

# **Dun Laoghaire Rathdown County Council - Winter Service Plan 2023/2024**

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Winter Service Plan – 2023/2024

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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 16<sup>th</sup> October 2023 – 30<sup>th</sup> April 2024.

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
1.00	Draft Issue	Issued for Review	11/10/2023
2.00	Final Draft	Issued for Signatures	12/10/2023

### 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		12/10/2023
Senior Engineer (Winter Services Manager)	Mr. James Phelan		12/10/2023

## 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. 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 2023 to 2024 winter maintenance programme commences on the 16<sup>th</sup> October 2023 and ends on the 30<sup>th</sup> April 2024 in accordance with TII circular No. 04/2023 issued on the 26<sup>th</sup> September 2023.

### 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.

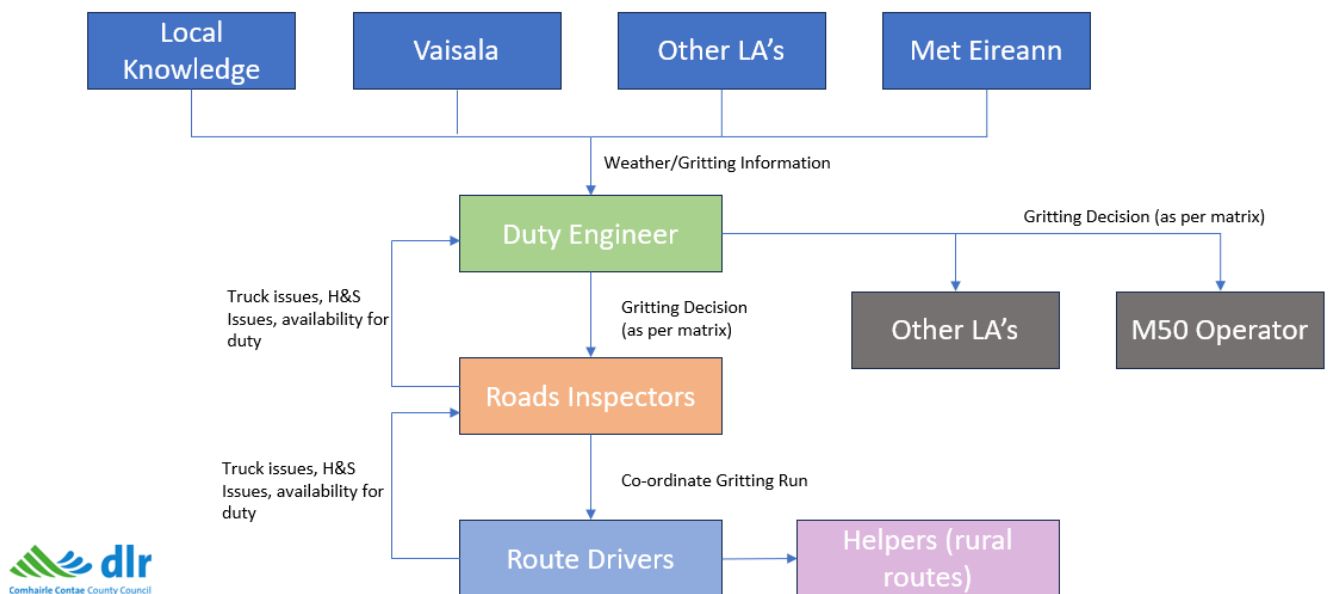
### 2.2 General Arrangements and Decision Making

#### 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.

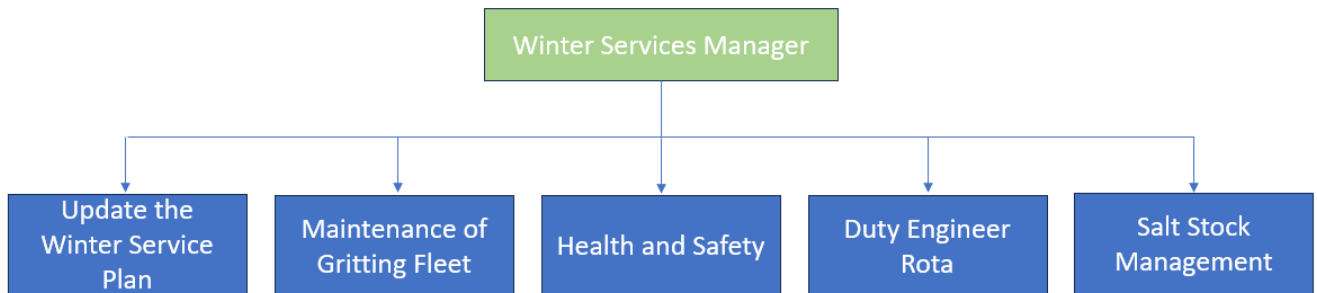


Once the appropriate gritting decision has been made by the Duty Engineer based on the weather information at the time, this decision is circulated to the relevant staff within Dun Laoghaire Rathdown County Council including the Roads Inspectors, Gritting Route Drivers, Helpers. This communication is 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 2023/2024 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 2023/2024 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. Gerry Flaherty	Senior Executive Engineer	Operations Centre, Ballyogan
Mr. John O'Connor	Executive Engineer	Operations Centre, Ballyogan
Mr. John O'Malley	Executive Engineer	Operations Centre, Ballyogan
Ms. Katherine Beach	Assistant Engineer	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 2023/2024 winter service season, the Duty Engineers broadly operate a rota of three weeks on and three 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 DLRCC area are located at the M50 (Sandyford 'Master'), Ticknock, (Sandyford 'Slave'), and the M11 (Wilford interchange). Predictions developed from weather station data are extrapolated to all other areas using thermal mapping.

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

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

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
16 <sup>th</sup> October	Winter season commences
Weekly from 16 <sup>th</sup> October	Local Authority to report weekly to TII via the RWIS diary portal and on the National Salt Management System
Monthly from 16 <sup>th</sup> October	Monthly report to TII via the RWIS diary portal
31 <sup>st</sup> March	Finalise list of key issues to feed into winter service workshops and/or conferences arranged by TII
30 <sup>th</sup> April	Winter season concludes
31 <sup>st</sup> May	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 2023/2024 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
Acting Roads Inspector	Roads Inspector – Road Maint. Area East	Mr. Shane McMahon
Gritting Route Driver	Driver – Road Maintenance Area West	Mr. Noel Dease
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. Gerry Maguire
Gritting Route Driver	Driver – Road Maintenance Area East	Mr. Dave Farrell
Gritting Route Driver	Driver – Road Maintenance Area East	Mr. Derek O'Toole
Gritting Route Driver	Driver – Road Maintenance Area West	Mr. Dave Scanlon
Gritting Route Driver	Driver – Parks Department	Mr. Mark Doyle
Gritting Route Driver	Driver – Cleansing Section	Mr. John Murray
Gritting Route Driver	Driver – Cleansing Section	Mr. Peter Hannigan
Spare Driver No.1	Driver – Cleansing Section	Mr. Barry Hill
Spare Driver No.2	Inspector – Water Section	Mr. Alan Murphy
Gritting Route Helper	Driver – Road Maintenance Area East	Mr. Shane O'Connor
Gritting Route Helper	Driver – Road Maintenance Area West	Mr. Paul Blake
Gritting Route Helper	Driver – Road Maintenance Area East	Mr. Gary Burnett
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 West	Mr. Tom Flood
Gritting Route Helper	Driver – Road Maintenance Area East	Mr. David O'Neill
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. Des Lynch
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### 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.

