-1	turn right to Kilgobbin Road	roundabout after 610m		Travel	610	--	
L-2024-1	stay straight (first exit)	drive for 185m junction with Ballyogan Road		Travel	185	--	
L-2026-1	turn left to Ballyogan Road and again right to stay on Ballyogan Road	Driveway Ballyogan Operations Centre		Travel	1600	--	
	Ballyogan Road	Depot Ballyogan Operations Centre		Travel	130	--	

ROUTE CARD FOR PRECAUTIONARY TREATMENT ROUTE No. 2							
Route Description:	light green - Ballyogan						
Depot:	Ballyogan Operations Centre						
Driver/Helper:	name of driver & helper - can change						
Vehicle:	tonnes, registration plate - can change						
Road	From	To	Route Risks / Hazards	Action	Free run (m)	Spreading Distance (m)	Time (mins)
	Depot Ballyogan Operations Centre	Ballyogan Road		Travel	130	--	
L-2026-1	turn left on Ballyogan Road	drive for 1.55km		Salt	--	1550	
L-2026-2	turn right to Murphystown Way (Mount Eagle Lawn)	drive for 838m till M50		Salt	--	838	
R-113-5	cross the M50	roundabout after 116m		Salt	--	116	
N-31-121 / -124 R-113-5	in the roundabout take the same exit	junction after crossing M50		Salt	--	324	
R-113-5	turn right to Leopardstown Road	junction with Kilgobbin/R113/R133		Salt	--	667	
L-20145-1	cross the Kilgobbin Road to go on Hillcrest Road	drive for 80m junction with Sandyford Road C		Salt	--	80	
L-6065-1	turn right to Sandyford Road C	drive for 650m until the road ends		Salt	--	652	
R-117-3	turn left to Sandyford Road	drive for 678m junction with Hillcrest Road		Salt	--	678	
R-117-4	the street change to Enniskerry Road	drive for 1.74km junction Kilgobbin Road		Salt	--	1740	
L-2024-1	turn left to Kilgobbin Road	drive for 2.06km junction with Leopardstown Road		Salt	--	2060	
R-113-5	stay straight ahead to Leopardstown Road	drive 960m to the roundabout		Salt	--	960	
R-113-5 L-2024-1	in the roundabout take the same exit and drive the whole route back	junction with Enniskerry Road		Salt	--	3020	
R-117-4	turn left to Enniskerry Road	drive for 2.05km junction with Glenamuck Road		Salt	--	2050	
R-842-5	turn left on Glenamuck Road	roundabout after 1.62m		Salt	--	1620	
R-842-6	take the first exit on the roundabout (M50)	roundabout before the M50		Salt	--	355	
R-842-5	take the same exit back and go back to the other roundabout drive there one round and take the exit to the M50	roundabout before the M50		Salt	--	1000	
R-842-4	cross the M50	roundabout after M50		Salt	--	978	
	take the second exit	roundabout after 240m					
	take the first exit to stay on Glenamuck Road	drive just straight					
R-842-3	the name changes to Claremont Road	but keep going		Salt	--	560	
R-842-2	the street changes to Cornelscourt Hill Road but still keep going, on the roundabouts go straight	drive till the road ends		Salt	--	640	
R-842-1	turn left to Old Bray Road R	junction N11		Salt	--	365	
N-11	stay for a short time on the N11	after 570m at the junction with Kill Lane		Salt	--	570	
R-830-1	turn right to Kill Lane	drive for 1.33km junction with Rochestown Avenue		Salt	--	1330	
R-282-3	turn right to Rochestown Avenue	drive for 80m junction with Pottery Road		Salt	--	80	
L-2023-1	keep to the left to get to Pottery Road	drive till the road ends		Salt	--	1600	
L-2034-1	turn left to Johnstown Road	drive till the end (junction with Rochestown Avenue)		Salt	--	538	
L-2034-1	then turn around and follow the road over the N11 and another 100m	junction with Old Bray Road		Salt	--	1183	
L-2030-1	turn right to Old Bray Road	drive for about 778m junction with Clonkeen Road		Salt	--	778	
R-827-4	turn right to Clonkeen Road, cross N11	drive for 1.4km junction with Kill Lane		Salt	--	1393	
R-827-4	turn around and drive the whole route back	junction with Old Bray Road		Salt	--	1393	
L-2030-1	turn right for Old Bray Road and stay there until you can turn left (around 490m)	junction with Cournelcourt Hill Road		Salt	--	489	
R-842-2 / -3 / -4	turn left to Cournelcourt Hill Road	roundabout before the M50 (the name will change during the drive to Claremont Road and Glenamuck Road)		Salt	--	1753	
R-842-8	in the roundabout take the second exit	the next roundabout		Salt	--	184	
R-842-4	take the first exit to cross M50	roundabout after M50		Salt	--	519	
L-2026-1	take the second exit	Driveway Ballyogan Operations Centre		Salt	--	833	
	Ballyogan Road	Depot Ballyogan Operations Centre		Travel	130	--	

