COMHAIRLE CONTAE ÁTHA CLIATH THEAS
SOUTH DUBLIN COUNTY COUNCIL

SOUTH DUBLIN COUNTY COUNCIL

PROCEDURES FOR THE EXECUTION OF WINTER MAINTENANCE OPERATIONS IN THE ROADS DEPARTMENT OF SOUTH DUBLIN COUNTY COUNCIL

WINTER MAINTENANCE SYSTEM WMS 2016-2017

1. TABLE OF CONTENTS

1.1 Document Management

Date	Version	Author
01/09/2010	DRAFT	V. Dennan
13/10/2011	2011 Rev01	G. Walsh
14/10/2011	2011 Rev02	G. Walsh
19/10/2011	2011 Rev03	V. Dennan
04/10/2012	2012 Rev01	G. Walsh
05/10/2012	2012 Rev02	G. Walsh
03/10/2013	2013 Rev01	S. Tsang
17/12/2013	2013 Rev02	S. Tsang
11/09/2014	2014 Rev01	S. Tsang
16/10/2015	2015 Rev 01	S. Tsang
07/10/2016	2016 Rev 01	S. Tsang

1.2 Glossary of Terms

N	N.P	National Primary
	N.S	National Secondary
S	S.D.C.C	South Dublin County Council
W	WMS	Winter Maintenance System

1.3 Purpose and Scope

South Dublin County Council (SDCC)'s road network consists of

- 73km National Roads
- 144km Regional Roads
- 785km Local Roads

Winter maintenance is confined to National, Regional and Local routes. National Primary routes are gritted by the NRA; National Secondary, Regional and Local routes are gritted by SDCC. The percentages of roads gritted by SDCC are summarized below in Table 1.

	Gritted (km)	Total (km)	%
National Secondary	13	13	100%
Regional	144	144	100%
Local	189	785	24.1%

Table 1

There are 7 Salting routes in SDCC. These Salting Routes can be seen in Appendix 1.

The purpose of this document is to identify the processes, procedures and control measures employed by South Dublin County Council, to ensure that Winter Maintenance works are carried out in accordance with procedural and Health and Safety requirements. All members of staff involved with Winter Maintenance shall be fully acquainted with this Winter Maintenance Strategy and will have access to copies of it.

1.4 Precautionary Gritting

The primary aim is to keep these roads safe and as free as possible from winter hazards.

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

	Road	Length (km)
Route 1	Lucan	41.91
Route 2	Clondalkin	58.83
Route 3	Saggart	27.18
Route 4	Tallaght	47.83
Route 5	Kimmage	44.43
Route 6	Ballyboden	50.16
Route 7	N81	53.52

Table 2

1.5 Emergency Scenarios

If snow or ice settles, snowploughing, salting and gritting is put into action. South Dublin County Council is constantly striving to improve the winter maintenance service.

Priority routes have been prepared to deal with emergency scenarios such as sudden snow storms or prolonged periods of freezing temperatures. S.D.C.C has also prepared specific routes to deal with; reduced driver numbers, low salt and heavy snowfall.

Priority Routes can be seen in Appendix 2.

1.6 Salt Bins for Public Use

In the 2011-2012 season, a trial was carried out which involved leaving Salt Bins at 15 specified locations throughout the county (3 per electoral area). These locations are in local estates and areas with severe slopes that are not on our salting routes but have been identified as problem areas during icy conditions. For the 2013-2014 season this trial was extended to include a further 2 Salt Bins in each electoral area.

These Salt Bins will be kept stocked with rocksalt so that members of the public can treat a road if they deem it required. Instructions on spread rate will be provided. The salt bins have a lock on them and the local residents association nominates a member of the public as a keyholder.

Salt Bin locations can be seen in Appendix 3.

1.7 ROAD WEATHER INFORMATION SYSTEM ARRANGEMENTS

The Ice Prediction System is supplied by:
Vaisala TMI Ltd
Vaisala House
349 Bristol Road
Birmingham

Tel No: 0044 (0) 121 683 1200 Fax No: 0044 (0)121 683 1299

Vaisala in conjunction with Met Eireann issue forecasts daily. The server for the network Ice Prediction System is housed at the Vaisala office in Birmingham.

The Ice Prediction System polls the outstations 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 station for SDCC is located on the N81 at the Mahons Lane junction.

2. DEPOTS

SDCC currently operates Winter Maintenance operations from Ballymount and Palmerston Depots. The Ballymount Depot Salt Barn is our largest and is in close proximity to the M50. A new Salt Barn was constructed in the Palmerston Depot, adjacent to the N4. This Salt Barn came into operation in November 2011.

3. HEALTH & SAFETY

SDCC will ensure so far, as is reasonably practicable:

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

This procedural document should be read in conjunction with

- Roads Maintenance Ballymount – Risk Assessments (Mounting and Loading Gritter, Gritting Roads and Snow Plough)
- Roads Maintenance Palmerston – Risk Assessments (Mounting and Loading Gritter, Gritting Roads and Snow Plough)

A copy of which is attached in Appendix 4 below.

3.1 DRIVERS DAILY DEFECT REPORT

Before any driver can leave a depot to carry out a salting run they must carry out a checklist on the vehicle to ensure that there are no obvious defects with it.

This checklist can be seen in Appendix 5.

3.2 LONE WORKING

Where Lone working occurs, the procedures outlined in Appendix 6 below shall be utilised.

4. Responsible Persons

Winter Maintenance coordinator:
Michael Glynn, Senior Executive Engineer, Road Maintenance

4.1 Duty Engineers 2016 - 2017

Name	Position	Contact Numbers Mobile
Tony O'Grady	Senior Engineer	
Gary Walsh	Assistant Engineer	
Michael Glynn	Senior Executive Engineer	
Padhraic McGillycuddy	Area Engineer	
Caitriona Lambert	Senior Executive Engineer	
Sally Tsang	Assistant Engineer	

The 2016 - 2017 roster for Duty Engineers can be seen in Appendix 7.

