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(DFI) ROADS EMERGENCY RESPONSE PLAN

PART 2 -

WINTER SERVICE EMERGENCY PLAN

1. Introduction

Purpose of Plan

The aim of Winter Service is to allow, as far as possible, main road traffic to move safely and freely in wintry conditions by spreading salt at the most effective times.

The Winter Service Emergency Plan sets out the procedures to be followed by staff when responding to the abnormal closure of roads caused by snow or ice. The checklists have been developed to clarify roles, responsibilities and actions of key personnel and ensure that all duties are integrated into the Agencies every day working and management structure.

The procedures are not intended to deal with the normal range of salting actions faced by (DfI) Roads on a routine basis.

The (DfI) Roads Emergency Response Plan has been written in two parts:

Part 1 - a high level generic plan and **Part 2** - supporting plans for specific types of Emergency. The Winter Service Emergency Plan dovetails into the generic plan and both combine together to provide the complete (DfI) Roads response to a range of possible Emergencies, which it may face.

Useful Definitions

Salting Schedule – The network of roads selected for salting determined on a rational, criteria based system as defined in the (DfI) Roads Policy and Procedure Guide for Winter Service (E022).

Duty Controller – The decision-maker who decides if salting is required, the timing of the operation and the extent of the salting schedule to be treated.

Lead Communicator – There are currently 6 (DfI) Roads Lead Communicators who operate on a rota basis. They must be

- Available to respond ‘out of hours’ on a rota basis 52 weeks of the year;
- Proactive during Winter with the issue of the Media Report;
- Reactive in summer and if necessary issue the Media Report;
- Act as the initial contact point for other Responding Agencies/Organisations and Media enquiries about individual incidents ‘out of hours’ (eg.) Flooding, high winds, traffic collisions / roads closed, etc; and
- Act as (DfI) Roads’s ‘Out of Hours’ Flood Spokesperson.

The (DfI) Roads Lead Communicator prepares an early morning report to the Media, informing them of road conditions and potential problems.

Duty Supervisor – The supervisor in charge of Winter Service operations at the Salting Depot.

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Snow Removal – The use of snow clearing equipment, such as snowploughs or snow blowers, to prevent the build-up and compaction of snow.

Vaisala Navigator – Weather forecasting computer software used by engineers to help determine the Salting Action.

Thermal Map - The thermal profile of the salting schedule, which shows by means of a digital road map the variations in road surface temperature.

(DfI) Roads Operation & Maintenance ((DfI) Roads (O&M)) – our direct service organization that carries out the salting operation

CONTROL - the Emergency Control Centre Telephone Operator

2. Triggers and Activation Procedures

Emergency Classifications

Winter Service covers a broad spectrum of events with varying impacts and consequences.

The procedures within this Winter Service Emergency Response Plan are not intended to deal with the normal range of salting actions faced by (DfI) Roads on a routine basis.

Their application will therefore generally be restricted to widespread heavy snowfalls and prolonged periods of freezing temperatures.

To clarify this position, the Winter Service Emergency Response Plan details the triggers that are to be used to determine if the Winter Service Emergency Response Plan should be activated. Whilst it is accepted that this list is not exhaustive, it does provide general guidance for the purposes of this plan.

The Winter Service Emergency Plan “triggers” are detailed below.

(DfI) Roads will Activate its **WINTER SERVICE EMERGENCY PLAN** in the following conditions;

- **In the event that Any Motorway or Trunk Road or any part therein is Closed For Over 4 hrs due to Snow or Ice**

And / Or

- **In the event that Snow is falling and lying over the majority of the Northern Ireland Road Network for At Least Three Days**

And / Or

- **In the event of a period of at least 7 consecutive days, when the minimum Road Surface Temperature (RST) is Below -7C**

Activation Procedures

The Deputy Secretary / Director of Network Services shall be responsible for formally authorizing the activation of the “(DfI) Roads ERP Part 2 – Winter Service Emergency Plan”.

3. Winter Service Systems Business Continuity Plan

This document sets out the contingency and business continuity arrangements and procedures developed to ensure restoration of the (DfI) Roads Winter Service Systems as quickly as possible in the event of failure and to ensure continued operation of Winter Service in the period immediately following system failure and during restoration of the system.

System Failure includes:

- (a) Major or localised destruction at a Regional Office – (i.e.) Duty Supervisors will not be able to input their information onto the Winter Service Database.

- (b) Unavailability of the Departmental Network, (i.e.) none of the Regional Offices will be able to input their information onto the Winter Service database or send incident reports, (DfI) Roads HQ will not be able to send upward reports and secure remote access to the Departmental Network will not be possible.