ROUTE CARD FOR PRECAUTIONARY TREATMENT ROUTE No. 3							
Route Description:	gold - Churchtown						
Depot:	Ballyogan Operations Centre						
Driver/Helper:	name of driver & helper - can change						
Vehicle:	tonnes, registration plate - can change						
Road	From	To	Route Risks / Hazards	Action	Free run (m)	Spreading Distance (m)	Time (mins)
	Depot Ballyogan Operations Centre	Ballyogan Road		Travel	130	--	
L-2026-1	turn left on Ballyogan Road	drive for 1.55km		Travel	1550	--	
L-2026-1	go left towards Kilgobbin Road	drive for 115m junction with Kilgobbin Road		Travel	115	--	
L-2024-1	turn right to Kilgobbin Road	stay there for 820m junction with Leopardstown Road/Hillcrest Road		Travel	822	--	
R-113-5	stay straight ahead for another 150m	start with the gritting		Travel	150	--	
R-113-5	start with the gritting	road towards R113		Salt	--		108
R-113-11	stay left, to go towards R113	roundabout before the M50		Salt	--		225
R-113-13	exit the roundabout in the second exit, cross the M50	roundabout after the M50		Salt	--		1698
R-113-2	leave the roundabout at the first exit to Brehon Field Road	drive 1.33km junction Grange Road		Salt	--		1413
L-30136-1	turn now left to Grange Road and stay there for 600m	drive for 600m junction with Harold's Grange		Salt	--		602
L-7017-1	stay straight ahead on Kellystown Road	drive 80m to the car park on the left-hand side		Salt	--		80
L-30136-1 L-7017-1	turn around and drive back	drive for 682m junction with Brehon Field Road		Salt	--		682
R-113-1	turn left to stay on Grange Road	drive for 1.2km to the height of Eden Avenue		Salt	--		1204
R-113-1	try to turn around at the height of Eden Avenue	drive for 930m back junction Stonemasons Way		Salt	--		930
L-3013-1	turn left to Stonemasons Way	drive till the roundabout		Salt	--		525
L-3013-1	take the same exit	drive back until the junction Grange Road		Salt	--		568
R-113-1	turn left to Grange Road and Brehon Field Road	drive 404m junction with Ballinteer Avenue		Salt	--		404
L-3016-1	turn left to Ballinteer Avenue	drive for 1.2km to the roundabout		Salt	--		1216
R-826-0	take the first exit to Wyckham Way/R826	drive for 330m to the roundabout		Salt	--		355
R-826-0	take the same exit and drive the R286 back	roundabout		Salt	--		392
L-3016-1	take the third exit to Ballinteer Avenue	drive 840m junction with Broadford Road		Salt	--		840
L-3012-1	turn right to Broadford Road	drive for 1.08km to the roundabout		Salt	--		1080
L-3012-1	take the second exit to Broadford Road/Stonemasons	drive 823m to the next roundabout		Salt	--		823
L-3011-1	take the third exit to Barton Road East	drive 1.3km until the next roundabout		Salt	--		1299
L-3014-1	take the third exit	drive 773m to the oval roundabout		Salt	--		773
L-3014-1	exit the roundabout at the same exit	drive back to the other roundabout		Salt	--		773
L-3011-1	take here also the same exit as earlier (first now)	drive 660m junction with Beamont Avenue		Salt	--		600
L-3009-1	turn right to Beamont Avenue	drive 745m junction with Nutgrove Avenue		Salt	--		785
R-821-1	turn left to Nutgrove Avenue	drive 820m junction Nutgrove Way		Salt	--		820
L-3008-1	turn left to Nutgrove Way	follow the street for around 630m to the roundabout		Salt	--		627
L-3008-1	turn around (take the same exit)	drive back to the junction at Nutgrove Shopping Centre		Salt	--		627
R-821-1	turn now left to Nutgrove Avenue	drive 860m, there will be a big junction		Salt	--		860
R-821-1	turn around	drive back to the same junction at Nutgrove Shopping Centre		Salt	--		860
L-7004-1	turn now left again to Whitehall Road	follow the road for 760m junction Hillside Drive		Salt	--		759
L-3004-1	turn left again to Hillside Drive	follow the road for 825m		Salt	--		827
L-3003-1	the name changes to Woodside Drive	but keep driving for 127m		Salt	--		127
R-112-1	turn right to Braemor Road	drive 305m junction Landscape Road		Salt	--		305
L-3005-1	turn right and drive the whole Landscape Road (454m)	drive 454m junction Churchtown Road Upper		Salt	--		454
L-3006-1	turn left to Churchtown Road Upper	drive 756m to a huge junction		Salt	--		756
R-112-2	turn right to stay on Churchtown Road Upper	drive for 265m junction with Churchtown Road Lower		Salt	--		265
L-3001-1	turn left to Churchtown Road Lower	drive 1.5km until River Dodder		Salt	--		1510
L-3001-1	turn around	drive 1.02km back junction Orwell Road		Salt	--		1020
L-3002-1	turn now right to Orwell Road	drive 1.2km to the hospital on the left-hand side		Salt	--		1200
L-3002-1	turn there around	drive 225m back junction Braemor Park		Salt	--		225
L-7001-1	turn right to Braemor Park	drive for 412m junction Braemor Road		Salt	--		412
R-112-1	turn left to drive on Braemor Road	follow the street for 916m		Salt	--		916
R-112-2	the streetname changes to Churchtown Road Upper	but keep driving for 883m		Salt	--		883
R-117-2	at the big junction turn right to the Dundrum by-pass	follow the street until you come to a roundabout		Salt	--		1080
R-826-2	take the third exit to Wyckham Way	drive around 400m to the next roundabout		Salt	--		500
R-826-0	exit the roundabout at the second exit	keep driving for 330m to the next roundabout		Salt	--		407
R-826-1	leave at the second exit to drive on Ballinteer Road South	drive for 730m to the next junction		Salt	--		761
R-113	at this roundabout exit on the first one	drive on the R113 for 1.51km to the roundabout		Salt	--		1510
R-113-16/-12 R-113-5	take the second exit in the roundabout to Leopardstown Road (you cross the M50 while you in the roundabout)	drive for about 330m on Leopardstown Road junction with Kilgobbin Road/Hillcrest Road		Travel	662	--	
L-2024-1	drive straight ahead to Kilgobbin Road	drive for around 800m junction Ballyogan Road		Travel	802	--	
L-2026-1	turn left on Ballyogan Road	Driveway Ballyogan Operations Centre		Travel	1600	--	
	Ballyogan Road	Depot Ballyogan Operations Centre		Travel	130	--	