4.2 Depot Inspectors 2016 - 2017

Name	Depot	Routes	Contact Numbers Mobile
Paddy Hearns	Palmerstown	1, 2, 3	
Tony Murphy	Ballymount	5, 6	
Mick Redmond	Ballymount	4, 7	

5. Procedures and Rosters

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

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

5.1 Duties of the duty Engineer

The Pre-salting Phase will be activated by the Duty Engineer in the event of ice or adverse weather prediction from the Vaisala service. This is normally issued before 2.30pm in the afternoon.
Pre-salting shall commence at the time determined by the Duty Engineer to ensure the completion of routes before the onset of icy conditions. As the Vaisala forecast and data is available at 2.30 pm therefore it is expected that the callout is given as early as possible particularly on a Friday in order that arrangements can be made before personnel finish work.

5.2 Monday – Friday Procedure

- The Duty Engineer checks the Vaisala and forecast at or before 2.30pm each day.
- In the event of the forecast of ice conditions the Duty Engineer notifies the Inspector on call before 3.30pm, of routes to be pre-salted and time of commencement.
- The Inspector then notifies the drivers and the Machinery Yard Foreman on call for that week.
- The Duty Drivers proceed to their parking depots at the end of their normal working day and fit the salt spreaders.
- The Inspector notifies the loader driver, proceeds to the salt depot at the end of normal working time, and prepares the depot for loading of salt.
- At the designated time, the drivers will collect their machines, load salt and pre-salt their prearranged routes, on completion the driver will return the spreader to its parking location.
- The Inspector will be on standby in the event of breakdown.
- From the call out time, the Inspector will monitor the operations and in the event of breakdown will call out a fitter, or activate the standby salt spreader whichever he feels appropriate.

5.3 Weekend (Sat. - Sun.) and Bank Holidays Procedure

The pre-salting duty roster is as above

- The Duty Engineer checks the Vaisala and forecast at or before 2.30pm each day.
- In the event of the forecast of ice conditions he notifies the Inspector on call before 3.30pm, of routes to be pre-salted and time of commencement.
- The Inspector notifies the drivers and Machinery Yard Foreman on call for that week, of the time of callout.
- The Inspector notifies the loader driver, proceeds to the salt depot at the time appointed and prepares the depot for loading of salt.
- The Duty Drivers proceed to the depot at the appointed time, load salt, proceeds to complete assigned routes, and on completion the driver will return the salt spreader to its parking location.

5.4 Winter Maintenance Duty Engineers' Roster

The 2016-2017 roster for Duty Engineers can be seen in Appendix 7.

5.5 Rates of Spread for Precautionary Salting

It is intended that Precautionary Action forms the major part of winter operations.

For frost and road surface temperatures at or above -2ºC, salt shall be spread at 10-20 g/m^2 dependant on local conditions and the immediate forecast.

If freezing conditions are expected after rain or frost and the road surface temperature is below -2ºC, spread rates will be increased to 20-30 g/m^2 according to the amount of moisture present and the temperature expected. Unless freezing conditions coincide with rainfall, salting shall be delayed as long as possible to reduce loss of salt by run-off.

If continuous snow is forecast, salt shall be spread at 30-40 g/m^2 according to the anticipated severity of the snowfall. Every effort will be made to ensure enough salt is applied before snow starts to stick to the road to melt the initial snowfall and to provide a wet surface.

The spread rates for precautionary salt treatments are summarized below.

Weather Conditions	Definition	Salt Spread Rate (gram/square metre)
Light	Frost and/or light snow	10
Moderate	Freezing conditions after rain	20 to 30
Severe	Continuous snow	30 to 40

For a single precautionary treatment on all Priority 1 and 2 routes at a spread rate of 10 g/m^2, the tonnage of salt required would be 19t. This would be on a night when a hoar frost is expected, and the road surface temperature will be at or above -2°C.

5.6 Treatment of snow already on the road after Precautionary Salting

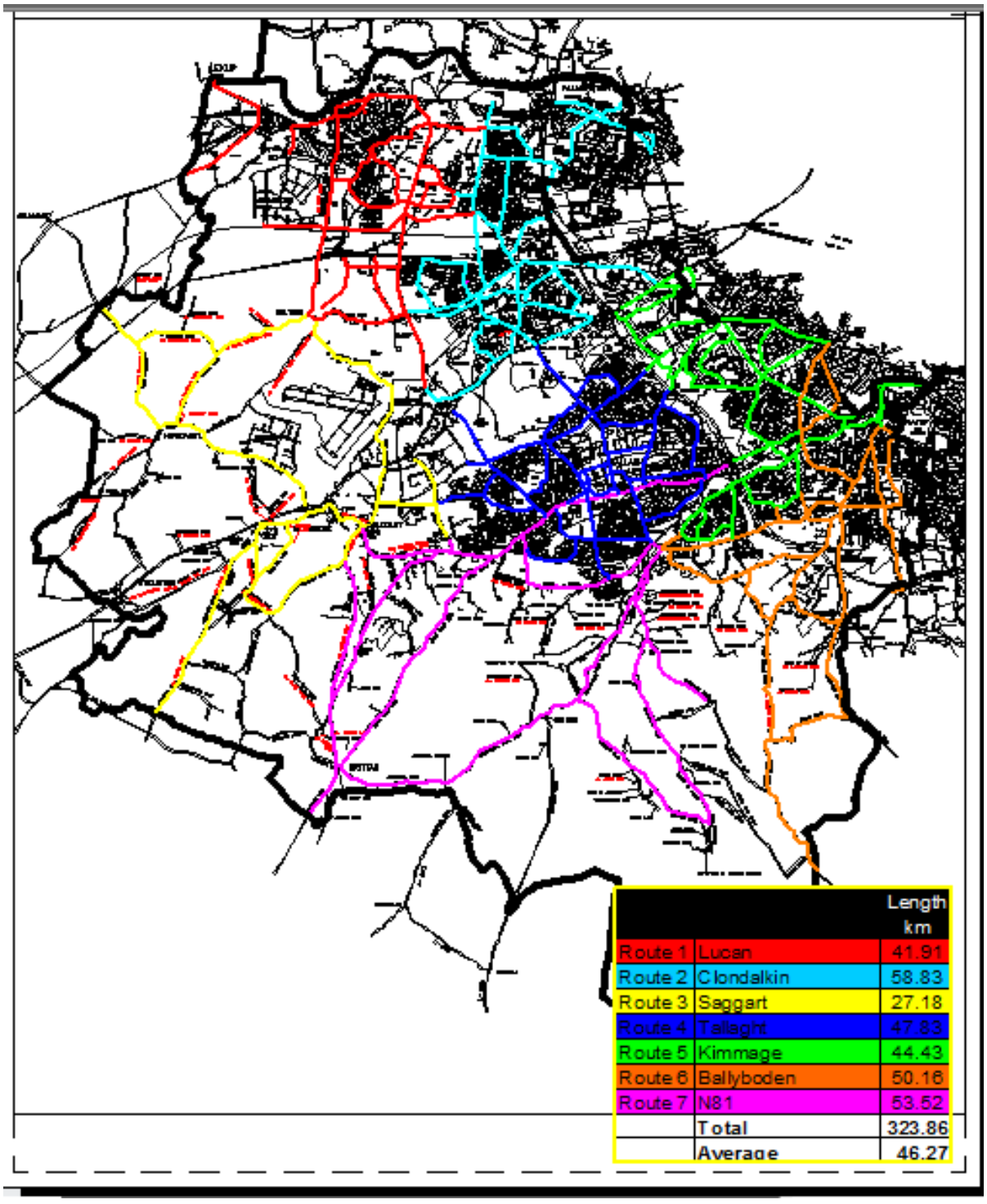
Snow ploughing will commence on major routes as shown in Appendix 2 as directed by the Duty Engineer. Each pass of the plough shall be supplemented by an application of salt at a rate as per the table above. Special salting may be necessary to deal with melted water from snow, which may freeze at night, and a watch will be kept for such conditions.