- (c) Unavailability of Secure Remote Access - which means that no weather forecasting information will be available to Duty Controllers – (i.e.) no text forecasts, site graphs, thermal maps or camera images and no Winter Service Database to record the Duty Controllers decision or send a Lead Communicators early morning Media Report.

The recommended response to these situations is to implement a temporary return to clerical procedures. A temporary return to clerical procedures involves returning to manual collection of data in the event of systems failure, and manual analysis of that data if necessary to ensure continued, even if limited, delivery of essential services. On restoration of the system, the clerical procedure will involve uploading data recorded on hard copy or other format to update the system.

A full copy of the ‘Winter Service Systems Business Continuity Plan’ is available on the Intranet and can also be found in Part 2 of the (DfI) Roads Emergency Response Plan, within the RSPPG_E035. The clerical procedures to be followed by key personnel are contained in Appendix B of this plan.

4. Roles and Responsibilities

Responsibilities of the DUTY CONTROLLER (or designated substitute)

General:

- Determine Salting Action
- Authorise activation of Winter Service Action Codes
- **Check Lists should only be completed for heavy snow– (i.e.) Action Code 50**

Winter Service Check List

	DUTY CONTROLLER	Tick Box
	Prior to any anticipated snow action:	
1	Download sensor information on Vaisala NAVIGATOR – (Winter Service software program)	
2	Check Met Office forecast including text, graph and thermal maps	
3	If required, initiate scouting to help you in the decision making process	
4	Inform Duty Supervisors (either directly or indirectly via CONTROL) of the Action Code, time of action, routes to be treated and any additional information or specific instructions including any amendments to the ‘Action Call’	
5	Confirm (either directly or indirectly via CONTROL) that Duty Supervisors have responded to the ‘Action Call’ and the salting operation has commenced as per instructions	
6	Enter decision on Winter Service Database as soon as possible	
7	When notified by the Met Office, check amends to the forecast and review Action Code	
8	If required, liaise with Met Office Advisor / Forecasters (and Section Engineers during normal working hours)	
9	Consider and advise (DfI) Roads (O&M) on the need for additional Supervisors	
10	Advise contractors and/or farmers to prepare for possible action	
11	Contact Lead Communicator by telephone to report delays in the operation or problems encountered and also to report any ‘newsworthy items’. (NB. where possible before 06:00 for a.m. actions)	
	Emergency Response: Action Code 50	
12	Activate Action Code 50 – (as authorised by the Deputy Secretary / Director of Network Services)	
13	Mount Snow blades	
14	Mobilize Snow Blowers and Snow Cutters	
15	Mobilize contractors and/or farmers to help clear snow from roads	
16	Where possible, seek the assistance of local Councils to salt town centre footways	
17	When notified, check amends to the forecast and liaise with the Met Office (and Section Engineers during normal working hours)	
18	Review Action Code 50	
19	‘Stand down’ the Emergency Response or lessen the Action Code	

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Responsibilities of the DUTY SUPERVISOR (or designated substitute)

General:

- Implement Salting Action called by the Duty Controller
- Direct Winter Service operations at the Salting Depot under the direct management of (DfI) Roads Operation & Maintenance - ((DfI) Roads (O&M))
- Take on Line Management responsibilities for the operatives
- **Check Lists should only be completed for heavy snow– (i.e.) Action Code 50**

Winter Service Check List

	DUTY SUPERVISOR	Tick Box
	Prior to any anticipated action:	
1	Check the availability of vehicles and plant (including Snow Blowers and Snow Cutters) and ensure they are operational and fuelled prior to any anticipated action	
2	If required, carry out scouting under the direction of the Duty Controller	
3	Report observations to Duty Controller and record details on the database	
4	Ensure receipt of 'Action Call' determined by Duty Controller	
5	Ensure drivers are aware of the Action Code, time of action, rate of spread, routes to be treated and any additional information or specific instructions including any amendments to the 'Action Call'	
6	Ensure drivers carry out and record all vehicle/plant checks	
7	Ensure a record is kept of minor maintenance and Fleet Management are informed	
8	Ensure that tachographs and logging equipment are fitted and fully operational	
9	Ensure drivers carry necessary Health and Safety equipment in case of breakdown	
10	Ensure that an 'up to date' list of contractors and farmers ,with contact details, is at hand ready for use	
	During the salting/snow clearance operation:	
11	Ensure that communication is maintained with all operatives and progress is monitored and recorded	
12	Inform Duty Controller of any significant difficulties encountered during the salting operation and of any 'newsworthy items'	
13	Input Route Action records onto the database as soon as possible including problems encountered	
	After the salting/snow clearance operation:	
14	Ensure the Route Action is completed on the Winter Service Database	
15	Ensure detailed records are kept on the database of the quantity of Salt Used	
16	Inform the client if Salt Stocks are running low	
17	Record times of operation of contractors and/or farmers to validate invoices	
18	Ensure Data Loggers/Smart Cards are downloaded to a PC and checked for accuracy	
19	Ensure that Salt Bins and Grit Piles are replenished	
20	Report overnight problems, incidents or breakdowns to the local (DfI) Roads (O&M) Supervisor the next morning	
21	When salting operations continue beyond 08:00 hrs brief and formally hand over supervision to the local (DfI) Roads (O&M) Supervisor	
22	Check that roads are clear of snow before 'standing down' crews	
23	Ensure all vehicles have excess salt removed and are washed down	