ROUTE CARD FOR PRECAUTIONARY TREATMENT ROUTE No. 4							
Route Description:	purple - Sandyford+						
Depot:	Ballyogan Operations Centre						
Driver/Helper:	name of driver & helper - can change						
Vehicle:	tonnes, registration plate - can change						
Road	From	To	Route Risks / Hazards	Action	Free run (m)	Spreading Distance (m)	Time (mins)
	Depot Ballyogan Operations Centre	Ballyogan Road		Travel	130	--	
L-2026-1	turn left on Ballyogan Road	drive for 1.55km		Travel	1550	--	
L-2026-1	go left towards Kilgobbin Road	drive for 115m junction with Kilgobbin Road		Travel	115	--	
L-2024-1	turn right to Kilgobbin Road	stay there for 825m junction with Leopardstown Road/Hillcrest Road		Travel	825	--	
R-113-5	stay straight ahead	and drive to the big roundabout		Travel	331	--	
R-113-14/-15	exit the roundabout in the second exit (on the other side from M50) to drive on R133	R113		Travel	195	--	
R-133-6	drive 488m on the R133	to a big junction with Blackthorne Drive		Salt	--	488	
L-2014-1	turn right to Blackthorne Drive	drive around 650m until the T-junction		Salt	--	652	
L-2014-1	then turn right to stay on Blackthorne Drive	drive for 270m		Salt	--	271	
L-2021-1	stay straight to come to Blackthorne Avenue	follow the road for 870m junction with Burton Hall Road		Salt	--	872	
L-2025-1	turn right to Burton Hall Road A	drive there for 340m until the street ends		Salt	--	340	
L-2015-1	turn left to get on Blackthorne Road	follow the street till it ends (around 855m)		Salt	--	856	
L-2014-1	turn now left for Blackthorne Drive	drive for 670m junction with Sandyford Road		Salt	--	696	
R-117-3	turn left for Sandyford Road	drive over M50 and keep going for another 140m there will be a junction with Kilcross Road on the right-hand side		Salt	--	592	
R-117-3	turn around here	drive back to the junction Sandyford Drive/Blackthorne Drive		Salt	--	592	
R-117-3	keep now straight ahead	drive for 1.31km junction by the Dundrum Shopping Center		Salt	--	1310	
R-117-13	turn left	drive to the roundabout		Salt	--	127	
R-117-12 / -13	take the same exit	drive back to the junction		Salt	--	127	
R-826-3	drive straight ahead to Overend Way	follow the street for 540m there will be a little curve and there is a street on the left-hand side		Salt	--	541	
L-2050-1	drive straight ahead on Kilmaud Road Upper	drive for 690m junction with R826		Salt	--	690	
R-133-2	turn right to Drummartin Link Road B	drive for 450m junction with Benildus Avenue, shortly after you crossed the LUAS		Salt	--	453	
L-2016-1	turn left to Benildus Avenue	drive for 1.02km till the first left turn junction Kilmacud Road Upper Extension		Salt	--	1020	
L-2051-1	turn left to Kilmacud Road Upper Extension (St. Raphaela's Drive)	drive for 624m		Salt	--	624	
L-2050-1	the name changes to Kilmacud Road Upper	keep driving for 510m until you reach the road ends		Salt	--	507	
R-825-4	turn left to Kilmacud Road Lower	drive for 1.28km junction with Drummartin Road		Salt	--	1280	
R-133-3	turn right to Drummartin Road	drive for 215m		Salt	--	215	
R-133-4	the name changes to Kilmacud Road Lower	drive for 257m		Salt	--	257	
R-825-3	name changes again to Goatstown Road	keep driving for around 1.2km		Salt	--	1208	
R-825-2	go slightly left to Roebuck Road	drive for 418m junction with Gledwoods Drive/Bird Avenue		Salt	--	418	
R-825-1	keep going straight ahead on Clonskeagh Road	drive for 790m junction Whitebeam Road A		Salt	--	790	
L-6003-1	turn left to Whitebeam Road A	drive to the roundabout		Salt	--	565	
L-6001-1	take the first exit to Milltown Bridge Road	follow the street towards river Dodder		Salt	--	276	
R-117-1	turn around before crossing the river and go on Dundrum Road	drive for around 600m junction Bird Avenue		Salt	--	597	
L-3007-1	turn left in Bird Avenue	drive for 630m till the end of the road		Salt	--	630	
L-30075-1	turn right on Roebuck Road and immediately right again to Gledswood Drive	junction with Bird Avenue		Salt	--	71	
L-3007-1	drive back Bird Avenue	junction with Dundrum Road		Salt	--	545	
R-117-1	turn now left to get on Dundrum Road	drive south for 1.29km till you get to the junction at the LUAS bridge		Salt	--	1290	
R-112-3	turn left to Taney Road	drive 1.2km to the junction with R825		Salt	--	1198	
R-112-3	turn around	drive 315m back on Taney Road		Salt	--	315	
R-826-4	stay now more on the left and drive down Birch's Lane	junction with Ballinteer Road North		Salt	--	254	
L-3014-1	turn right to Ballinteer Road North	drive for 207m junction with Sydenham Road		Salt	--	207	
L-6006-1	turn then right to Sydenham Road	drive 220m junction with Taney Road		Salt	--	219	
L-6006-1	turn around	drive the street back junction with Ballinteer Road North		Salt	--	219	
L-3014-1	turn right to get to Ballinteer Road North again	drive past the Dundrum Shopping Centre to the roundabout		Salt	--	504	
L-3014-1	take the second exit	drive 735m on Ballinteer Road North to the next roundabout		Travel	735	--	
R-826-0	exit the roundabout at the second exit	keep driving for 330m to the next roundabout		Travel	330	--	
R-826-1	leave at the second exit to drive on Ballinteer Road South	drive for 730m to the next junction		Travel	729	--	
R-113	at this roundabout exit on the first one	drive on the R113 for 1.51km to the roundabout		Travel	1510	--	
R-113-16/-12 R-113-5	take the second exit in the roundabout to Leopardstown Road (you cross the M50 while you in the roundabout)	drive for about 330m on Leopardstown Road junction with Kilgobbin Road/Hillcrest Road		Travel	662	--	
L-2024-1	drive straight ahead to Kilgobbin Road	drive for around 800m junction Ballyogan Road		Travel	802	--	
L-2026-1	turn left on Ballyogan Road	Driveway Ballyogan Operations Centre		Travel	1600	--	
	Ballyogan Road	Depot Ballyogan Operations Centre		Travel	130	--	

<b>ROUTE CARD FOR PRECAUTIONARY TREATMENT ROUTE No. 5</b>							
<b>Route Description:</b>	light blue - N11						
<b>Depot:</b>	Ballyogan Operations Centre						
<b>Driver/Helper:</b>	name of driver & helper - can change						
<b>Vehicle:</b>	tonnes, registration plate - can change						
Road	From	To	Route Risks / Hazards	Action	Free run (m)	Spreading Distance (m)	Time (mins)
	Depot Ballyogan Operations Centre	Ballyogan Road		Travel	130	--	
L-2026-1	turn left on Ballyogan Road	drive for 1.55km		Travel	1550	--	
L-2026-2	turn right to Murphystown Way (Mount Eagle Lawn)	drive for 838m till M50		Travel	838	--	
R-113-5	cross the M50	roundabout after 116m		Travel	116	--	
N-31-121 / -124	in the roundabout take the third exit	N31		Travel	324	--	
N-31-12	drive on the N31 (Leopardstown Road)	drive 700m big junction with Burton Hall Road on your left-hand side		Salt	--	702	
L-2025-1	turn left on Burton Hall Road A	drive 210m junction Burton Hall Road B, nearly immediately turn left		Salt	--	210	
L-2025-2	turn left on Burton Hall Road B	drive to the end junction N31		Salt	--	221	
N-31-12	turn left on N31	stay there until junction with Burton Hall Road		Salt	--	234	
R-113-6	turn right on Leopardstown Road	drive for 1.27km junction with the N11		Salt	--	1270	
N-11-16	turn left on N11/Stillorgan Road	drive for 2.55km junction N31 N11 will end there		Salt	--	2550	
R-138-5	keep driving on the same road, now Stillorgan Road	drive for 840m junction Foster Avenue		Salt	--	840	
R-112-5	turn left to Foster Avenue	drive for 847m junction with Mount Anville Road and Roebuck Road		Salt	--	847	
R-112-4	keep driving straight ahead on Mount Anville Road	drive for 1.16km junction with Goatstown Road		Salt	--	1158	
R-825-3	turn now right on Goatstown Road	drive for 1.2km junction with Roebuck Road		Salt	--	1208	
L-2049-1	turn right on Roebuck Road	drive for 1.05km junction with Foster Avenue/Mount Anville Road		Salt	--	1053	
R-112-5	turn left to Foster Avenue	drive back junction with Stillorgan Road from earlier		Salt	--	847	
R-138-5	turn left, now your back on Stillorgan Road	drive for 1.47km junction with Greenfield Park/Nutley Lane			--	1470	
R-138-1	turn around	drive back 2.33km to the N11/N31 junction			--	2326	
N-11-9 / N-11-10	drive straight ahead, you are back on the N11	keep driving until you reach the roundabout to the M11		Salt	--	8249	
R-837-1 R-119-19 /-20	take the first exit to drive on Dublin Road	drive for 3.3km to the roundabout there will be a roundabout after 1.03 km but stay on Dublin Road, now R119		Salt	--	3314	
R-837-1 R-119-19 /-20	take the same exit	drive back to the roundabout where N11 starts/finish		Salt	--	3314	
N-11-15 / N-11-16	take the third exit	drive back 6.41km on the N11 junction with Leopardstown Road/R113, towards M50		Salt	--	6408	
R-113-6 / N-31-212	turn left on Leopardstown Road	drive back in the direction of M50, until you reach the roundabout before the M50		Salt	--	1983	
R-113-5	take the first exit to cross M50	junction Ballyogan Road after the M50		Travel	164	--	
L-2026-1	turn left on Ballyogan Road	Driveway Ballyogan Operations Centre		Travel	1600	--	
	Ballyogan Road	Depot Ballyogan Operations Centre		Travel	130	--	

