

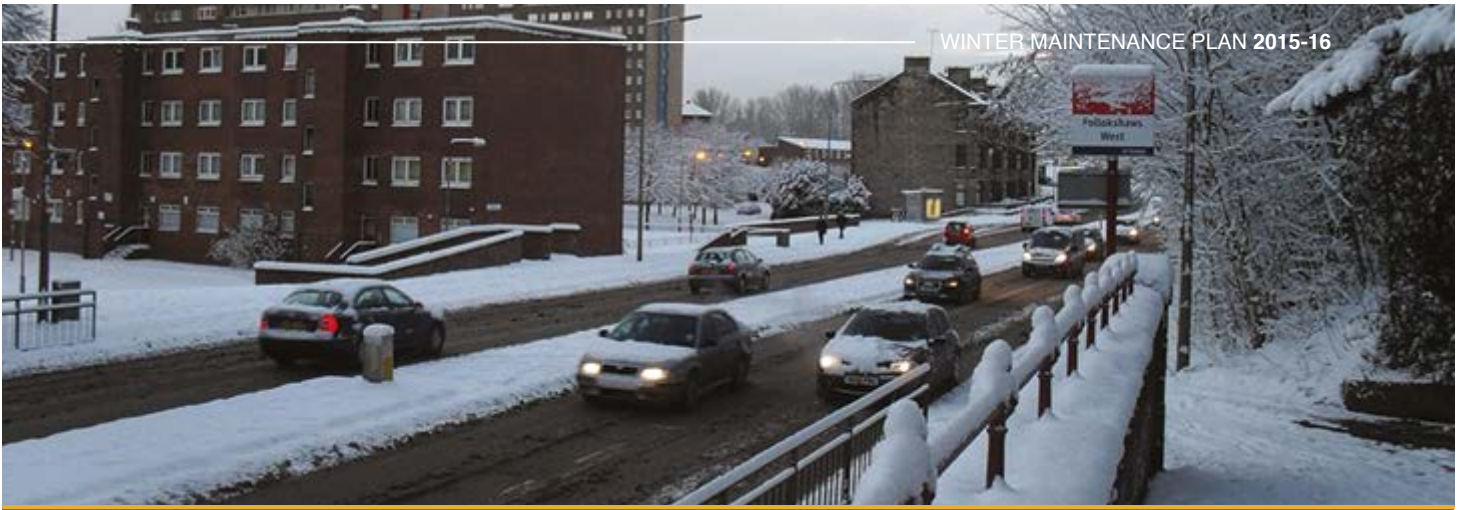


Land and Environmental Services

# Winter Maintenance Plan 2015-16







## Winter Maintenance Plan 2015-16

**INTRODUCTION**

Land and Environmental Services is responsible for providing the winter maintenance service for Glasgow, including:-

Establishing standards.  
Establishing treatment priorities.  
Day to day direction of operations.  
Monitoring performance.  
Liaison with adjoining Councils  
and Emergency Services.



The Winter Maintenance Plan has been revised during the summer of 2015 to incorporate operational and management improvements.

There is additional and more detailed information available for operational personnel in the Land and Environmental Services Good Practice Guide to Winter Maintenance.



## Winter Maintenance Plan 2015-16

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Winter Maintenance Plan 2015-16

# STATEMENT OF POLICIES AND RESPONSIBILITIES

## 1.1 Statutory Obligations And Policy

### 1.1.1 Statutory Obligation

1.1.1.1 The Council has a statutory obligation under Section 34 of the Roads (Scotland) Act 1984 to take such steps as it considers reasonable, to prevent snow and ice endangering the safe passage of pedestrians and vehicles over public roads.

1.1.1.2 Following a complete revision of the winter gritting sections within the Code of Practice Well-Maintained Highways, the Society of Chief Officers of Transportation Scotland (SCOTS) recommended compliant spread rate treatment matrices in July 2015 which have been adopted.

1.1.1.3 In terms of the above legislation a 'road' includes carriageways, footways, footpaths and pedestrian areas.

1.1.1.4 The aim of the Winter Maintenance Plan is to set out how the winter maintenance service will be provided for Glasgow.