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Responsibilities of the DRIVER (or designated substitute)

General:

- Carry out Salting Action as instructed by the Duty Supervisor/ (DfI) Roads (O&M) Supervisor
- **Check Lists should only be completed for heavy snow– (i.e.) Action Code 50**

Winter Service Check List

	DRIVER	Tick Box
	Prior to any anticipated action:	
1	Confirm action call with the Duty Supervisor, to include: <ul style="list-style-type: none"> • Time of action • Rate of spread • Routes to be treated • Any additional information, or • Specific instructions from the Duty Controller 	
2	Carry out and record vehicle/plant checks	
3	Report any defects to the Duty Supervisor	
4	Carry out mounting and dismounting of ploughs	
5	Set Salt Spreader to the correct rate of spread	
6	Fit tachographs & logging equipment and ensure that they are fully operational	
7	Ensure the correct quantities of salt are loaded onto your Salt Spreader	
8	Check salt distribution from Salt Spreader before leaving depot	
	During the salting operation:	
9	Maintain regular contact with the Duty Supervisor	
10	Inform Duty Supervisor of any significant breakdowns/difficulties/delays encountered	
	After the Salting Operation:	
11	Notify Duty Supervisor of time of completion and any changes to the planned action	
12	Remove the tachographs and Data Loggers/Smart Cards and give it to the Duty Supervisor	
13	Remove all excess salt and ensure vehicle is washed down	

Responsibilities of the SECTION ENGINEER (or designated substitute)

General:

- Ensure that the Winter Service database is kept ‘up to date’ and as accurate as possible
- Mobilize external resources as required and ensure that an up to date list of contractors/farmers, with contact details, is maintained
- Ensure Incident Reporting Procedures are being adhered to
- Prior to the Winter Service season, obtain confirmation from (DfI) Roads (O&M) that all Salt Spreaders have been calibrated and all equipment is in working order
- **Check Lists should only be completed for Heavy Snow– (i.e.) Action Code 50**
- **Refer to Part 1 of the (DfI) Roads Emergency Response plan for Level 3 and 2 Emergencies**

Winter Service Check List

	SECTION ENGINEER	Tick Box
1	Determine category of Emergency Response based on information received	
2	Request additional personnel and equipment from (DfI) Roads (O&M), as necessary	
3	Mobilize contractors and/or farmers to help clear blocked roads	
4	Where possible, seek the assistance of local Councils to salt town centre footways	
5	Where applicable inform other Agencies who may need to respond	
6	Obtain a basic brief on the situation from the Duty Supervisor or local (DfI) Roads (O&M) Depot Supervisor(s)	
7	Confirm the Level of the Emergency Response with the Network Maintenance Manager	
8	Confirm the Level of the Emergency Response with the Duty Supervisor or (DfI) Roads (O&M) Depot Supervisor(s)	
9	Ensure Incident Reports are sent by the Section Office using the ‘(DfI) Roads Divisional Regional Incident Report’ Form(s) in Annex A <ul style="list-style-type: none"> • Incidents that occur during normal working hours – send to the DfI Roads Incident Desk and copy to the Network Maintenance Manager • Incidents that occur ‘Outside Normal Working Hours’ – send ‘follow up’ report to the DfI Roads Incident Desk, by 09:30 the following morning 	
10	Ensure that the Traffic Information Control Centre are notified, if roads are closed	
11	Check and review Salting Action	
12	If required, liaise with Met Office Advisor / Forecasters (and Duty Controllers during normal working hours)	
13	Ensure that the Divisional Administrator is regularly checking inputs onto the Winter Service Database	
14	Ensure records of Salt Used are entered onto the Winter Service Database	
15	Order Salt, if Stocks are running low	
16	Continually communicate the status of the incident and provide updates to the Network Maintenance Manager	