All Roads Inspectors, Gritting Route Drivers, and Helpers have received formal training from Romaquip Limited who supply all our gritting units/trucks. This training course was recently run in Dun Laoghaire Rathdown County Council in September 2023 for all operatives who will be involved in the implementation of the Winter Service Plan for the 2023/2024 season.

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 2023/2024 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		
Road Surface Temperature	Precipitation etc	Wet	Damp	Dry
May fall below 1°C	<u>No</u> rain <u>No</u> hoar frost <u>No</u> fog	Salt before frost	Salt before frost (see note A)	Salt before frost (see note A)
	<u>Expected</u> hoar frost <u>Expected</u> frost		Salt before frost (see note B)	
Expected to fall below 1°C	<u>Expected</u> rain <u>BEFORE</u> freezing	Salt after rain stops (see note C)		
	<u>Expected</u> rain <u>DURING</u> freezing	Salt before frost and after rain stops (see note D)		
	<u>Possible</u> rain <u>Possible</u> hoar frost <u>Possible</u> fog	Salt before frost		Salt before frost
<u>Expected</u> snow		Salt before snow fall		
Freezing Rain	<u>Before</u> rain	Salt before rainfall (see note D)		
	<u>During</u> rain	Salt during rainfall (see note D)		
	<u>After</u> 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:

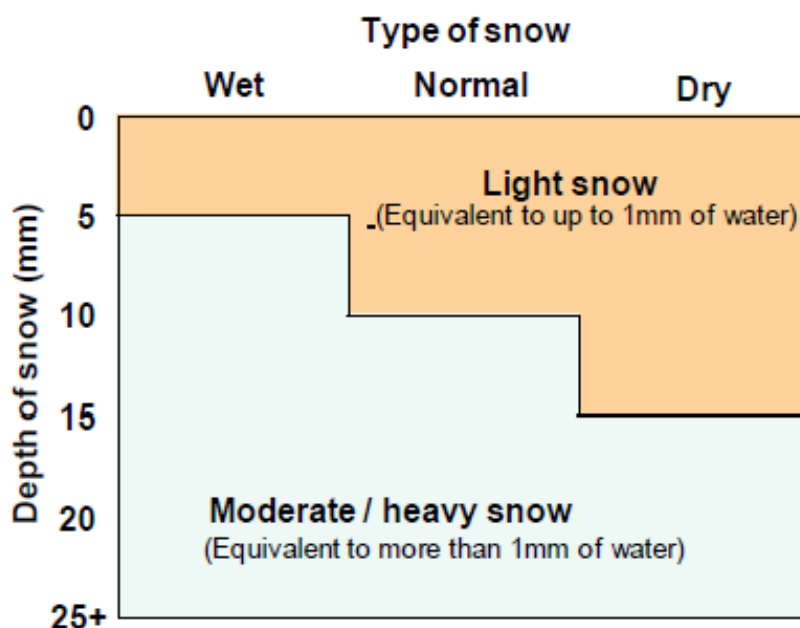
- When snow is forecast, ploughs and snow blowers shall be prepared and positioned in order that snow clearance can start without delay as and when required.
- To facilitate the breakup and dispersal of ice and snow by trafficking, treatments shall be made before snowfall or freezing rain so that sufficient 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.

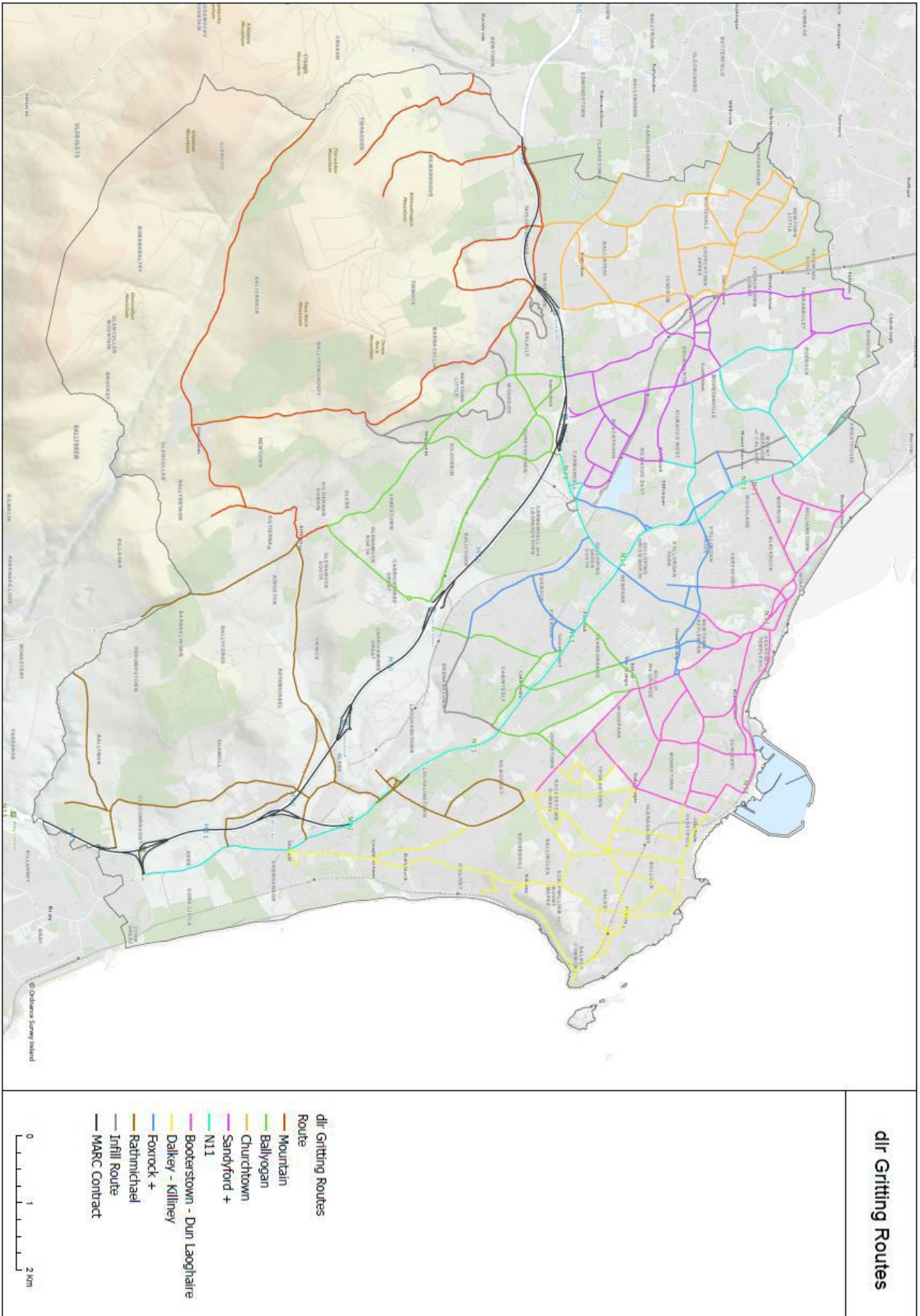
### 4.4.2 Ploughing & Clearance Techniques and Operational Considerations