1.1.2 The Council's aim is to provide an effective and efficient winter maintenance service in accordance with Land and Environmental Services Service Plan and within the resources available to:-

- Allow the safe passage of vehicles and pedestrians
- Minimise delays due to winter weather
- Ensure operations are undertaken safely

## 1.2 Responsibilities

1.2.1 The enabling and service delivery of the winter maintenance service is the responsibility of the Head of Infrastructure Services.

- 1.2.2 Land and Environmental Services Roads Operations will be responsible for the work of winter maintenance on the carriageways and footways. These responsibilities include the following:-



Designing a service to cope with an average winter but having the capability to be extended or adapted when winters are more severe or of a longer duration than average



- Production and distribution of the Winter Maintenance Plan and Good Practice Guide
- Carrying out an annual review of all aspects of the service and updating the Winter Maintenance Plan
- Liaising with adjacent roads authorities including ScotlandTranServ and Connect (who have responsibility for the Motorway and Trunk Road network) in the preparation of the Winter Maintenance Plan to ensure continuity of service across boundaries
- Providing a list of roads designated for salting treatment
- Providing a list of footways, cycleways and pedestrian areas for salting treatment
- Providing a list of roads that make up the strategic routes for snow clearing
- Providing decision-making charts, advice and guidance for those involved in winter maintenance
- Liaising with the winter supervisors to provide help and advice to ensure the service is delivered in the most effective, efficient and economical way, including establishing operational priorities during extreme or prolonged severe weather conditions
- Arranging for weather forecasts, ice prediction reports and road and weather monitoring information to be available throughout the winter period
- Arranging for the specialist vehicles and equipment to be available throughout the winter period
- Arranging supplies of salt to be available at the start of the winter season
- Monitoring the salt usage and ensuring supplies are replenished to maintain an appropriate level of salt in the stockpile
- Establish contact numbers for access to emergency services control rooms, public transport operators, local media and the motoring organisations
- Passing of factual information of road conditions to the Council's press officer, local media or general public as and when required
- Monitoring all aspects of the winter service and providing information on performance indicators for the service
- Maintaining full and comprehensive records of all winter service activities
- Directing all salting and snow clearing resources at their disposal
- Liaising when necessary with the Roads Weather Forecaster
- Monitoring the 'ice prediction' forecasts and weather conditions
- Monitoring actual road surface temperatures and road conditions
- Assessing the requirement to carry out precautionary or post salting treatment or snow clearance on the defined network, deciding appropriate start times and rates of spread and arranging for the work to be carried out, monitoring treatments and amending instructions, when necessary, due to a change of road or weather conditions
- Assessing the need to carry out post salting or snow clearance to footways and cycle routes and ensuring the works are carried out when necessary
- In the event of deteriorating conditions, notably major blockages to the primary route network and / or severe drifting snow to contact:
  - a) The Emergency Service Control Rooms (Police, Ambulance, Fire).
  - b) The Council's Senior Resilience Officer.
  - c) The Head of Communications and Organisational Development.

d) Executive Member for Land and Environmental Services.

- Maintaining a list of contractors with suitable plant for snow clearing purposes and hiring in such plant when necessary to do so
- Liaising when appropriate with the Emergency Services and Public Transport Operators
- Providing accurate and timely information to the Council Customer Care Centre, (RALF - Road and Lighting Faults service)
- Ensuring the Transport workshops are notified of any vehicle faults and that they are repaired without delay
- Arranging with the Transport workshops for appropriate staff to be available on 24 hour call out to deal with any serious mechanical breakdown(s)
- Checking and calibrating salt spreading equipment and supplying copies of the certificates to Roads Operations
- Ensuring all operatives receive adequate and appropriate training in winter
- services activities and that drivers are issued with route navigation devices and / or 'route cards' to record details of the treatment, times, etc.

e) No action planned (minimum road surface temperature forecast above +1°C).