5.7 Treatment of Hard-Packed Snow and Ice

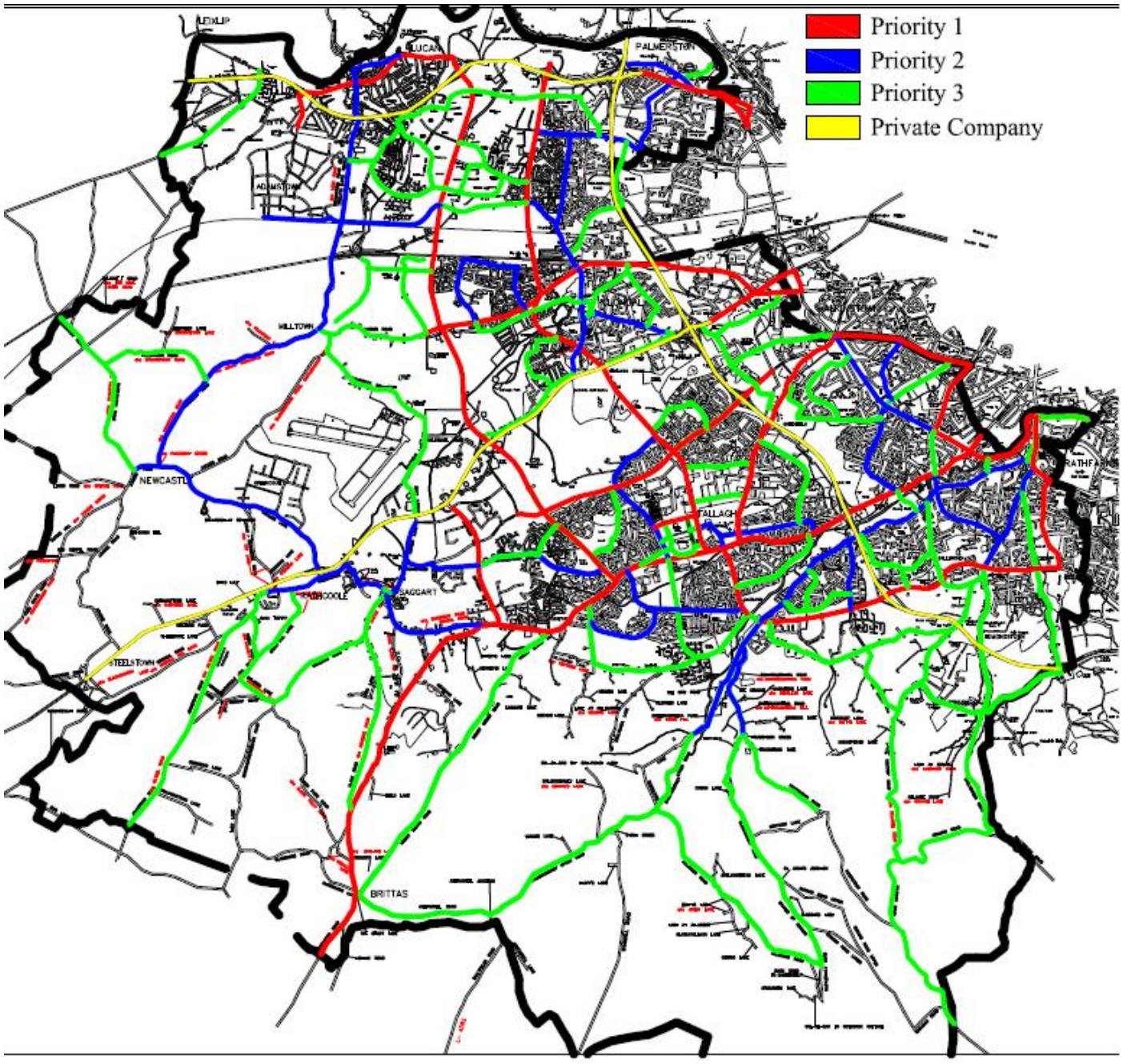
If the previous procedures are carried out successfully then the formation of hard-packed snow should be prevented. However, in cases where hard-packed snow and ice occur and provided that the ice is no more than 20mm thick and the air temperature is below -5ºC, then removal shall be carried out by successive salt applications of 20-40 g/m^2.