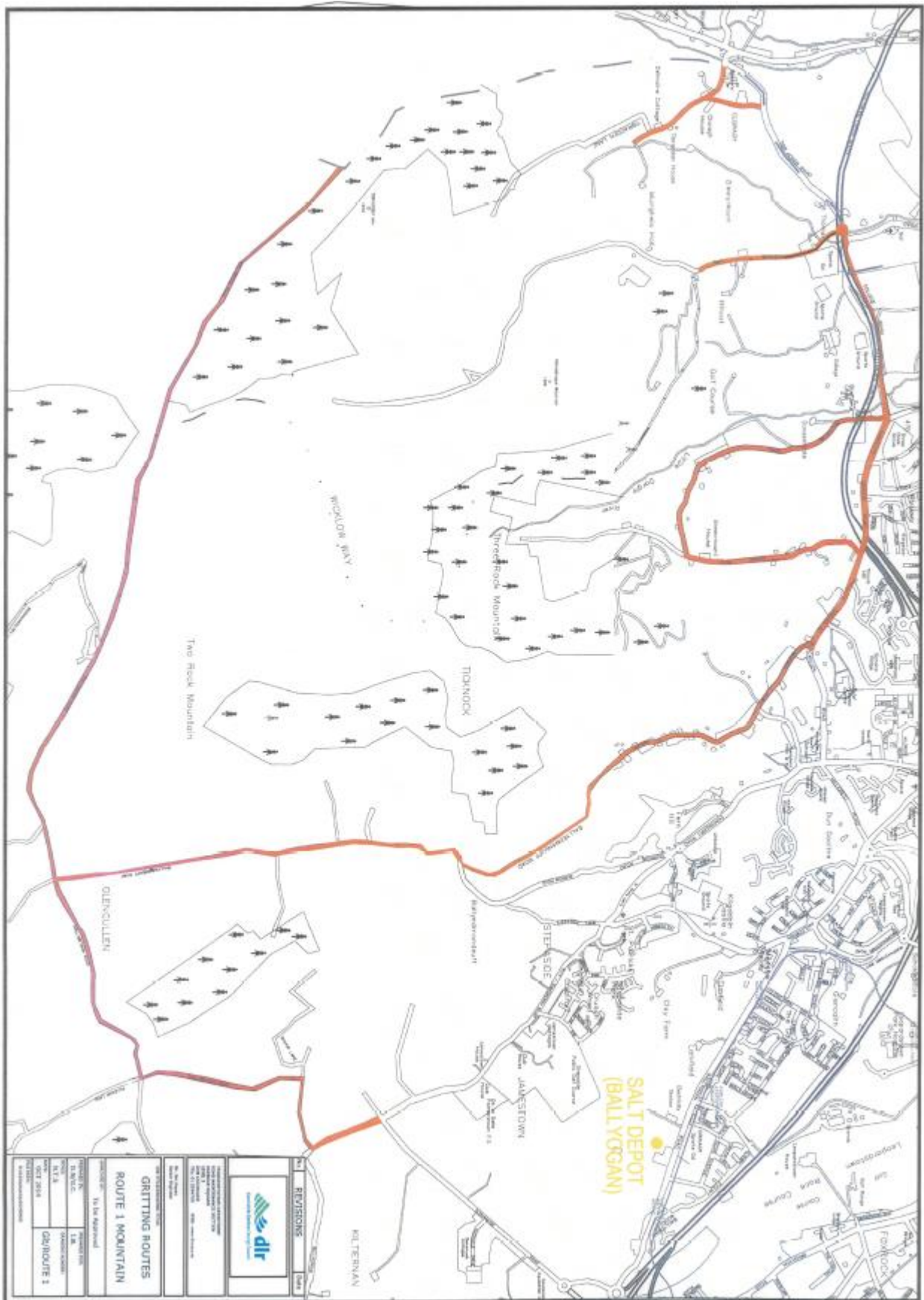
The Duty Engineer shall make the call for the fitment of ploughs once snow has been forecast and the Vaisala and Met Eireann forecasts have been assessed. Ploughs will be set so as to avoid reflective studs where applicable.

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.

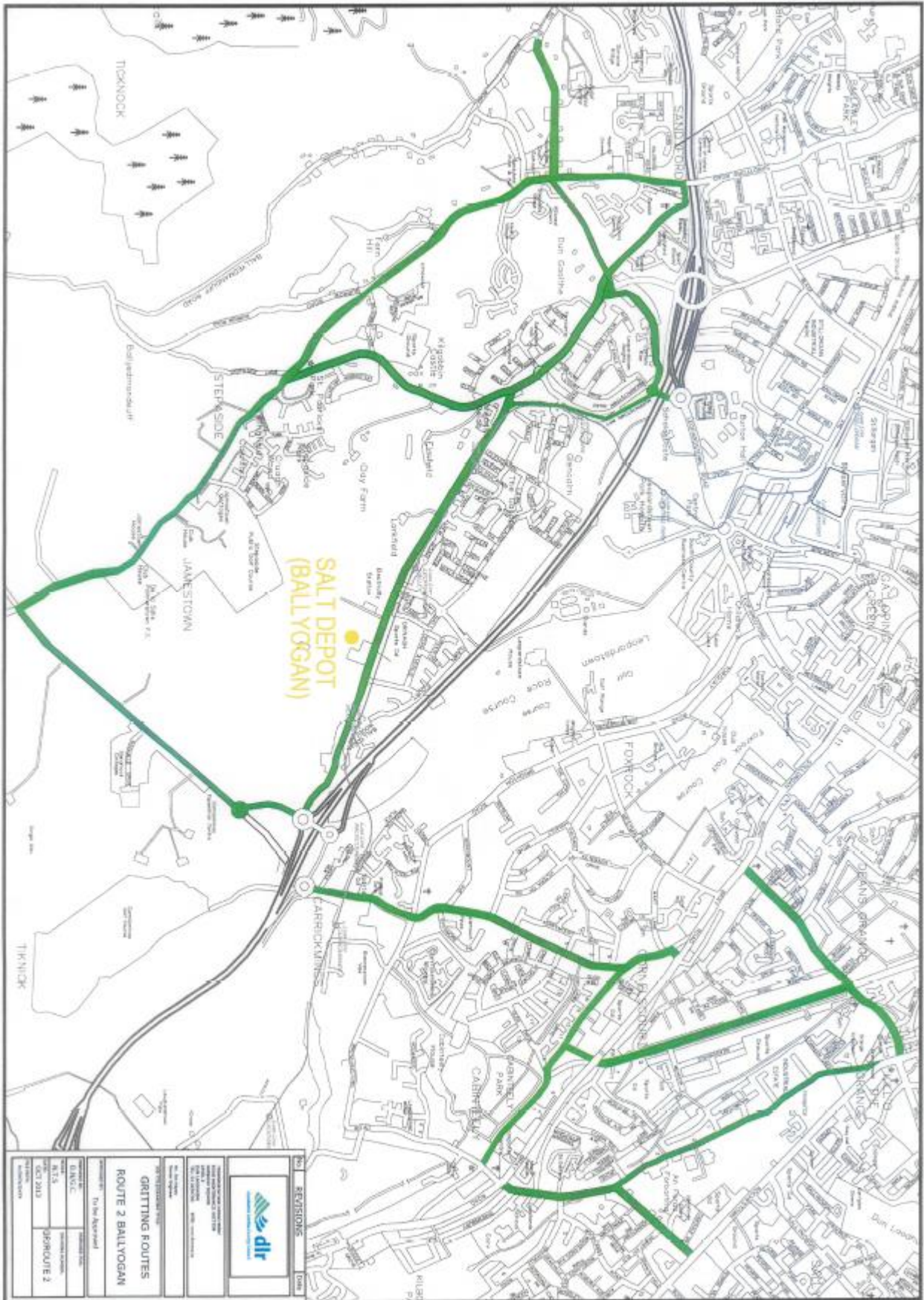
In all cases the defined treatment routes will be adhered to, and where conditions demand a more intensive treatment in specific areas, Dun Laoghaire Rathdown County Council shall achieve this by increasing the resources in use (if resources allow) or by contracting in additional assistance from the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