**Responsibilities of the (DfI) ROADS OPERATION & MAINTENANCE
- (DfI) Roads (O&M)) AREA ENGINEER (or designated substitute)**

General:

- Prior to the Winter Service season, provide confirmation to all Section Engineers in your area that all Salt Spreaders have been calibrated and equipment is in working order
- Manage Duty Supervisor and Driver rotas for each of the Depots
- Undertake line management responsibilities for all operational staff (except Duty Supervisors when undertaking scouting duties)
- Ensure all operational staff receive Winter Service training
- **Check Lists should only be completed for Heavy Snow– (i.e.) Action Code 50**
- **Refer to Part 1 of the (DfI) Roads Emergency Response Plan ((DfI) Roads ERP) for Level 3 and 2 Emergencies**

Winter Service Check List

	(DfI) Roads (O&M) AREA ENGINEER	Tick Box
1	The following morning, confirm that the treatment action requested by the Duty Controller/Section Engineer was carried out in accordance with the instructions	
2	If necessary, arrange for additional RT Operators and Supervisors	
3	Ensure that proper arrangements are made for rotation of staff	
4	Ensure Contract Drivers adhere to operational procedures	
5	Confirm the availability of all vehicles and plant and ensure they are operational – (i.e.) make sure that Fleet Management carry out timely maintenance	
6	Check Salt Levels in Barns and inform the Client if Stocks are running low	
7	Ensure that all Duty Supervisors are completing their reports on the Winter Service Database immediately after each salting operation	
8	Ensure that all Data Logging equipment is being used to record the treatment action	

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Responsibilities of the LEAD COMMUNICATOR (or designated substitute)

General:

- Scan the Winter Service Database and other information sources to compile the Media Report
- Act as the initial contact point for other responding Agencies and Media enquiries about individual incidents ‘Out of Hours’.
- **Check Lists should only be completed for Heavy Snow– (i.e.) Action Code 50**

Winter Service Check List

	LEAD COMMUNICATOR	Tick Box
1	If necessary, check Met Office forecast, including National Severe Weather Warnings.	
2	Assess reports on the Winter Service Database	
3	Issue Media Report	
4	If required, undertake Media Interviews	
5	During a Snow Event, send the latest Incident Report (extra detail) to the DFI Roads Incident Desk, before 08:30am.	
6	When the Salting Action continues beyond 08:30am., liaise closely with (DfI) Roads Headquarters Emergency Liaison staff	
7	Maintain an Incident Log	

5. Action Code 50

[(i.e.) The **SNOW PLAN** – this shall only be initiated following authorisation by the Deputy Secretary / Director of Network Services.]

The objective of the response is to ensure that quick and appropriate responses are made and to concentrate maximum effort on the more important traffic routes first – (i.e.) each Division is required to have Snow Clearance Route Maps for each of the four levels of Treatment and Operational Arrangements, developed to clear snow from motorways and dual carriageways.

For operational purposes, the **Severity of Snowfall** is categorised as:

- **Light** (up to 25mm)
- **Moderate** (25mm to 100mm) or
- **Heavy** (above 100mm)

Light snow is treated normally by increasing the quantity of salt spread on the roads to 40 grammes per square metre.

Moderate and Heavy snow is treated as directed by the Duty Controller – (i.e.) mount snow blades, mobilise snow blowers and snow cutters and continue salting at 40 grammes.

Four Levels of Treatment

To take into account the increased treatment time to clear moderate and heavy snow from the Salting Schedule, 4 levels of treatment have been identified:

- **Level 1:** trunk roads and motorways only (17% of the schedule).
- **Level 2:** 50% of the Salting Schedule to include motorways, trunk roads and other important roads.
- **Level 3:** 100% of the Salting Schedule.
- **Level 4:** Roads outside the Salting Schedule.

Maximum effort is concentrated on the more important traffic routes first – (i.e.) clearing snow from Level 1 must be given ‘priority’, before moving onto Level 2, Level 3, and Level 4.

Exercises

To ensure quick and appropriate responses are made, snow blade mounting is practised as follows:

- Once in October (pre standby period)
- Once in December and
- Once in February

It is also recommended that familiarisation/practice with snow clearance routes should be taken at least once per year or more frequently if appropriate.