6. Appendices

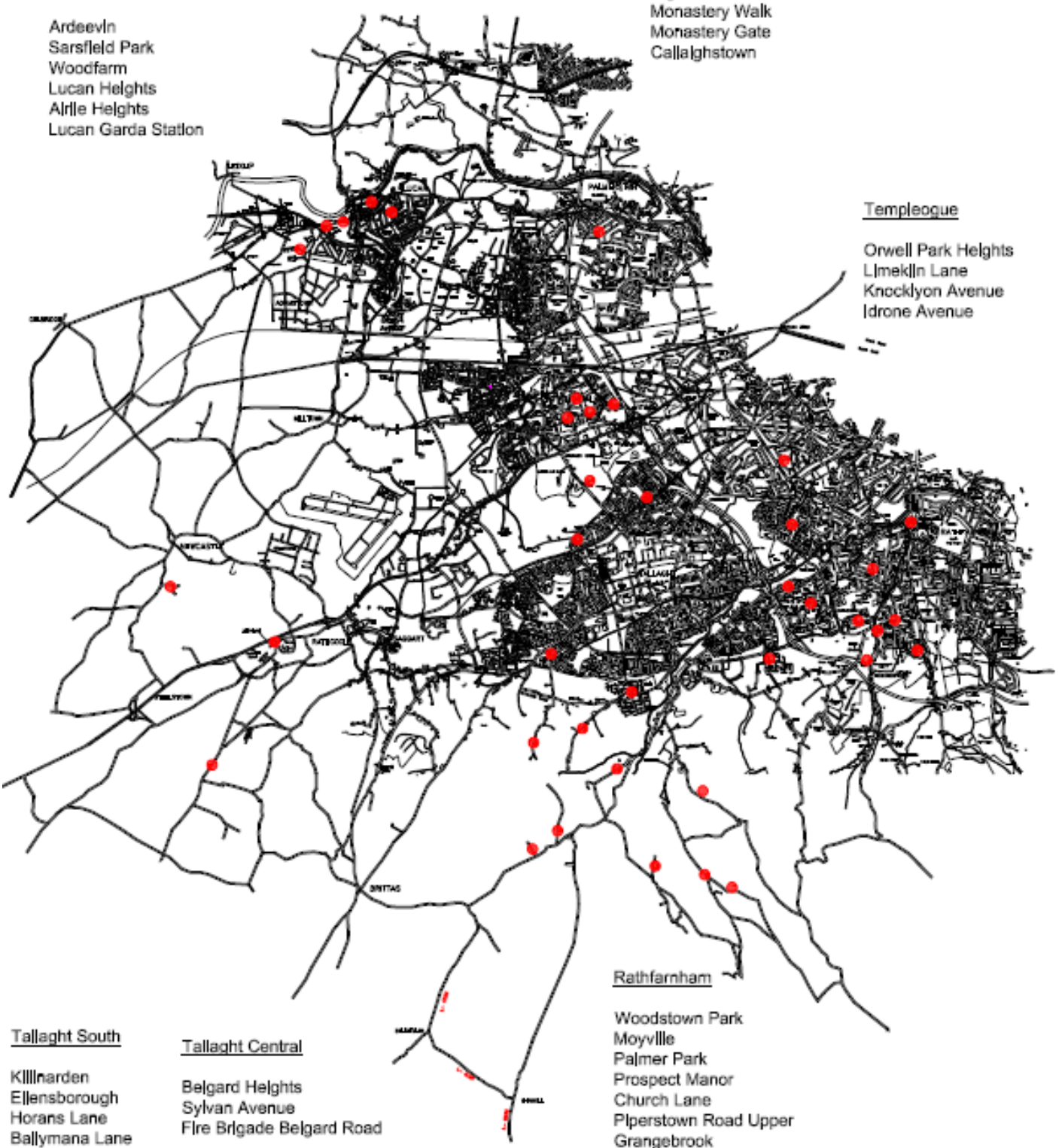
6.1 Appendix 1 - Gritting Routes



6.2 APPENDIX 2 - PRIORITY ROUTES



6.3 Appendix 3 - Salt Bin Locations



Clondalkin

Floraville
Monastery Heath
St. Patrick's Crescent
Highdownhill
Monastery Walk
Monastery Gate
Callaghstown

Lucan

Ardeevin
Sarsfield Park
Woodfarm
Lucan Heights
Airfle Heights
Lucan Garda Station

Templeogue

Orwell Park Heights
Limekiln Lane
Knocklyon Avenue
Idrone Avenue

Rathfarnham

Woodstown Park
Moyville
Palmer Park
Prospect Manor
Church Lane
Piperstown Road Upper
Grangebrook
Boden Park
Ballyroan Library
St. Ann's Bohernabreena
Cunard
Ballymorefinn Lane

Tallaght South

Killinarden
Ellensborough
Horans Lane
Ballymana Lane
Ballymalce Lane
Vances Lane
Cullens Lane

Tallaght Central

Belgard Heights
Sylvan Avenue
Fire Brigade Belgard Road

6.4 APPENDIX 4 – RISK ASSESSMENTS

RISK ASSESSMENT – Mounting and Loading Gritter

Ref: RDS/MB/RA/0218

Risk Rating: Medium Risk

Date: 07/10/16

Work Activity: Mounting and Loading Gritting Trucks

Assessed by: Road Mntc Safety Committee

HAZARDS

Loading of grit by JCB (external contractor)
Reversing truck
Mounting gritter (insertion of pins) – hand injury
Gritter dismounting from truck while in motion
Manual handling

Persons Exposed To Risk

Public ☐ Other contractors/employees ☑ Visitors ☐

Work Description (including location)

Mounting of gritters on to the bed of a truck and the loading of grit into the gritter. Demounting the gritter

Existing Controls

☐	Appropriate PPE must be worn
☐	Gritter must be strapped to truck body by nylon straps before truck moves off. New straps are provided at the start of each season
☐	Drivers specially trained in the mounting and operation of gritters. Straps to be used when mounting and dismounting.
☐	Gritter legs must be raised and pinned before truck moves off
☐	Tail board to be lifted off by forklift
☐	Each driver has a helper to assist these works.
☐	First aid kits are provided in each truck
☐	Spinner to be mounted and dismounted by driver and operative, never individually
☐	Truck must be fully switched off while plates are being removed from above worm.
☐	Operatives are not to enter the gritted bed unless machine is fully switched off
☐	All drivers and helpers are to be aware of the emergency stop button
☐	
☐	

Site Specific Controls / Recommendation

☐
☐
☐
☐

RISK ASSESSMENT

Ref:
RDS/MB/RA/0218

Monitoring Arrangements

- [ ] Monitor compliance with risk assessment
- [ ] Monitor wearing of PPE

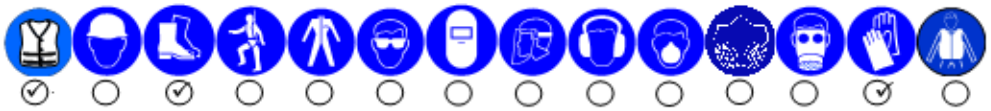
Supervisor Checks

- [ ] Check that PPE is being worn
- [ ] Check that new starts have undergone induction and appropriate training
- [ ] Check that drivers have been fully trained in the mounting and operation of gritters
- [ ] Check that safe systems of work are being followed