**ROUTE CARD FOR PRECAUTIONARY TREATMENT ROUTE No. 6**

pink - Booterstown-Dún  
Laoghaire

**Route Description:**

**Depot:** Ballyogan Operations Centre  
name of driver & helper - can change

**Driver/Helper:** change

**Vehicle:** tonnes, registration plate - can change

Road	From	To	Route Risks / Hazards	Action	Free run (m)	Spreading Distance (m)	Time (mins)
	Depot Ballyogan Operations Centre	Ballyogan Road		Travel	130	--	
L-2026-1	turn left on Ballyogan Road	drive for 1.55km		Travel	1550	--	
L-2026-2	turn right to Murphystown Way (Mount Eagle Lawn)	drive for 838m till M50		Travel	838	--	
R-113-5	cross the M50	roundabout after 116m		Travel	116	--	
N-31-121 / -124	in the roundabout take the third exit	N31		Travel	324	--	
N-31-12	drive on the N31 (Leopardstown Road)	drive 700m big junction with Burton Hall Road on your left-hand side		Travel	702	--	
R-113-6	turn right on Leopardstown Road	drive for 1.27km junction with the N11		Travel	1270	--	
R-113-7	cross N11 to Newtownpark Avenue	drive for 2.14km until the road ends		Salt	--	2142	
R-113-8	turn left on Stradbroke Road	drive for 205m junction with Monkstown Road		Salt	--	205	
R-113-9	the name changes to Temple Hill	keep driving on R113 towards N31		Salt	--	128	
N-31-3	drive now on N31 towards City Centre (straight ahead)	drive for 290m		Salt	--	291	
N-31-2	drive straight ahead on Frascati Road	drive for 710m junction where the N11 takes a left turn		Salt	--	710	
R-118-1	keep driving straight on R118/Rock Road	drive for about 1.45km first junction with St. Helen's Road		Salt	--	1447	
L-91001-1	turn around at this junction with St. Helen's Road	drive back 360m on Rock Road until there is the DART station Booterstown on the left-hand side		Salt	--	360	
L-1003-1	turn there right on Booterstown Avenue	drive 1.28km until the junction with R138		Salt	--	1284	
R-138-1	turn left on the R138	drive for 327m until the junction with Mount Merrion Avenue (N31)		Salt	--	327	
N-31-1	turn left on Mount Merrion Avenue	follow the street until the N31 takes a right turn		Salt	--	1539	
N-31-2	turn right to Frascati Road	drive for 710m		Salt	--	710	
N-31-3	continue on Temple Road	drive for 291m junction with Newtown Avenue		Salt	--	291	
N-31-4	turn left to Newtown Avenue	drive there for 160m		Salt	--	158	
L-1010-1	keep driving straight ahead to stay on Newtown Avenue	drive for another 399m		Salt	--	399	
L-1009-1	street name changes to Main Street	keep driving until you reach the junction with Temple Road		Salt	--	160	
L-1011-1	cross Temple Road to Carysfort Avenue	drive for 150m to the junction with N31		Salt	--	152	
R-825-6	cross N31 to stay on Carysfort Avenue	drive 1.1km to the junction with Elm Grove		Salt	--	1103	
R-825-6	turn around	drive back to the junction with Frascati Road		Salt	--	1103	
N-31-2	turn right to Frascati Road	drive for 335m		Salt	--	335	
N-31-3	continue on Temple Road	for 291m until the junction with Newtown Avenue		Salt	--	291	
R-113-9	turn left for Temple Hill	drive for 128m to the junction with Monkstown Road		Salt	--	128	
R-113-8	continue on Stradbroke Road	for another 205m junction with Newtownpark Avenue		Salt	--	205	
R-827-1	stay straight to stay on Stradbroke Road	drive for 475m		Salt	--	474	
R-828-1	turn now slightly left to stay on Stradbroke Road	drive 670m to the roundabout		Salt	--	671	
R-828-2	take the second exit to Abbey Road	drive 630m to the junction with Kill Lane		Salt	--	633	
R-828-3	cross Kill Lane/Avenue and for Rochestown Avenue	follow for 995m (after 105m the street takes a slight left turn)		Salt	--	945	
L-1028-1	turn now left to Sallynoggin Road	drive 1.06km to the roundabout		Salt	--	1066	
R-118-6	take the second exit to Gleanageary Road Lower	drive for 1.12km there will be the People's Park in front the junction		Salt	--	1122	