- 1.3.4 If treatment is planned the decision record will include the instructed carriageway salt spread rate.
- 1.3.5 If the decision record includes post salting and / or snow clearances this will be noted on the decision record and noted on the record sheets.
- 1.3.6 The decision will be distributed to appropriate operations personnel and other key partners.
- 1.3.7 If the decision is for option c), d) or e) and treatment subsequently becomes necessary an amended decision record will be distributed as soon as possible.
- 1.3.8 If the decision for action is a) or b) and conditions improve so that salting is cancelled, an updated decision record will be distributed as soon as practicable.
- 1.3.9 The Council will endeavour to ensure that salt is spread, as necessary, prior to the formation of ice or the settling of snow on the priority network. When the road surface temperature falls to below +1°C with forecast of freezing conditions and ice forming, precautionary salting shall take place, unless:-
- There is enough residual salt on the road to deal with the expected conditions, or
  - The weather forecast information indicates that the road surface temperature will rise before the roads could be salted or there will be no period of frost that could cause icing

### 1.3 Decision Making Process

1.3.1 The day to day routine operational decisions will be made by the Duty Controller using MetroGroup weather forecasts and the road and weather monitoring data.

1.3.2 The Winter period will be from the beginning of November to the end of March (this period can be extended should conditions warrant).

1.3.3 On receipt of a weather forecast or update throughout the winter period the Duty Controller, in consultation with a colleague, will reach a decision on action for the next 24 hours from one of the five following options:

- a) Presalting to commence immediately.
- b) Presalting to commence at a specified time (e.g. 1900 hours).
- c) Treatment is likely - but start time can not yet be determined.
- d) Treatment is possible - conditions being monitored (marginal night).

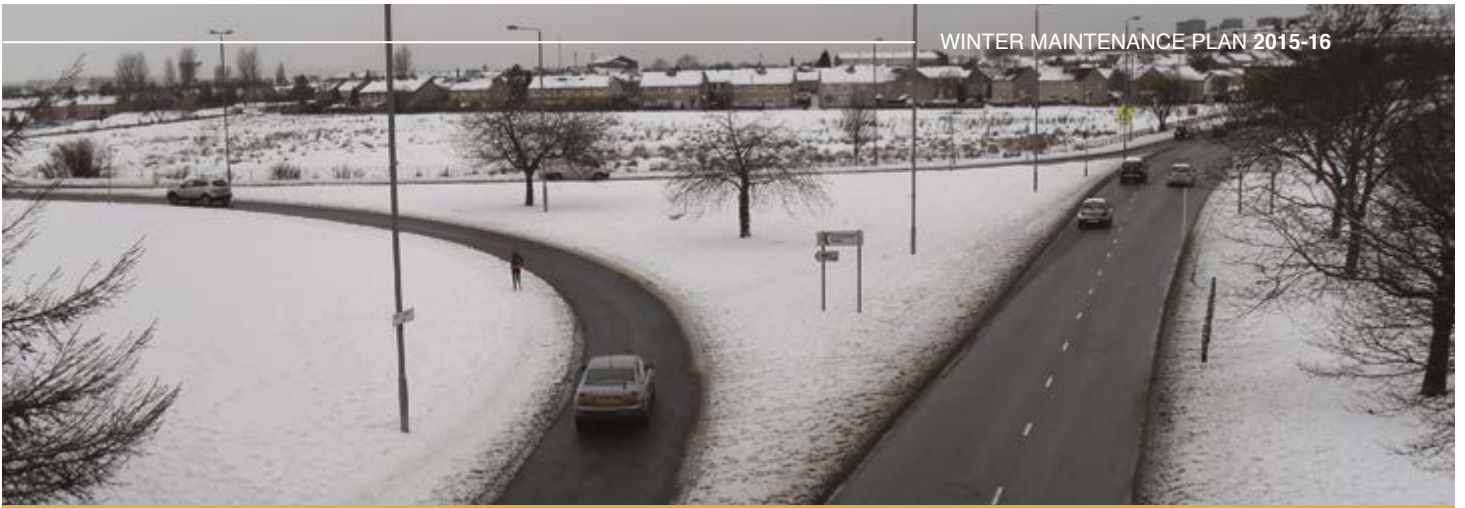
1.3.10 Precautionary salting would be carried out under the following circumstances:

- a) On roads where a forecast indicated that freezing conditions may occur.
- b) On roads where a hoar frost is predicted (this occurs when the road surface temperature is below zero and also at or below the dew point).