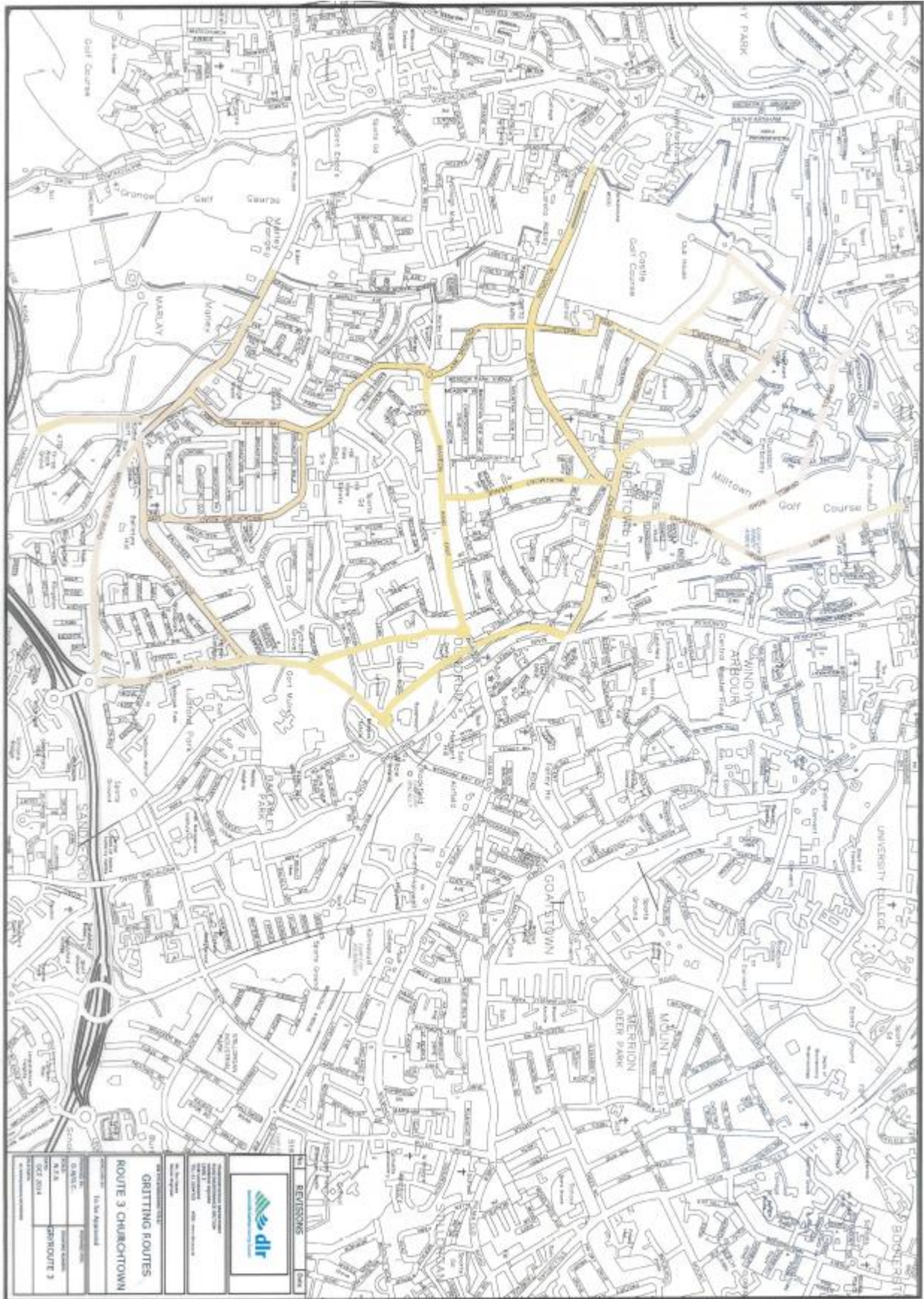
# APPENDIX A1: Gritting Route Maps

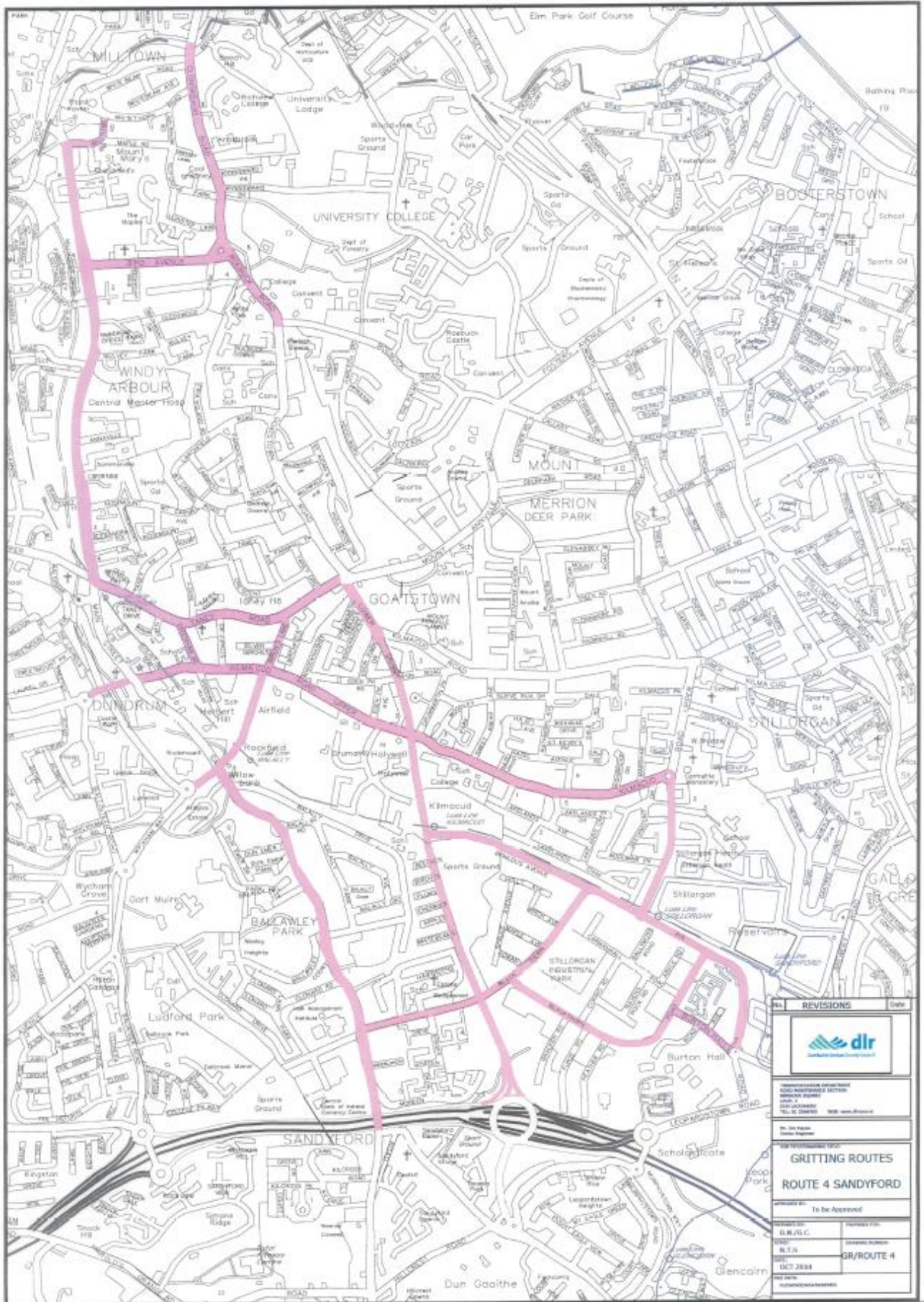