R-118-4	cross the junction to Park Road	and drive to the seafront		Salt	--	213	
R-118-5	turn left to Queens Road	drive until you come to the junction at City Hall again		Salt	--	518	
N-31-10	cross the junction to Crofton Road	drive 575m		Salt	--	574	
N-31-9	the streetname changes to Dunleary Road	keep driving for 421m		Salt	--	421	
N-31-8	name changes to Old Dunleary Road	keep driving for another 110m		Salt	--	112	
N-31-7	road name change again to Longford Terrace	drive for another 300m		Salt	--	306	
N-31-5	changes to Seapoint Avenue	drive there for another 1.23km		Salt	--	1229	
N-31-4	turn left to Newtown Avenue	drive there for 160m		Salt	--	158	
R-113-9	turn left for Temple Hill	drive for 128m to the junction with Monkstown Road		Salt	--	128	
R-119-1	turn left to Monkstown Road	follow the street for 1.12km		Salt	--	1124	
R-119-2	keep going straight now on Monkstown Crescent	and drive there for another 320m		Salt	--	320	
R-119-3	road name changes to Longford Place	drive for 150m		Salt	--	153	
R-119-4	street name changes to Dunleary Hill	drive for 160m		Salt	--	161	
R-119-5	name changes again to Cumberland Street	drive for 140m junction with Clarence Street/York Road		Salt	--	142	
R-830-3	turn right to York Road	follow the street until you come to the junction with Mounttown Road Upper and Lower		Salt	--	750	
R-829-3	continue on Mounttown Road Lower	drive 560m to the junction with Oliver Plunkett Road/Kill Avenue		Salt	--	558	
R-830-2	continue on Kill Avenue	drive 875m to the junction with Abbey Road		Salt	--	875	
R-828-2	turn right to Abbey Road	drive 630m to the roundabout		Salt	--	633	
L-10278-4 /-2	take the third exit to Monkstown Avenue	drive 734m to the next roundabout		Salt	--	117	
L-1024-1				Salt	--	734	
R-829-14	take the first exit to Carrickbrennan Road	drive 295m to the junction with Pakenham Road		Salt	--	32	
R-829-1				Salt	--	295	
R-829-1	turn around	drive back to the roundabout		Salt	--	295	
R-829-11	take the second exit to Mounttown Road Upper	drive 375m to the junction with York Road/Mounttown Road Lower		Salt	--	31	
R-829-2				Salt	--	376	
L-1027-1	continue on Tivoli Road	drive there for 580m		Salt	--	581	
L-1032-1	the name changes to Corrig Road	drive for 395m until you reach the junction with Glenageary Road Lower		Salt	--	395	
R-118-6	turn right on Glenageary Road Lower	drive 765m to the roundabout		Salt	--	765	
R-829-42	take the first exit to Glenageary Road Upper	drive there for 989m to the next roundabout		Salt	--	26	
R-829-5				Salt	--	989	
R-829-51 /-52 /-53 /-55	take the fourth exit to Avondale Road	drive 1.4km to the roundabout		Salt	--	137	
L-3026-1				Salt	--	1409	
R-829-34 /-33 /-31	take the third exit to Sallyglen Road	drive for 1.44km on Sallyglen Road, there will be a roundabout		Salt	--	132	
R-118-7				Salt	--	1439	
R-829-44	take the first exit to Sallynoggin Road	drive until the junction with Rochestown Avenue		Salt	--	36	
L-1028-1				Salt	--	1066	
R-828-3	turn left on Rochestown Avenue	drive for 1.27m to the roundabout		Salt	--	1274	
R-829-31 /-32 /-33	take the third exit to Church Road	and drive there for 1.12km		Travel	129	--	
R-118-8				Travel	1124	--	
R-118-9 /-10	road name changes to Wyattville Link Road	drive for 2.57km		Travel	2569	--	
M-50-14 N-50-17 M-50-9	drive now on the M50	drive 2.2km and leave at junction 15		Travel	2208	--	
L-2026-1	take the second exit	Driveway Ballyogan Operations Centre		Travel	833	--	
	Ballyogan Road	Depot Ballyogan Operations Centre		Travel	130	--	

ROUTE CARD FOR PRECAUTIONARY TREATMENT ROUTE No. 7							
Route Description:	yellow - Dalkey-Killiney						
Depot:	Ballyogan Operations Centre						
Driver/Helper:	name of driver & helper - can change						
Vehicle:	tonnes, registration plate - can change						
Road	From	To	Route Risks / Hazards	Action	Free run (m)	Spreading Distance (m)	Time (mins)
	Depot Ballyogan Operations Centre	Ballyogan Road		Travel	130	--	
L-2026-1	turn right on Ballyogan Road	drive for 833m to the roundabout		Travel	833	--	
R-842-4	take the second exit to cross M50	next roundabout after the M50		Travel	162	--	
R-842-4	take again the second exit	drive to the next roundabout		Travel	401	--	
R-842-8	take the third exit to the M50	drive 276m		Travel	276	--	
M-50-12		now drive on the M50					
M-50-1	drive on the M50 for 1.5km	exit on junction 16 southbound		Travel	1791	--	
M-50-15							
R-118-13	turn left to Wyattville Link Road	drive for about 1.2km until you reach N11		Travel	1172	--	
R-118-12	cross N11 to stay on Wyattville Road	drive for 1.25km		Travel	1248	--	
L-1062-1	Roadname changes to Church Road	keep going for 630m junction with Wyattville Road/Shanganagh Road		Salt	--	631	
L-1066-1	cross the junction to Shanganagh Road	drive for 890m to the roundabout		Salt	--	891	
R-823-35 /-31 /-32	take the third exit to stay on Shanganagh Road	stay on that road for 1.26km to the next roundabout		Salt	--	60	
R-119-18				Salt	--	1265	
R-119-18	take the same exit again	drive back to the roundabout		Salt	--	1344	
R-823-33 /-34 /-35	take the third exit to Killiney Hill Road	follow the road to the roundabout after 2.4km		Salt	--	45	
R-832-3				Salt	--	2393	
L-3025-1	take the first exit to stay on Killiney Hill Road	and drive there for 575m junction with Killiney Road / Dalkey Avenue		Salt	--	574	
L-1046-1	at this junction drive straight ahead for Dalkey Avenue	follow the street for 1.1km junction with R829	ramps	Salt	--	1090	
L-1045-1	cross R829	drive shortly on R119		Salt	--	42	
L-10391-1	keep to the right to Link Road	drive there 50m		Salt	--	49	
R-119-11	now turn left to Ulverton Road	drive for 850m		Salt	--	851	
R-119-10	keep driving straight, now on Breffni Road	drive for 280m		Salt	--	280	
R-119-9	street name changes to Sandycove Road	drive for around 460m		Salt	--	458	
R-119-8	street name is now Glasthule Road	stay here for another 225m		Salt	--	224	
R-119-7	keep driving straight ahead to Summerhill Road	stay there for 490m until the junction at the People's Park		Salt	--	491	
R-118-6	turn now left to Glenageary Road Lower	drive 355m to the next bigger junction		Salt	--	355	
L-1037-1	turn left to Eden Road Upper	drive 290m		Salt	--	292	
L-1038-1	changes to Eden Road Lower	drive for 235m to the junction with Adelaide Road/Hudson Road		Salt	--	233	
L-1039-2	turn right to Adelaide Road	drive till the road ends at the junction with Glenageary Road Upper		Salt	--	993	
R-829-5	turn left to Glenageary Road Upper	drive 330m to the roundabout		Salt	--	328	
R-829-51	take the first exit to Albert Road	drive there for 1.1km to the junction with Hudson Road/Elton Park		Salt	--	34	
L-3028-1				Salt	--	1089	
L-1042-1	turn right to Elton Park	drive 460m to the T-junction with Castlepark Road		Salt	--	458	
L-1044-1	turn right to Castlepark Road	drive 770m to the roundabout		Salt	--	770	
R-829-6	take the first exit to Barnhill Road	drive 650m to the junction where you can only turn left		Salt	--	654	
L-1045-1	cross R829	drive shortly on R119		Salt	--	42	
L-10391-1	keep to the right to Link Road	drive there 50m		Salt	--	49	
R-119-11	now turn right to Ulverton Road	drive to the junction, keep to the left		Salt	--	48	
R-119-12	now turn left to Castle Road	drive around 280m junction with Station Road		Salt	--	278	
R-119-13	turn right to Station Road	drive for 73m junction with Sorrento Road		Salt	--	73	
R-119-14	now turn left to Sorrento Road	follow the street for 830m until the junction with Vico Road / Colimore Road		Salt	--	828	
R-119-15	turn right to Vico Road	follow that road for 1.31km		Salt	--	1314	
L-1059-1	keep driving straight to Victoria Road (you can't drive any other way)	follow the street for around 530m to the roundabout		Salt	--	527	
L-3025-1	take the second exit to Killiney Hill Road	drive for 575m junction with Killiney Road / Dalkey Avenue		Salt	--	574	
L-3026-1	turn now left for Killiney Road	drive 990m to the roundabout		Salt	--	991	
L-3026-1	take the same exit again	drive 530m junction with Ballinclea Road		Salt	--	530	
L-1058-1	turn right to Ballinclea Road	drive to the junction with Avondale Road		Salt	--	967	
L-3027-1	turn left to Avondale Road	drive 130m to the roundabout		Travel	129	--	
R-828-33	take the first exit to Church Road	and drive there for 1.12km		Travel	43	--	
R-118-8				Travel	1124	--	
R-118-9 /-10	road name changes to Wyattville Link Road	drive for 2.57km Driveway to the M50		Travel	2569	--	
M-50-14							
N-50-17	go now on M50 northbound	leave at junction 15		Travel	2208	--	
M-50-9							
L-2026-1	take the second exit	Driveway Ballyogan Operations Centre		Travel	833	--	
	Ballyogan Road	Depot Ballyogan Operations Centre		Travel	130	--	