Information, Instruction and Training

- [ ] Risk Assessment and safe systems of work
- [ ] Use of PPE
- [ ] Induction training for new employees
- [ ] Manual handling training

Personal Protective Equipment (last resort)



Additional notes on PPE

Initial Risk Rating (without any control measures)

Severity Rating (A)		Exposure Rating (B)		Exposure Probability Rating (C)	
Multiple fatality	15	1 Person	2	Exposure would rarely occur	4
Fatality	**12**	2 – 5 Persons	**4**	Exposure unlikely to occur	8
Major injury (hospitalisation)	9	6 – 20 Persons	6	Exposure likely to occur	**12**
Reportable injury	6	21 – 100 Persons	8	Exposure occurs regularly	16
Minor accident	3	100 + Persons	10	Exposure certain to occur	20

Risk Rating Calculation Risk = A X (B + C) = **192** **High Risk**

Risk Reduction Rating (after controls introduced)

Severity Rating (A) **6** **Exposure Rating (B)** **4** **Exposure Probability Rating (C)** **8**

Risk Rating Calculation Risk = A X (B + C) = **72** **Medium Risk**

Low Risk = 18 – 59 **Medium Risk** = 60 – 89 **Substantial Risk** = 90 - 129 **High Risk** = 130 - 450

Risk Assessment Review

As and when process changes or yearly
Date of Risk Assessment 07/10/16…. …… ……

RISK ASSESSMENT – Gritting Roads

Ref: RDS/MB/RA/0218

Risk Rating: High Risk

Date: 07/10/16

Work Activity: Gritting Roads

Assessed by: Road Mntc Safety Committee

HAZARDS

Collisions
Reversing truck

Truck sliding off the road
Gritter dismounting from truck while in motion

Persons Exposed To Risk

Public ✓ Other contractors/employees ✓ Visitors ✓

Work Description (including location)

Application of grit to public roads using gritting unit attached to truck during hours of darkness

Existing Controls

	Appropriate PPE must be worn
	Gritter must be strapped to truck body by nylon straps before truck moves off. New straps are provided on an annual basis.
	Drivers specially trained in the mounting and operation of gritters
	A helper travels in each truck with the driver
	First aid kits, head lamps and torch in each truck.
	Each truck has a set of winter tyres put on at the start of the season
	Equipment checked on an annual basis

Site Specific Controls / Recommendation

RISK ASSESSMENT

Ref:
RDS/MB/RA/0218

Monitoring Arrangements

- [ ] Monitor compliance with risk assessment
- [ ] Monitor wearing of PPE

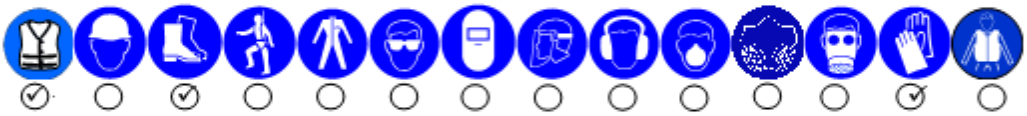
Supervisor Checks

- [ ] Check that PPE is being worn
- [ ] Check that new starts have undergone induction and appropriate training
- [ ] Check that drivers have been fully trained in the mounting and operation of gritters
- [ ] Check that safe systems of work are being followed

Information, Instruction and Training

- [ ] Risk Assessment and safe systems of work
- [ ] Use of PPE
- [ ] Induction training for new employees
- [ ] Manual handling training

Personal Protective Equipment (last resort)



Additional notes on PPE

Initial Risk Rating (without any control measures)

Severity Rating (A)		Exposure Rating (B)		Exposure Probability Rating (C)	
Multiple fatality	15	1 Person	2	Exposure would rarely occur	4
Fatality	**12**	2 – 5 Persons	**4**	Exposure unlikely to occur	8
Major injury (hospitalisation)	9	6 – 20 Persons	6	Exposure likely to occur	**12**
Reportable injury	6	21 – 100 Persons	8	Exposure occurs regularly	16
Minor accident	3	100 + Persons	10	Exposure certain to occur	20

Risk Rating Calculation Risk = A X (B + C) = **192 High Risk**

Risk Reduction Rating (after controls introduced)

Severity Rating (A) 12 Exposure Rating (B) 4 Exposure Probability Rating (C) 8

Risk Rating Calculation Risk = A X (B + C) = **144 High Risk**

Low Risk = 18 – 59 **Medium Risk** = 60 – 89 **Substantial Risk** = 90 - 129 **High Risk** = 130 - 450

Risk Assessment Review

As and when process changes or yearly

Date of Risk Assessment……07/10/16…… ……

RISK ASSESSMENT – Snow Plough

Ref: RDS/MB/RA/0228

Risk Rating: Medium Risk

Date: 07/10/16

Work Activity: Snow Plough, mounting and operating

Assessed by: Road Mntc Safety Committee

HAZARDS

Back injury
Hand injury
Eye injury (hydraulic oil under pressure)

Persons Exposed To Risk

Public ☐ Other contractors/employees ☑ Visitors ☐

Work Description (including location)

Snow plough, mounting and operating

Existing Controls

- ☐ Truck to approach snow plough in end–on position
- ☐ Snow plough and truck to be on level ground
- ☐ Hydraulic hoses to be in good condition
- ☐ Appropriate PPE must be worn
- ☐ Exclusion zone around operation.
- ☐ Only adequately maintained machinery permitted for use
- ☐ Eye protection must be worn when mounting the snow plough. (danger from hydraulic oil under pressure)
- ☐ Ploughs must be parked on a stand on concrete at the same level as the truck
- ☐ 2 people present when mounting ploughs
- ☐

Site Specific Controls / Recommendation

- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐

RISK ASSESSMENT

Ref: RDS/MB/RA/0228

Monitoring Arrangements

- [ ] Monitor compliance with safe system of work
- [ ] Monitor for pedestrians / workers in the area
- [ ] Ensure defects are reported