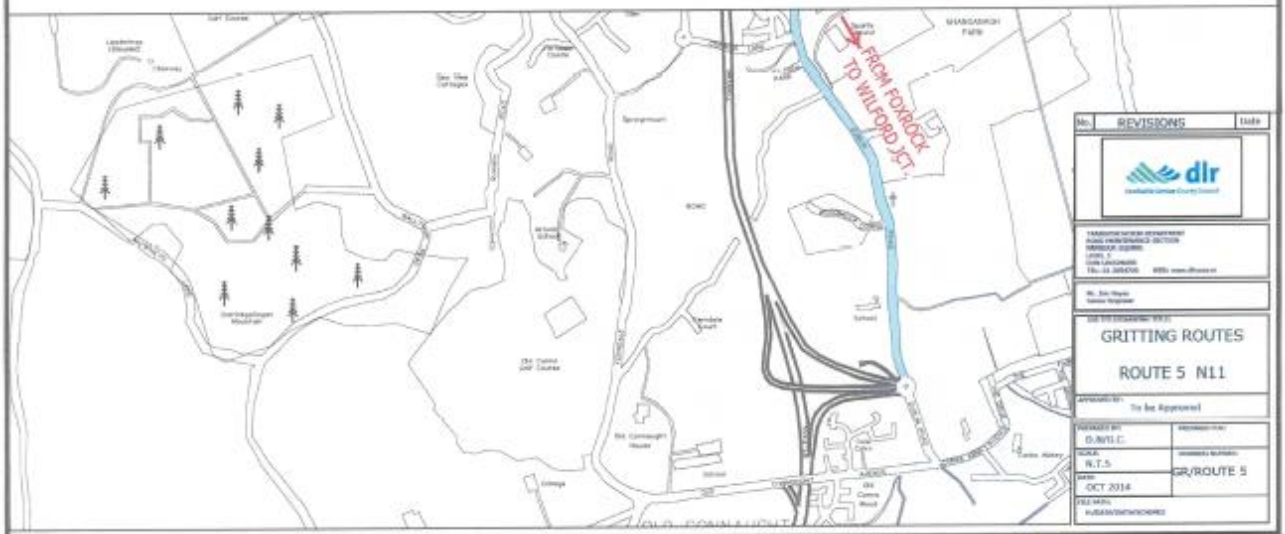
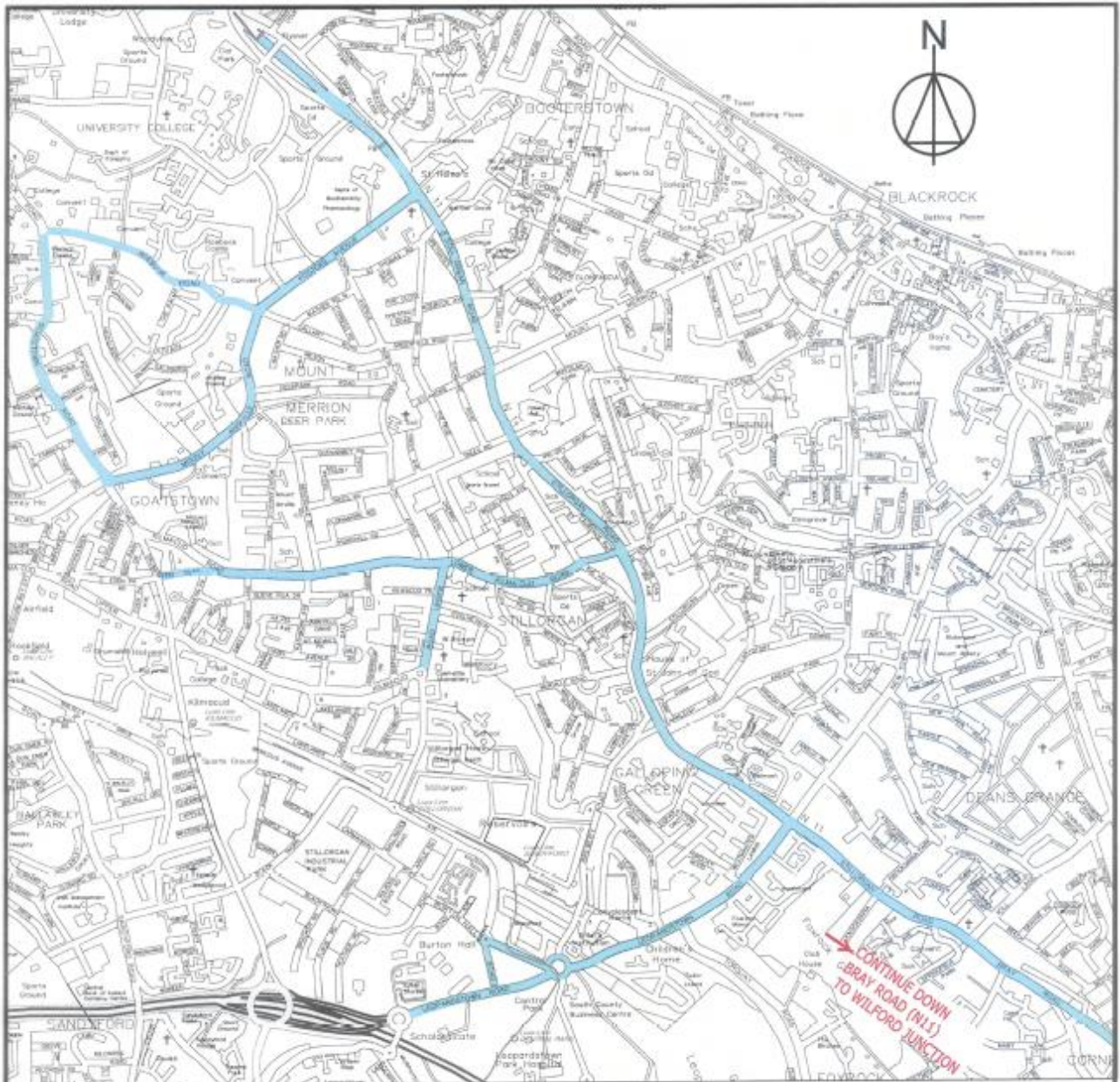