ROUTE CARD FOR PRECAUTIONARY TREATMENT ROUTE No. 8							
<b>Route Description:</b>	dark blue - Foxrock+						
<b>Depot:</b>	Ballyogan Operations Centre						
<b>Driver/Helper:</b>	name of driver & helper - can change						
<b>Vehicle:</b>	tonnes, registration plate - can change						
Road	From	To	Route Risks / Hazards	Action	Free run (m)	Spreading Distance (m)	Time (mins)
	Depot Ballyogan Operations Centre	Ballyogan Road		Travel	130	--	
L-2026-1	turn left on Ballyogan Road	drive for 1.55km		Travel	1550	--	
L-2026-2	turn right to Murphystown Way (Mount Eagle Lawn)	drive for 838m till M50		Travel	838	--	
R-113-5	cross the M50	roundabout after 116m		Travel	116	--	
N-31-121 / -124	in the roundabout take the third exit	N31		Travel	324	--	
N-31-12	drive on the N31 (Leopardstown Road)	drive 700m big junction with Burton Hall Road on your left-hand side		Travel	702	--	
N-31-11	drive straight ahead to Brewery Road	follow the street for 1.13km junction with St. Brigid's Church Road, just under 60m before N11		Salt	--	1130	
L-20209-1	turn left on St. Brigid's Church Road	drive 574m		Salt	--	574	
L-6022-1	the name changes to Glenalbyn Road	keep driving till the road ends		Salt	--	146	
L-20502-1	turn left on The Hill, Stillorgan	drive for 340m junction with R825		Salt	--	337	
L-6023-1	cross the R825 to get on Old Dublin Road	drive 535m junction with N11		Salt	--	535	
N-11-16	turn left on N11			Salt	--	115	
L-6017-1	and immediately left again on Trees Road Lower	drive there until you reach a roundabout		Salt	--	585	
L-2018-1	take the first exit to South Avenue	drive 375m until the junction where the road ends		Salt	--	375	
R-825-4	turn left to R825/Lower Kilmacud Road	drive for about 920m junction with N11		Salt	--	920	
R-825-5	cross N11 and follow the Stillorgan Park A/R825	drive for 1.06m (there will be a roundabout after around 305m, take the second exit) junction with Fleurville		Salt	--	1062	
L-91557-1	the R825 will go left but you stay straight on Fleurville A	drive for 145m		Salt	--	145	
L-1068-1	the name changes to Annaville Terrace/L1068	drive for around 250m		Salt	--	246	
L-1068-2	go straight ahead to L1068	drive for 281m		Salt	--	281	
L-91490-1 L-91342-3	street name changes to Rowanbyrne and L-91342	drive 320m until you reach a big junction with Dean's Grange Road		Salt	--	322	
R-827-3	turn right to Dean's Grange Road	drive 915m junction with R830		Salt	--	915	
R-830-1	turn left to Kill Lane	drive for around 490m junction R830/R828		Salt	--	489	
R-828-2	turn left to Abbey Road	drive 630m to the roundabout		Salt	--	633	
L-10278-1	take the first exit to Stradbroke Road A	drive for 366m junction with Dean's Grange Road		Salt	--	366	
R-827-3	turn right to Dean's Grange Road	follow the street for 360m		Salt	--	362	
R-827-2	the street name changes to Rowan Park	keep driving for around 190m until the R828 combines		Salt	--	187	
R-827-1	but you stay on R827/Stadbrook Road	drive for 475m junction with R113		Salt	--	474	
R-113-7	at the junction with R113 turn left to Newtownpark Avenue	drive until you reach N11, there will be several junctions but always stay straight ahead		Salt	--	2142	
R-113-6	cross the N11 for Leopardstown Road	drive 660m junction with Torquay Road		Salt	--	660	
L-2027-1	turn left to Torquay Road	drive for 1.08km junction Westminster Road		Salt	--	1080	
L-2028-1	now turn left to Westminster Road	drive 1.08km to the N11		Salt	--	1086	
N-11-10	turn right to N11 towards Wexford	drive 370m to the next junction		Salt	--	370	
R-842-1	turn right on Old Bray Road	drive for 100m junction Mart Lane		Salt	--	100	
L-6035-1	turn right to Mart Lane	follow the street for around 500m junction Westminster Road		Salt	--	496	
L-2028-1	turn now left to Westminster Road	drive back 780m to the junction with Torquay Road/Brighton Road		Salt	--	780	
L-2029-1	go left for Brighton Road	follow the road for 1.45km junction with Brennanstown Road		Salt	--	1450	
L-2032-1	keep driving straight ahead to get on Brennanstown Road	follow this street until you get to junction Bray Road (100m away from N11)		Salt	--	1955	
L-2032-1	turn around	drive back 1.95km to the junction with Glenamuck Road		Travel	1955	--	
R-842-4	turn left to Glenamuck Road	roundabout before the M50		Travel	545	--	
R-842-8	in the roundabout take the second exit	the next roundabout		Travel	406	--	
R-842-4	take the first exit to cross M50	roundabout after M50		Travel	125	--	
L-2026-1	take the second exit	Driveway Ballyogan Operations Centre		Travel	833	--	
	Ballyogan Road	Depot Ballyogan Operations Centre		Travel	130	--	