Use of External Resources

During a Snow Event, Section Offices may employ contractors and/or farmers to clear snow from roads using loading shovels, tractors and ploughs. Section Offices may also seek the assistance of local Councils to salt heavily used town centre footways. Only those parties who have entered into a ‘formal agreement’ with the Department, may be employed.

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Annex A: (DfI) Roads Divisional Regional Incident Report Form(s)

1. Insert pro forma here. (These pro forma(s) are located on Appendices Page 8 of the RSPPG_EO35 – (DfI) Roads Emergency Response Plan.)
2. This pro forma may be used for reporting road closures, even if Action Code 50 has not been called.

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Annex B: Winter Service System Business Continuity Plan - Clerical Procedures

The following tables summarise the clerical procedures to be followed by key personnel in the event of system failure.

	DUTY CONTROLLER	Tick Box
1	Consult Met Office by phone about the weather forecast before determining Salting Action	
2	If required, initiate 'scouting' to help you in the decision making process	
3	Inform Duty Supervisors (either directly or indirectly via CONTROL) of the Action Code, time of action, routes to be treated and any additional information or specific instructions including amendments to the Action Call	
4	Confirm (either directly or indirectly via CONTROL) that Duty Supervisors have responded to the Action Call and that the salting operation has commenced as per instructions.	
5	Retain record of decisions - use blank copies of Winter Service Database input forms to record decisions (NB. These need to be copied in advance and ready for use)	
6	When notified, continue to liaise with the Met Office (and Section Engineers during normal working hours if necessary) about amends to the Forecast and review Action Code	
7	If required, continue to use scouts on the ground and liaise by phone about road conditions	
8	Send text or phone Lead Communicator detailing 'Salting Action' and any 'newsworthy items'	
9	Input decisions onto the WS Database as soon as possible	
10	Phone DFI Roads Incident Desk (02890 540454) by 09:30 the following morning detailing decisions taken	

	DUTY SUPERVISOR	Tick Box
1	If required, carry out Scouting under the direction of the Duty Controller	
2	Report observations by telephone to Duty Controller	
3	Ensure receipt of Action Call determined by Duty Controller	
4	Ensure drivers are aware of the Action Code, time of action, rate of spread, routes to be treated and any additional information or specific instructions	
5	Inform Duty Controller by phone of any significant difficulties encountered during the salting operation	
6	Retain records - use blank copies of WS Database input forms to record scouting information, salting action and problems encountered (NB. These need to be copied in advance and ready for use)	
7	Fax copy of Winter Service Database input forms to Section Engineer (for input to WS Database when available) and Duty Controller	
8	Contact Lead Communicator by telephone on an exception basis and report delays in the operation or problems encountered (NB. where possible before 06:00 for a.m. actions)	

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LEAD COMMUNICATOR		Tick Box
1	If necessary, liaise with Met Office by phone about the Weather Forecast, including National Severe Weather Warnings	
2	Assess telephone reports from Duty Controllers and Duty Supervisors	
3	Compile Media Report	
4	Contact Duty Press Officer by phone and pass on Media Report	
5	When necessary (Level 3 or 2 only), inform Divisional Roads Manager/s of situation	
6	Fax copy of Media report to DFI Roads Incident Desk (02890 540 815) by 09:30 the following morning	

SECTION ENGINEER		Tick Box
1	During normal working hours ensure Incident Reports are Faxed by the Section Office to the DFI Roads Incident Desk (028 9054 0815) and passed on to the Network Maintenance Manager. Incidents that occur 'Outside Normal Working Hours' – Fax 'Follow Up' reports to the DFI Roads Incident Desk by 09:30 the following morning	
2	If necessary, during normal working hours consult the Duty Controller about the Weather Forecast	
3	If necessary, continue to liaise with the Duty Controller about amends to the Forecast and review Action Code	
4	Ensure receipt of Winter Service Database 'input forms' from Duty Supervisor and input into the Database when available	

DFI ROADS INCIDENT DESK		Tick Box
1	If necessary, liaise with Met Office by phone about the Weather Forecast including National Severe Weather Warnings	
2	Assess Fax Reports from Section Offices	
3	Compile Incident Reports	
4	Pass on Incident Reports to Press Office and (DfI) Roads Senior Management	

These procedures should be used in conjunction with Winter Service Checklists, which are part of the Winter Service Emergency Plan.

The '(DfI) Roads Emergency Contact List(s)' contains land line telephone numbers, mobile telephone numbers and fax numbers of key personnel. These lists are updated twice yearly by (DfI) Roads–HQ and distributed to Divisions for use in an Emergency. Divisions are responsible to ensure that their key staff are sent the latest Contact List.