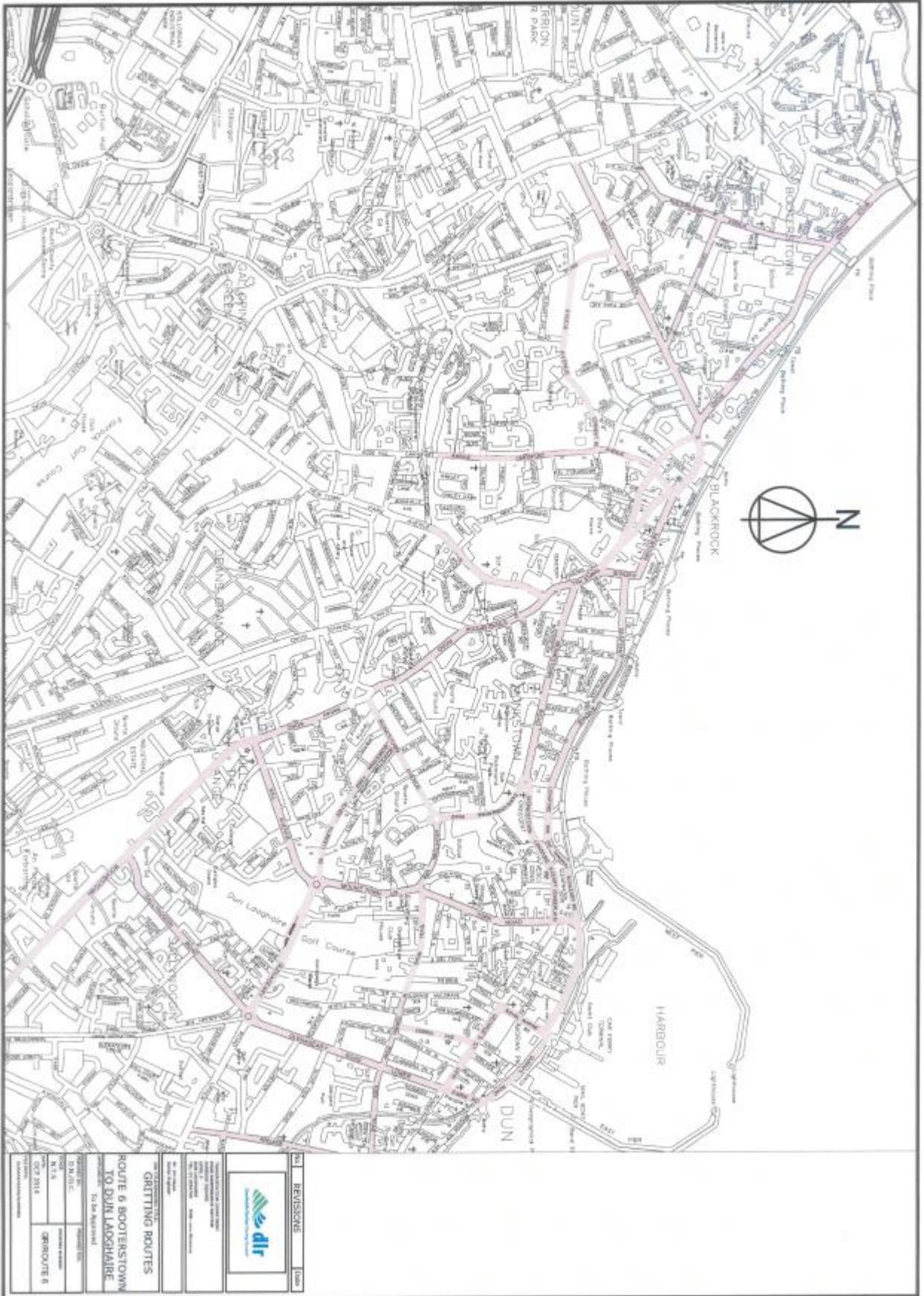


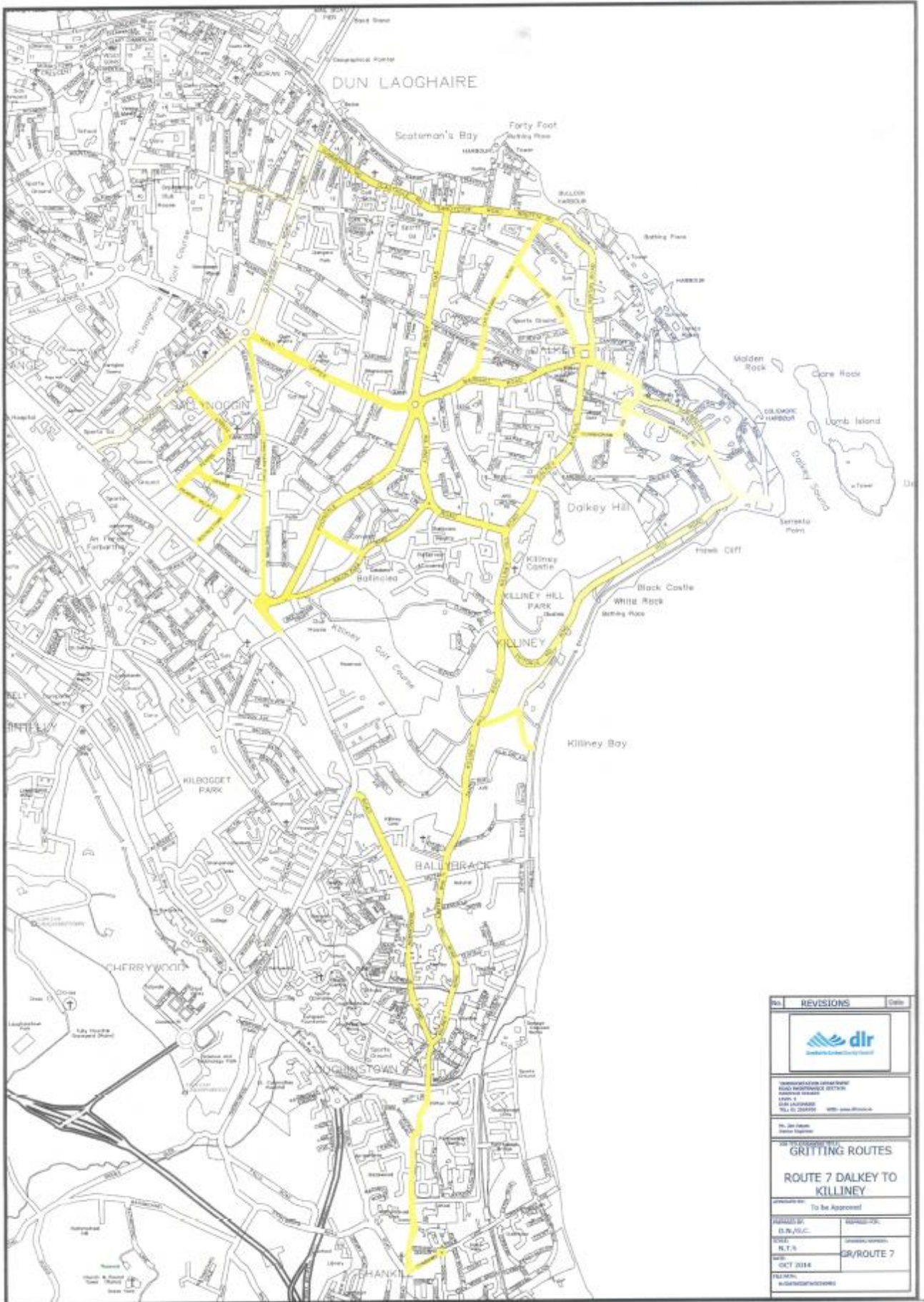




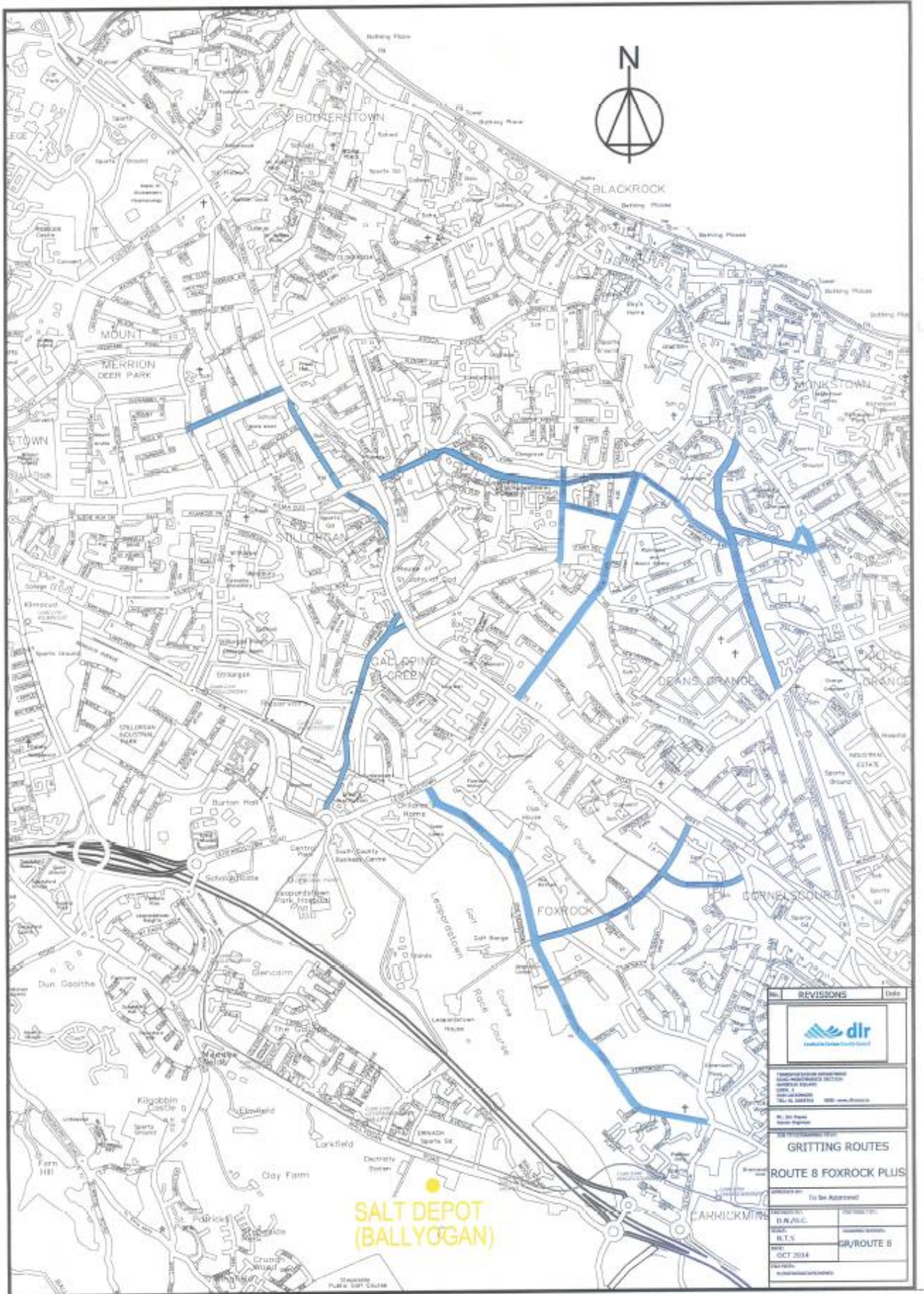


No.	REVISIONS	Date
 dlr Dublin Region Local Authority		
1. DUBLIN REGIONAL COUNCIL ROAD MAINTENANCE SECTION BRAY ROAD JOHN LAMBERT TEL: 01 809 0100    01 809 0100		
No. 501 Street Water Register		
<b>GRITTING ROUTES</b> <b>ROUTE 5 N11</b>		
APPROVED BY: To be Approved		
PREPARED BY: G. N.T.S.	APPROVED BY: G. N.T.S.	DATE: OCT 2014
ROUTE: GR/ROUTE 5		
DATE: OCT 2014		
FILE NO: #501/2014/000000		





No.	REVISIONS	Date
		
<small>           DUN LAOGHAIRE KILLINEY LOCAL BOARD            ROAD MAINTENANCE SECTION            PROJECT NUMBER            14/15/00000            No. of Sheets            1 of 1         </small>		
<b>GRITTING ROUTES</b> <b>ROUTE 7 DALKEY TO KILLINEY</b>		
<small>To Be Approved</small>		
<small>           PREPARED BY            D.N./S.C.         </small>	<small>           APPROVED BY            R.T.S.         </small>	<small>           GR/ROUTE 7         </small>
<small>           DATE            OCT 2014            FILE NAME            R1415000007000000         </small>		