1.3.11 Post salting would be carried out under the following circumstances:

- a) Given the presence of ice or snow on roads and a forecast that these conditions will last for a period longer than 48 hours, appropriate treatment will take place between 0730 and 1830 hours the following day depending on available resources unless otherwise directed.





b) Section 3.3.1 contains the list of locations to be covered by P2 carriageway routes or post salting. These include industrial access roads not pre-salted, together with the more important accesses and through roads in residential areas.

c) The remaining P3 carriageway routes may be treated by salting as determined by progress, conditions and resources.

1.3.12 Snow clearing operations will be carried out across the network as conditions dictate.

1.3.13 Three stages of snow clearing can be considered:

a) Light falls of undisturbed accumulation of snow reaching a depth of less than 30 mm.

b) Moderate falls of snow between 30 mm and 100 mm in depth, or light falls associated with drifting.

c) Falls over 100 mm or moderate falls associated with drifting.  
Stage a) will normally be dealt with by one or more repeated applications of salt.

Stage b) or c) conditions may require the use of ploughs in addition to salting. As ploughing may block junctions and side roads, arrangements must be made to remove any resulting accumulations of snow.

1.3.14 Normal priority will be to clear the snow from main arterial routes then clear the carriageway Priority 1 routes before dealing with the remaining roads (Priority 2 and then Priority 3 as required).

1.3.15 Under extreme conditions priority will be to clear and treat snow routes as detailed in Section 3.4.

## 1.4 Arrangements With Adjacent Authorities

1.4.1 Reciprocal arrangements are in place with adjacent authorities to ensure the most efficient and consistent treatment of routes at boundaries and co-operation in providing the winter maintenance service.

1.4.2 Reciprocal arrangements are in place with ScotlandTranServ and Connect who are responsible for the Motorway and Trunk Road network within Glasgow.

## 2

Winter Maintenance Plan 2015-16

## QUALITY AND THE ENVIRONMENT

### 2.1 Quality Management Regime

- 2.1.1 The Winter Maintenance Service is part of the Roads Operations Integrated Management System (IMS).
- 2.1.2 The Roads Operations IMS is maintained by the Policy and Development Section within Land and Environmental Services and is externally audited and verified by SGS.

### 2.2 Document Control Procedures

- 2.2.1 All quality / environmental documents are controlled and held on a computerised document management control system and are available for viewing by all members of Roads Operations staff.
- 2.2.2 The Winter Maintenance Plan will be maintained within IMS and will be distributed as detailed in section 2.3.

### 2.3 Distribution of Documents

- 2.3.1 The Winter Maintenance Plan is issued as listed below:

Chief Executive, Glasgow City Council  
 Leader of the Council  
 Depute Leader of the Council  
 Executive Member for Land and Environmental Services  
 All other Local Councillors  
*(all located at: City Chambers, Glasgow G2 1DU)*  
 Chief Executive Resilience and Safety Unit,  
 Room 02.01 23 Montrose Street

GCC, Corporate Communications,  
 78 Cochrane Street, Glasgow G2 1DU  
 All Executive Directors of Services  
 Chief Constable of Police Scotland,  
 PO Box 21184, Alloa FK10 9DE  
 Chief Officer, Scottish Fire and Rescue  
 Service Headquarters,  
 5 Whitefriars Crescent, Perth PH2 0PA  
 Divisional Commander, Strathclyde Fire and Rescue ,  
 123 Port Dundas Road, Glasgow G4 0ES  
 SPT,  
 Consort House,  
 12 West George Street, Glasgow G2 1HN  
 Scottish Ambulance Service,  
 Divisional Headquarters,  
 Range Road, Motherwell ML1 2JE

Freight Transport Association,  
Hermes House, Pavillion, 1 Castlecraig Business Park,  
Players Road, Stirling FK7 7SH  
Road Haulage Association,  
Roadway House, The Rural Centre, Inglinton,  
Newbridge EH28 8NZ  
MeteoGroup,  
292 Vauxhall Bridge Road, London SW1V 1AE  
Strathclyde Emergencies Co-ordination Group -  
c/o Strathclyde Police,  
173 Pitt Street, Glasgow G1 4JS  
Bus Companies / Operators  
(via SPT on previous page)  
Land and Environmental Services Management Team  
Police Divisional Commanders,  
Traffic Superintendents, Local Stations  
(separate list)  
Community Planning Partnership Boards  
Community Health Care Partnerships  
Heads of Roads - adjoining authorities  
ScotlandTranServ  
(Motorway and Trunk Road Operating Contractor)  
Connect  
Roads Manager, Traffic Group Manager,  
Cleansing Services Managers,  
Parks Operations Manager,  
the Assistant Managers and Duty Controllers