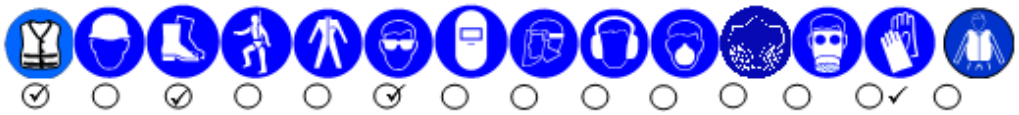
Supervisor Checks

- [ ] Monitor wearing of PPE
- [ ] The supervisor shall undertake regular inspection of plant
- [ ] Ensure pre-use checks are carried out and defects reported
- [ ] Ensure safe system of work communicated

Information, Instruction and Training

- [ ] Operator training in safe use of equipment
- [ ] Manual handling
- [ ] Safe system of work explained
- [ ] Training register to be kept

Personal Protective Equipment (last resort)



☑ ○ ☑ ○ ○ ☑ ○ ○ ○ ○ ○ ○ ✓ ○

Additional notes on PPE

Eye protection must be worn when mounting the snow plough (danger from hydraulic oil under pressure)

Initial Risk Rating (without any control measures)

Severity Rating (A)		Exposure Rating (B)		Exposure Probability Rating (C)	
Multiple fatality	15	1 Person	**2**	Exposure would rarely occur	4
Fatality	12	2 – 5 Persons	4	Exposure unlikely to occur	8
Major injury (hospitalisation)	**9**	6 – 20 Persons	6	Exposure likely to occur	**12**
Reportable injury	6	21 – 100 Persons	8	Exposure occurs regularly	16
Minor accident	3	100 + Persons	10	Exposure certain to occur	20

Risk Rating Calculation Risk = A X (B + C) = **126** **Substantial Risk**

Risk Reduction Rating (after controls introduced)

Severity Rating (A) **6** **Exposure Rating (B)** **2** **Exposure Probability Rating (C)** **8**

Risk Rating Calculation Risk = A X (B + C) = **60** **Medium Risk**

Low Risk = 18 – 59 **Medium Risk** = 60 – 89 **Substantial Risk** = 90 - 129 **High Risk** = 130 - 450

Risk Assessment Review

As and when process changes or yearly

Date of Risk Assessment……07/10/16…… ……

6.5 APPENDIX 5 – DRIVER CHECKLIST

Comhairle Contae Átha Cliath Theas
South Dublin County Council

Vehicle Daily Visual Inspection Checklist

Department:		**Depot:**	
Vehicle Reg Number:		**Date:**	
Make/Model of Vehicle:		**Odometer Reading (Mileage/KM/Hours):**	

	In – Cab checks	SATISFACTORY	DEFECT	N/A
1.	Good visibility for driver through all cab windows and mirrors.			
2.	All required mirrors fitted and adjusted correctly.			
3.	Driving controls, seat and driver safety belt adjusted correctly.			
4.	Windscreen washer, wipers, demister and horn operating correctly.			
5.	All instruments, gauges and other warning devices operating correctly (including ABS/EBS in-cab warning lights).			
6.	Cab clean with no obstructions or loose material.			
7.	High visibility jacket/vest accessible in cab.			
8.	Reversing Alarm operating			
9.	Reversing CCTV operating if fitted			
10.	First Aid Kit in Cab			
11.	Fire Extinguisher in Cab & serviced in past 12 months.			
12.	Vehicle/Machine **Not** Overdue a Service (Check Windscreen/Dashboard Sticker).			
	External Vehicle Checks			
13.	Vehicle sitting square and not leaning to one side.			
14.	Tax, CVRT/NCT and insurance discs present and valid.			
15.	Number plates clearly visible.			
16.	Wheels in good condition and secure (Visual).			
17.	Spare Wheel in good condition and secure (Visual).			
18.	Tyres undamaged with correct inflation and tread depth (Visual).			
19.	All lights, flashing beacons and reflectors fitted, clean and in good condition.			
20.	Exhaust secure with no excess noise or smoke			
21.	Vehicle access, doors, steps and bodywork in good condition			
22.	Fuel cap seal in place and not leaking.			
23.	Tow Bar & tow bar bracket (if fitted) in good order (no bolts missing) (Visual)			
24.	Tail Lift (if fitted) in good order.			
	Under the Hood Checks			
25.	Engine oil, brake fluid, water, coolant & windscreen washer reservoir levels checked & no leaks			
26.	Battery secure (battery clamp tightened), no leaks, no corrosion evident around battery terminals.			
	Prior to Leaving Depot			
27.	Steering and brakes operating correctly.			
28.	Loads secure and weight distributed evenly, Tie-Hooks in good order.			
	On the Road			
29.	ABS/EBS warning lights off			
30.	If towing, check trailer brakes, breakaway cable/safety chain, & condition of trailer hitch, tyres & body.			

Defect Details

Drivers Name (Print):		**Drivers Signature:**	
Defect Repaired Y/N?		**Date Repaired?**	
Defect Repaired in Mechanical Workshop/Ext Garage:			
Mechanical Section Repair Job Number:			
Mech Section Foreman Name (Print):		**Mech Section Foreman Name Signature:**	
Defect Repaired in External Garage Workshop:			
External Garage Foreman Name (Print):		**External Garage Foreman Name Signature:**	
External Garage Repairs as Listed			