No.	REVISIONS	Date
 dlr Comhairle Contae Chaitheamhain		
Preparing Authority: <b>Comhairle Contae Chaitheamhain</b> Planning Section: Planning Officer: Date: File No.:		
Prepared by: <b>GRITTING ROUTES</b> <b>ROUTE 8 FOXROCK PLUS</b> To be Approved:		
Approved by: <b>D.R./G.C.</b>	Approved on: <b>11/10/2014</b>	
Date: <b>11/10/2014</b>	Approved by: <b>G.R./ROUTE 8</b>	
Date: <b>OCT 2014</b>		
Prepared by: <b>Comhairle Contae Chaitheamhain</b>		

## APPENDIX A2: Duty Engineer Rota

Winter Service Duty Engineers' Roster for the Period 16 <sup>th</sup> October 2023 to 30 <sup>th</sup> April 2024							
Local Authority: <b>DÚN LAOGHAIRE-RATHDOWN COUNTY COUNCIL</b>							
Week starting Monday	Duty Engineer's Initials	Week starting Monday	Duty Engineer's Initials	Week starting Monday	Duty Engineer's Initials	Week starting Monday	Duty Engineer's Initials
16/10/2023	JOC	11/12/2023	GF	05/02/2024	JOM	01/04/2024	GF
23/10/2023	JOC	18/12/2023	JOC	12/02/2024	JOM	08/04/2024	GF
30/10/2023	JOC	25/12/2023	JOC	19/02/2024	RM	15/04/2024	JOM
06/11/2023	RM	01/01/2024	JOC	26/02/2024	RM	22/04/2024	JOM
13/11/2023	RM	08/01/2024	KB	04/03/2024	RM	29/04/2024	RM
20/11/2023	RM	15/01/2024	KB	11/03/2024	KB		
27/11/2023	GF	22/01/2024	KB	18/03/2024	KB		
04/12/2023	GF	29/01/2024	JOM	25/03/2024	KB		
Duty Engineer's Name & Initials	Office Phone No	Office E-mail Address	Mobile No				
John O' Connor (JOC)	01 2904807	<a href="mailto:johnconnor@dlrcoco.ie">johnconnor@dlrcoco.ie</a>	086 8226181				
John O'Malley (JOM)	01 2904812	<a href="mailto:jomalley@dlrcoco.ie">jomalley@dlrcoco.ie</a>	087 1838429				
Rob Mulhall		<a href="mailto:rmulhall@dlrcoco.ie">rmulhall@dlrcoco.ie</a>	086 7963531				
Gerry Flaherty	01 2047945	<a href="mailto:gflaherty@dlrcoco.ie">gflaherty@dlrcoco.ie</a>	086 0486134				
Katherine Beach		<a href="mailto:kbeach@dlrcoco.ie">kbeach@dlrcoco.ie</a>	087 4889369				
Send to: CAFO, Met. Éireann, Glasnevin Hill, Dublin 9. Attention: Duty SMO.					<a href="mailto:forecasts@met.ie">E-mail: forecasts@met.ie</a>		
Copy to: Owen Smith, Transport Infrastructure Ireland, Parkgate Business Centre, Parkgate St. Dublin 8.					<a href="mailto:owen.smith@tii.ie">Email: owen.smith@tii.ie</a>		



## 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
John O'Malley (JOM)	Duty Engineer	<a href="mailto:jomalley@dlrcoco.ie">jomalley@dlrcoco.ie</a>	087 1838429
Rob Mulhall	Duty Engineer	<a href="mailto:rmulhall@dlrcoco.ie">rmulhall@dlrcoco.ie</a>	086 7963531
Gerry Flaherty	Duty Engineer	<a href="mailto:gflaherty@dlrcoco.ie">gflaherty@dlrcoco.ie</a>	086 0486134
Katherine Beach	Duty Engineer	<a href="mailto:kbeach@dlrcoco.ie">kbeach@dlrcoco.ie</a>	087 4889369
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

# 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 gritter and raise <u>tipper</u></li> <li>Slide in timber block to prevent tipper 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 tipper</li> <li>Remount the gritter</li> </ul>	<b>Resources Needed (Bullet points)</b> <ul style="list-style-type: none"> <li>PPE defined below</li> <li>Fleet vehicle and gritter</li> <li>Timber <u>block</u></li> </ul>				
<b>PPE required</b>             	<b>Particular issues to note</b>				

Consequence	Probability	Risk 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 (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-Gritter Cleaning		Location:		RA No.	DLR RM 006a
Dept / Section:		Road Maintenance		Ballvoean Operations Depot		Rev No.	001
Description of task / operation being undertaken		Gritter Cleaning		Risk Rating		Responsible Person	
Hazard		Risk		Risk Level		Revised Risk Level	
		Risk Group (those potentially affected)		Current Risk Prob x Cons			
Site traffic / plant		-Fatal / serious injury resulting from contact with site traffic (i.e. reversing truck in place)		8		Driver	
Working at height when cleaning out gritter		Fatal serious injury resulting from fall		8		Driver	
Tipper dropping when cleaning out gritter		Fatal serious injury resulting from tipper dropping		10		Driver	
		Railings in place		Personnel must not go underneath tip body under any circumstances.		Driver	
		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	

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

**Activity Details**

<b>Description of Activity (Bullet points)</b>	<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>	<b>Resources Needed (Bullet points)</b>	<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>	<b>Training Requirements / Competences for personnel undertaking this activity</b>	<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>	<b>Picture of task:</b>	
<b>PPE required</b>							
<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)	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-Mounting and Dismounting Gritters and Loading salt				RA No.	DLR RM 006b
Dept / Section:		Road Maintenance		Location:		Rev No.	001
Description of task / operation being undertaken		Mounting and Dismounting Gritter					
Hazard	Risk	Risk Group (those potentially affected)	Current Risk Rating Prob x Cons	Risk Rating 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 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	P				
			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 (Risky)	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 RM1 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"/>	<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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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 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 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 Level				
			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											
Hazard	Risk	Risk Group (those potentially affected)	Current Risk Rating		Risk Level	Control Measures	Responsible Person	Revised Risk Level			
			Prob x Cons								
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-Risk				
			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>Mounting snow plough to vehicle</b>	<b>Task:</b>	<b>Mounting Snow Plough to vehicle</b>	<b>RA No.</b>	<b>DIR RM 006f</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> <ul style="list-style-type: none"> <li>Fit &amp; secure snow plough to fleet vehicle as per manufacturer's instructions</li> <li>Check operating features of the snow plough while in the yard</li> <li>Drivers to liaise with Mechanic on duty if any faults with snow plough/vehicle</li> </ul>	<b>Resources Needed (Bullet points)</b> <ul style="list-style-type: none"> <li>PPE defined below</li> <li>Fleet vehicle and snow plough</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>- Romagrip training</li> </ul>			
<b>PPE required</b>					
<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)	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		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

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