ROUTE CARD FOR PRECAUTIONARY TREATMENT ROUTE No. 9							
Route Description:	red - Rathmichael						
Depot:	Ballyogan Operations Centre						
Driver/Helper:	name of driver & helper - can change						
Vehicle:	tonnes, registration plate - can change						
Road	From	To	Route Risks / Hazards	Action	Free run (m)	Spreading Distance (m)	Time (mins)
	Depot Ballyogan Operations Centre	Ballyogan Road		Travel	130	--	
L-2026-1	turn right on Ballyogan Road	drive for 833m to the roundabout		Travel	833	--	
R-842-4	take the second exit to cross M50	next roundabout after the M50		Travel	162	--	
R-842-4	take again the second exit	drive to the next roundabout		Travel	401	--	
R-842-8 M-50-12	take the third exit to the M50	drive 276m now drive on the M50		Travel	276	--	
M-50-1 M-50-15	drive on the M50 for 1.5km	exit on junction 16 southbound		Travel	1791	--	
R-118-13	turn left to Wyattville Link Road	drive for about 900m until crossing the LUAS		Travel	895	--	
R-118-13	after crossing the LUAS	drive for about 450m junction with N11		Salt	--	446	
R-118-12	cross N11 to stay on Wyattville Road	drive for 1.25km		Salt	--	1248	
R-118-11 R-118-8	Roadname changes to Church Road	keep going for 1.14km until you come to a roundabout		Salt	--	1137	
R-118-8 R-118-9	take the same exit and drive the whole Church Road and a little bit from Wyattville Road back	drive approx. 1.49km junction with Churchview Road		Salt	--	1656	
L-6048-1	turn right to Churchview Road	drive until the road ends (1.55km) junction with Church Road		Salt	--	1547	
R-118-8 R-118-9 R-118-10	turn right to Church Road	drive back the whole road until you reach M50		Salt	--	3524	
R-118-13	before the road ends and you drive on the M50, turn sharp right so you can cross the M50	drive back 1.34km to reach N11		Salt	--	1341	
N-11-11 N-11-15	turn left to get on N11	drive 943m until you can cross to the other lane (going south)		Salt	--	1192	
N-11-10	make a u-turn and drive the N11 towards south	until you get to the roundabout with M11		Salt	--	1903	
R-837-1	take the first exit to Dublin Road	drive for 715m junction with Stonebridge Road		Salt	--	715	
L-2041-1	turn right to be on Stonebridge Road	drive there for 640m, you will reach a roundabout		Salt	--	641	
R-116-6	take the second exit to go on Mullinastill Road	drive to the next roundabout		Salt	--	160	
R-116-6	in the next roundabout take the same exit again	drive to the next roundabout		Salt	--	225	
R-116-6 R-116-5	take the second exit to drive on Stonebridge Road	cross the M50 drive to the roundabout		Salt	--	274	
L-6059-1	take the first exit to Ballybride Road	drive 1.16km to the next roundabout		Salt	--	1163	
L-91383-1	take the first exit to Crinken Lane	drive for 430m until the road ends, junction with Dublin Road		Salt	--	430	
L-91383-1	turn around	drive back on Crinken Lane to the roundabout		Salt	--	430	
L-6059-1	take the second exit to Ballybride Road	drive 1.16km to the roundabout		Salt	--	1186	
L-2042-1 / -2	on the roundabout before you cross M50 take the first exit on Ferndale Road	drive for 3.02km		Salt	--	3037	
L-2047-1	the road changes to Old Connaught Avenue	drive for 1.11km junction with Dublin Road		Salt	--	1113	
R-119-20	turn left to Dublin Road	drive until the roundabout		Salt	--	325	
R-119-20	take the same exit	drive back to Old Connaught Avenue		Salt	--	475	
L-2047-1	turn right to Old Connaught Avenue	drive back 1.11km to the junction with Thornhill Road / Ferndale Road		Salt	--	1113	
L-6061-1	turn left on Thornhill Road	drive 537m, there will be the St Gerard's Catholic School		Salt	--	537	
L-6061-1	turn around	drive the the street for 470m back		Salt	--	470	
L-2046-1	turn left on Ballyman Road	drive for 2.23km		Salt	--	2234	
L-2046-1 L-6061-1	turn around	drive the same route back, when you come to Thornhill Road again, turn left on Thornhill Road		Salt	--	2301	
L-2042-1 / -2	then left on Ferndale Road	drive the whole street back to the roundabout		Salt	--	3017	
R-116-4	take the first exit to Rathmichael Road	drive for 1.15km		Salt	--	1153	
R-116-3	the road changes to Ballcorus Road	keep driving for 2.73km until the road ends junction Enniskerry Road		Salt	--	2733	
R-117-4	turn right to Enniskerry Road	then turn around in the car park on the right-hand side		Salt	--	80	
R-117-4 R-116-3	drive back to the junction to Ballcorus Road and turn right	drive the whole street back junction Brides Glen Road / Rathmichael Road		Salt	--	2813	
L-60551-1	go on Brides Glen Road	cross M50 and follow the road until a roundabout		Salt	--	555	
R-116-6	take the second exit to Mullinastill Road	follow the street for another 360m to the next roundabout		Salt	--	357	
R-116-6	take the same exit	drive Mullinastill Road back to the roundabout		Salt	--	357	
R-116-7	take the second exit to Cherrywood Road	stay there for 706m junction with N11		Salt	--	706	
N-11-15	now you are going shortly onto the N11	drive there for about 185m next junction		Salt	--	185	
N-11-18	leave the N11 on the next junction	junction with Wyattville Road		Salt	--	382	
R-118-9 /-10	turn right on Wyattville Road	drive 300m junction with Valley Drive		Salt	--	300	
R-118-9 /-10	stay straight ahead	drive for 875m Driveway to the M50		Travel	875	--	
M-50-14 N-50-17 M-50-9	go now on M50 northbound	leave at junction 15		Travel	2208	--	
L-2026-1	take the second exit	Driveway Ballyogan Operations Centre		Travel	833	--	
	Ballyogan Road	Depot Ballyogan Operations Centre		Travel	130	--	