South Dublin County Council Drivers Daily Defect Check Report - Winter Gritters & Snow Ploughs					
Drivers Name (Print Name):				**Mileage/KM/Hours:**	
Drivers Name (Sign):					
Drivers Supervisor's Name (Print Name):					
Drivers Supervisor's Name (Sign):					
Date:					
Reg No:					
Please Tick	**Risk Rating**	**☑ OK ■ Fault N/A**	**Please Tick**	**Risk Rating**	**☑ OK ■ Fault N/A**
Oil & Hydraulic Level			Fire Extinguisher	Substancial Risk	
Water Level	Medium Risk		1st Aid Kit	Substancial Risk	
Oil Pressure	Medium Risk		Reverse Beeper Working[3]	Substancial Risk	
Fuel/Oil/Water/Air/Hydraulic Leaks[1]	**High Risk**		Reverse Camera[20]	Substancial Risk	
Brakes	**High Risk**		Access Steps[2]	Substancial Risk	
Steering	**High Risk**		**Interlocks & Guards**	**High Risk**	
Tyre Thread (Visual check)	Substancial Risk		Tipper Body Panels[19]	Substancial Risk	
Tyre Pressure (Visual check)	Substancial Risk		Tie-Hooks[18]	Substancial Risk	
Wheelnuts & Fixings	**High Risk**		Grease all Grease Fittings[4]	Low Risk	
Lights/Hazard/Beacons	Substancial Risk		Emergency Stop Buttons[17]	**High Risk**	
Indicators	Substancial Risk		**Spinner & Chute Assembly[6]**	**High Risk**	
Mirrors	Substancial Risk		Ladders and Platforms[7]	Substancial Risk	
Wipers & Washers (front & Rear)	Substancial Risk		**Loading Straps[8]**	**High Risk**	
Windows Cleaned	Low Risk		**Engine Compartment Door[9]**	**High Risk**	
Window Cracks	Low Risk		**Auger/Conveyor Belt[10]**	**High Risk**	
Body Panels & Bumpers			Front Roller[11]	Substancial Risk	
Spray Suppression	Low Risk		Retractable Support Legs (incl Locking Pins)[12]	Medium Risk	
Horn	Low Risk		Hopper Door[13]	Medium Risk	
Seats & Seatbelts[14]			Loading Grid[14]	Medium Risk	
Electrics (Dash Warning Lights)	Medium Risk		**Snow Ploughs & DIN Plate[15]**	**High Risk**	
ABS Warning	**High Risk**		**Auxiliary Road Lighting[16]**	**High Risk**	
**see overleaf for clarifications on the above in relation to certain vehicle types.*					
Other Comments; **Checks to be carried out daily.** **Recommend to carry out above checks during daylight hours.** **Never Load a griter or snow plough on your own!** **Always wash a griter and snow plough down after use**					

H&S Risk Assessment Rating					
Defect Check	Severity Rating	Exposure Rating	Exposure Probability Rating	Risk Rating	Risk Rating
1st Aid Kit	9	2	8	90	Substancial Risk
ABS Warning	15	4	8	180	High Risk
Access Steps[12]	9	2	8	90	Substancial Risk
Tyre Pressure (Visual check)	9	4	8	108	Substancial Risk
Auger/Conveyor Belt[10]	12	4	8	144	High Risk
Auxiliary Road Lighting[16]	12	4	8	144	High Risk
Body Panels & Bumpers	6	4	4	48	Low Risk
Brakes	15	4	8	180	High Risk
Electrics (Dash Warning Lights)	9	4	4	72	Medium Risk
Emergency Stop Buttons[17]	12	4	8	144	High Risk
Engine Compartment Door[9]	12	4	8	144	High Risk
Fire Extinguisher	9	4	8	108	Substancial Risk
Front Roller[11]	9	2	8	90	Substancial Risk
Fuel/Oil/Water/Air/Hydraulic Leaks[11]	15	4	8	180	High Risk
Grease all Grease Fittings[14]	3	1	8	27	Low Risk
Hopper Door[13]	6	2	8	60	Medium Risk
Horn	3	2	4	18	Low Risk
Indicators	9	4	8	108	Substancial Risk
Interlocks & Guards	15	4	8	180	High Risk
Ladders and Platforms[7]	9	2	8	90	Substancial Risk
Lights/Hazard/Beacons	9	4	8	108	Substancial Risk
Loading Grid[14]	6	2	8	60	Medium Risk
Loading Straps[8]	12	4	8	144	High Risk
Mirrors	9	4	8	108	Substancial Risk
Oil Level	9	1	8	81	Medium Risk
Oil Pressure	9	1	8	81	Medium Risk
Retractable Support Legs (incl Locking Pins)[12]	6	2	8	60	Medium Risk
Reverse Beeper Working[3]	15	4	4	120	Substancial Risk
Reverse Camera[20]	15	4	4	120	Substancial Risk
Seats & Seatbelts	12	1	12	156	High Risk
Snow Ploughs & DIN Plate[15]	12	4	8	144	High Risk
Spinner & Chute Assembly[5]	12	4	8	144	High Risk
Spray Suppression	3	4	4	24	Low Risk
Steering	15	4	8	180	High Risk
Tie-Hooks[18]	9	4	8	108	Substancial Risk
Tipper Body Panels[19]	9	2	8	90	Substancial Risk
Tyre Thread (Visual check)	9	4	8	108	Substancial Risk
Water Level	9	1	8	81	Medium Risk
Wheelnuts & Fixings	9	4	12	144	High Risk
Window Cracks	3	4	8	36	Low Risk
Windows Cleaned	3	4	8	36	Low Risk
Wipers & Washers (front & Rear)	9	4	8	108	Substancial Risk

Initial Risk Rating (without any control measures)		Highlight appropriate figure			
Severity Rating (A)		Exposure Rating (B)		Exposure Probability Rating (C)	
Multiple fatality	15	1 Person	2	Exposure would rarely occur	4
Fatality	12	2 – 5 Persons	4	Exposure unlikely to occur	8
Major injury (hospitalisation)	9	6 – 20 Persons	6	Exposure likely to occur	12
Reportable injury	6	21 – 100 Persons	8	Exposure occurs regularly	16
Minor accident	3	100 + Persons	10	Exposure certain to occur	20
Persons Exposed To Risk					
Public	☐	Other contractors/employees	✓	Visitors	☐
Risk Rating Calculation Risk = A x (B + C) = 144 High Risk					
Low Risk = 18 - 60 Medium Risk = 60 - 80 Substantial Risk = 90 – 120 High Risk = 130 – 400					
Where risk levels are substantial or high, additional controls must be introduced to reduce the risk to the lowest level practicable					

Notes on Defect List	
1	Air/hydraulic Leaks - check also for signs of damage to hydraulic pipes.
2	Access Steps - check access steps on truck plus gritter. Safety interlock on Econ gritter access steps - stand on step, auger stops.
3	Reverse Beeper Working - applicable to vehicles fitted with a reverse beeper, i.e. greater than or equal to 3.5 T G.V.W.
4	Grease all Grease Fitting - applicable to vehicles and attachments fitted with grease points.
5	Seats & Seatbelts - applicable to vehicles fitted with seat belts - refer to drivers handbook for further information.
6	Spinner & Chute Assembly - check spinner for cracks or other forms of damage. Check that chute assembly securely fixed to gritter, check for signs of damage.
7	Ladders and Platforms - check access ladders & platforms for signs of damage
8	Loading Straps - check load securing straps for signs of damage. Straps must have an ID number and S.W.L. marked.
9	Engine Compartment Door - Romaquip Gritters Only - check donkey engine compartment door securely fastened prior to leaving depot.
10	Auger/Conveyor Belt - Keep clear of auger/conveyor belt when in operation
11	Front Roller - Romaquip Gritters Only. Check roller securely fixed to bracket prior to mounting on truck.
12	Retractable Support Legs - Romaquip Gritters Only - never lift on own, apply manual handling training procedures. If leg stuck, contact Mechanical Section. Also check support leg pins.
13	Hopper Door - Romaquip Gritters Only - Ram operating door can get stuck with residues of grit. Never try to free up using manual techniques. Request Mechanical Section to use lift equipment to free up.
14	Loading Grid - Romaquip Gritters Only - report damage to Loading Grid to Mechanical Section ASAP.
15	Snow Ploughs - check frame and blade for cracks before use. Ensure DIN plate securely fixed to truck.
16	Auxiliary Road Lighting - As Snow Blade can block trucks main lights, ensure truck fitted with axially high level road lighting at front of truck.
17	Check all emergency stop buttons are working (where fitted).
18	Tie-Hooks - applicable to tipper body trucks, pickups and trailers where fitted.
19	Tipper Body Panels - applicable to tipper body vehicles only, check for corrosion, accidental damage etc.
20	Reverse Camera - applicable to vehicles fitted with reverse cameras.

Notes on Risk Ratings	
Low	Vehicle can be used as defect may not pose an immediate H&S Risk, but defect to be reported to Mechanical Section.
Medium	Defect may not pose a major H&S Risk, but vehicle should be grounded until defect repaired.
Substantial	Vehicle to report to Mechanical Workshop Immediately & not to be used thereafter until defect repaired. Do not use part of vehicle where defect is present, e.g. tow bar.
High	Vehicle to be grounded on site & not to be used thereafter until defect repaired.

6.6 APPENDIX 6 - SAFE WORKING ALONE SYSTEM

The Salt Spreading Operations are carried to prevent the occurrence of icy conditions on roads, the main period of activity is from November 1st to March 31st, but it is not exclusive to this period.
The operation when activated is scheduled each night to finish approximately two hours before the onset of icy conditions on the road. The equipment consists of a truck and a gritter mounted on the truck. The gritters are located in the Machinery Yard and the Salt used is stored in the salt barns.

HAZARDS

The Risk Assessments of the winter salting activity refers to the activity of lone working and lists the controls as follows.

- In the event that a driver operates the Salt Spreading Unit without an attendant, a Safe Working Alone System must be put in place.
- A communication procedure and an emergency procedure must form part of the system.
- An arrangement for periodic checks must be included.

SAFE WORKING ALONE SYSTEM

The following is the lone working procedure to comply with these controls

i) Before leaving the depot

a) Complete check of machine
b) Complete check of controls
c) Complete communications check with designated contact

ii) During Route

a) Check in with designated contact at approximately 30 minute intervals or agreed timing

(Specific check in locations and timings should be agreed with the supervisor and recorded to coincide with specific points on the route e.g. end of specific section of road, suitable stop point, etc)

b) Check in with designated contact on completion of route

STOP PROCEDURE

In the event of stopping during the route, the following shall be the procedure

- Park in a safe location
- Communicate with the designated contact
  (When leaving the cab, inform the designated contact that you are leaving the cab, for what purpose and how long you expect to be out of the cab)
- Contact your designated contact on return to the cab
- Personnel Should never mount the Bridge of the Salt Spreader unattended

BREAKDOWN PROCEDURE

- In the event of breakdown during the route, the following shall be the procedure

Park in a safe location

- Communicate with the designated contact
- Remain in the cab and await instructions from your supervisor

6.7 Appendix 7 – Duty Engineer Roster 2016-2017

Winter Maintenance Duty Engineer's Roster for the period Monday 17th October 2016 to Sunday 30th April 2017
Local Authority: South Dublin County Council

Week starting Monday	Duty Engineer's Initials	Week starting Monday	Duty Engineer's Initials	Week starting Monday	Duty Engineer's Initials	Week starting Monday	Duty Engineer's Initials
17/10/2016	TOG	05/12/2016	PMcG	23/01/2017	MG	13/03/2017	ST
24/10/2016	TOG	12/12/2016	PMcG	30/01/2017	MG	20/03/2017	ST
31/10/2016	TOG	19/12/2016	GW	06/02/2017	MG	27/03/2017	ST
07/11/2016	TOG	26/12/2016	GW	13/02/2017	CL	03/04/2017	ST
14/11/2016	TOG	02/01/2017	GW	20/02/2017	CL	10/04/2017	ST
21/11/2016	PMcG	09/01/2017	GW	27/02/2017	CL	17/04/2017	GW
28/11/2016	PMcG	16/01/2017	MG	06/03/2017	CL	24/04/2017	MG

Duty Engineer's Name & Initials	Office Phone No	Office Fax No	Office E-mail Address	Home Phone No	Home E-mail Address	Mobile No
Tony O'Grady TOG	01 414 9000	01 414 9158	togrady@sdublincoco.ie			
Padhraic McGillycuddy PMcG	01 451 9514	01 462 7736	pmcgillycuddy@sdublincoco.ie			
Gary Walsh GW	01 414 9000	01 414 9158	garywalsh@sdublincoco.ie			
Michael Glynn MG	01 414 9000	01 414 9158	mglynn@sdublincoco.ie			
Caitríona Lambert CL	01 414 9000	01 414 9158	clambert@sdublincoco.ie			
Sally Tsang	01 414 9000	01 414 9158	stsang@sdublincoco.ie			

Send to: CAFO, Met. Éireann, Glasnevin Hill, Dublin 9. Attention: Duty SMO. E-mail:forecasts@met.ie

Copy to: Ms. Margaret Claffey, Transport Infrastructure Ireland, Parkgate Business Centre, Parkgate Street, Dublin 8.
E-mail: margaret.claffey@tii.ie