**ROUTE CARD FOR PRECAUTIONARY TREATMENT ROUTE No. 10**

**Route**

**Description:** grey - Infill

**Depot:** Ballyogan Operations Centre  
name of driver & helper - can change

**Driver/Helper:** change

**Vehicle:** tonnes, registration plate - can change

Road	From	To	Route Risks / Hazards	Action	Free run (m)	Spreading Distance (m)	Time (mins)
	Depot Ballyogan Operations Centre	Ballyogan Road		Travel	130	--	
L-2026-1	turn right on Ballyogan Road	drive for 833m to the roundabout		Travel	833	--	
R-842-4	take the second exit to cross M50	next roundabout after the M50		Travel	162	--	
R-842-4	take again the second exit	drive to the next roundabout		Travel	401	--	
R-842-4	take the first exit to Glenamuck Road	drive 550m junction with Brennanstown Road		Travel	552	--	
L-2032-1	turn right to Brennanstown Road	follow this street to junction Bray Road (100m away from N11)		Travel	1955	--	
	turn now right and immediately left again towards N11 (Johnstown Road)	junction with N11		Travel	121	--	
N-11-15 N-11-16	turn left to N11 towards City Centre	drive for 5.58km junction N31 N11 will end there		Travel	5577	--	
R-138-5	keep driving on the same road, now Stillorgan Road	drive for 1.44km to the ramps		Travel	1440	--	
R-138-2	drive on the ramp	drive straight ahead until you get back on Stillorgan Road		Salt	--	617	
R-138-5	drive on Stillorgan Road again	drive for 340m until the junction with Greenfield Park/Nutley Lane		Salt	--	340	
R-138-5	turn around	drive back 380m to the ramps		Salt	--	377	
R-138-4	drive now again on the ramp and to get to the bridge	junction after the ramp		Salt	--	214	
R-138-3	turn right to cross the bridge	junction after the bridge		Salt	--	74	
	keep going straight	follow the street to the roundabout		Salt	--	328	
	take the first exit	follow the street and turn right when you can to come back to the bridge		Salt	--	278	
R-138-3	cross the bridge again	junction after the bridge		Salt	--	74	
R-138-4	turn now right	drive down the ramp to Stillorgan Road		Salt	--	322	
R-138-1	drive now 540m back on Stillorgan Road	junction with Foster Avenue (it's the first junction)		Salt	--	547	
R-112-5	turn now right to Foster Avenue	drive for 430m junction North Avenue		Salt	--	433	
L-2009-1 L-2018-1	now turn left to North Avenue	follow the road until it ends (there will be a few roundabouts but just drive straight ahead)	ramps and road islands	Salt	--	1509	
R-825-4	now turn left to Lower Kilmacud Road	drive for about 1.22km junction with Dunmartin Road		Salt	--	1224	
R-133-3	turn right to Dunmartin Road	drive for 215m		Salt	--	215	
R-133-4	the name changes to Kilmacud Road Lower	keep driving to the big junction with Taney Road		Salt	--	257	
R-112-3	turn left to Taney Road	drive for 570m junction Stoney Road		Salt	--	573	
L-6007-1	turn now right to get to Stoney Road	drive 240m junction with Ballinteer Road North	ramps	Salt	--	242	
L-3014-1	turn left to Ballinteer Road North	drive for about 100m junction with Overend Way		Salt	--	108	
R-826-3	turn right on Overend Way	drive for 440m junction Sandyford Road A		Salt	--	441	
L-6064-1	turn right on Sandyford Road A	drive to the junction after Dundrum Shopping Centre		Salt	--	530	
L-6063-1	stay straight ahead on Main Street A, Dundrum	drive for 435m along the Dundrum Town Centre		Salt	--	435	
R-117-2	turn left on Dundrum by-pass	drive to the roundabout		Travel	1080	--	
R-117-12 R-826-2	take the third exit to Wyckham Way	drive to the next roundabout		Travel	494	--	
R-826-11 R-826-0	take the second exit to R826	drive to the next roundabout		Travel	399	--	
R-826-10 L-3016-1	take the third exit to Ballinteer Road	follow that street for 1.22km till the end of the road		Travel	1269	--	
R-113-2	turn now right on Brehon Field Road	drive 138m junction with Grange Road		Travel	138	--	

L-30136-1	and then nearly immediately left on Grange Road	drive for 600m junction before the M50 with College Road		Travel	602	--	
L-20148-1	at the junction before the M50 turn left to College Road	drive for 1.24km until the street ends		Salt	--	1238	
L-7015-3	turn now left to Whitechurch Road	drive under the M50 to the roundabout		Salt	--	76	
L-7015-1	take the second exit to Tibradden Road	follow the road for 1.37km junction with Mutton Lane		Salt	--	1375	
L-7013-1	turn left to Mutton Lane	follow the street for 700m junction with Tibradden Lane		Salt	--	705	
L-70172-1	turn right to Tibradden Lane	drive for 670m	narrow street	Salt	--	670	
L-70172-1	turn around	drive back to the junction with Mutton Lane	narrow street	Salt	--	670	
L-7013-1	turn left on Mutton Lane	drive for 445m junction with Cloragh Road		Salt	--	445	
L-7014-1	turn right to Cloragh Road	drive for 377m junction with Tibradden Road	narrow street	Salt	--	377	
L-7015-1	turn right to Tibradden Road	drive back to the roundabout		Salt	--	915	
L-7015-2 L-7016-1	take the second exit to Kilmashogue Lane	drive there to the top until you can't drive further	narrow street	Salt	--	2527	
L-7016-1	turn around	drive back to the roundabout	narrow street	Salt	--	2495	
L-7015-3	take the second exit	drive on Whitechurch Road under the M50 junction with College Road		Salt	--	120	
L-20148-1	turn right to College Road	drive for 1.24km junction with Kellystown Road		Salt	--	1238	
L-7017-1	turn right to Kellystown Road	follow the road for 1.9km junction with Ticknock Road		Salt	--	1929	
L-7018-1	turn right to Ticknock Road	drive for 265m, there will be a junction with the sign "Ticknock Forest Recreation Area"	narrow street	Salt	--	264	
L-7018-1	turn around	drive back to junction with Kellystown Road	narrow street	Salt	--	264	
L-7018-1	drive straight ahead to stay on Ticknock Road	follow the road for 1.24km junction with Bleckglen Road	narrow street	Salt	--	1240	
L-20146-1	turn right to Blackglen Road	drive for 140m junction with Ticknock Drive		Salt	--	137	
	turn left to Ticknock Drive	drive there until you reach a roundabout		Salt	--	177	
	take the second exit to Rockview	follow the street for 1.17km		Salt	--	1170	
L-20146-1	turn left on Blackglen Road	stay there for 109m junction with Woodside Road		Salt	--	109	
L-3017-1	turn right on Woodside Road	drive for 550m, till the first junction		Salt	--	549	
L-7019-1	turn left on Slate Cabin Lane	drive for 520m junction with Enniskerry Road	ramps	Salt	--	522	
R-117-4	turn right on Enniskerry Road	drive only 160m junction with Village Road		Salt	--	161	
L-30172-1	turn left at the first opportunity to Village Road	follow that road until you get to a roundabout		Salt	--	754	
L-30181-1	take the second exit to Belarmine Avenue	drive there until you reach the roundabout by Enniskerry Road	ramps	Salt	--	696	
R-117-4	take the first exit to Enniskerry Road	drive for 650m junction with Kilgobbin Road		Travel	652	--	
L-2024-1	turn left to Kilgobbin Road	drive for 1.23m junction with Ballyogan Road		Travel	1230	--	
L-2026-1	turn right to Ballyogan Road and again right to stay on Ballyogan Road	Driveway Ballyogan Operations Centre		Travel	1600	--	
	Ballyogan Road	Depot Ballyogan Operations Centre		Travel	130	--	





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