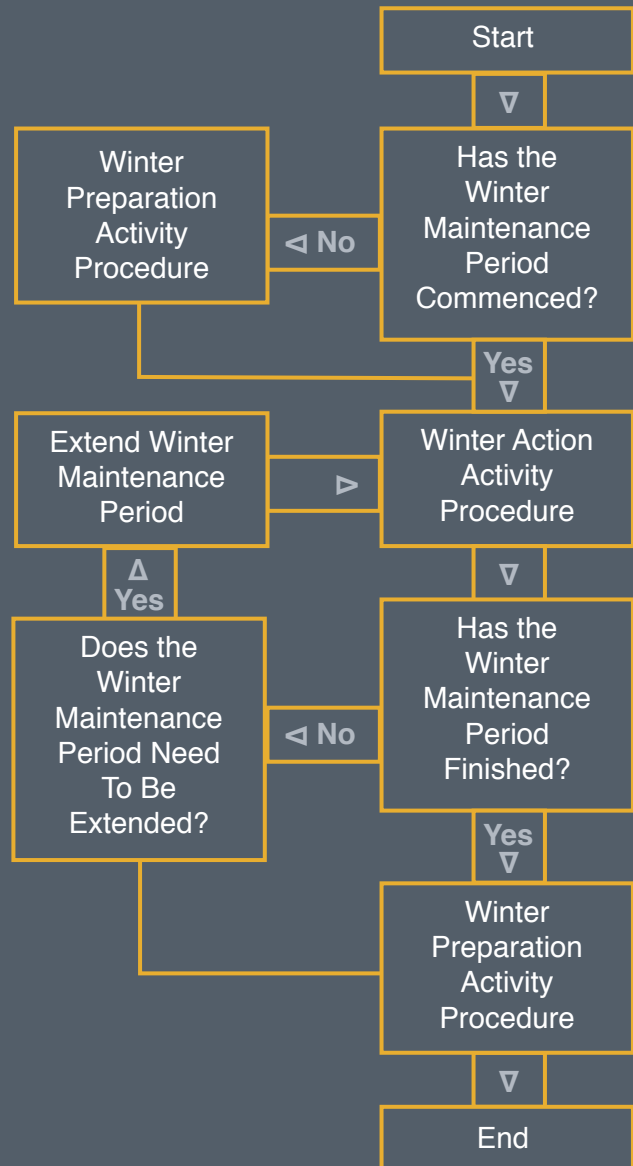
- f) Allowing for additional resources should they be required for extreme circumstances

## 2.4 Information Recording and Analysis



### 2.4.1

The process is shown (on the right) and fits into a higher level process, which incorporates feedback, allowing monitoring, auditing and improvement to be made.



2.4.2 The first procedure is Winter Preparation, which includes the following:

- Preparation and checking of different types of treatment routes.
- Training of personnel involved.
- Calibration of plant involved.
- Placing and maintaining of grit bins and allowing for their collection following completion of Winter Maintenance operations.
- Ordering an adequate supply of salt for the start of the Winter Maintenance period.

2.4.3 The second procedure is Winter Action which includes the following:

- The decision making process for the Winter Controller.
- Issuing of instructions.
- Distribution of instructions.
- Procedures of gritting and ploughing.
- Response times.
- Monitoring and reporting of actions completed.
- Maintaining an adequate supply of salt.



## 2.5 Arrangements for Performance Monitoring, Audit and Updating

### 2.5.1 Performance measures

2.5.1.1 Land and Environmental Services evaluates and compares the following 2 local key performance measures for each winter period:-

- Percentage of precautionary treatments on Priority 1 Carriageways completed within planned time
- Actual winter expenditure per kilometre of carriageway

2.5.1.2 These performance measures are compared with projections from the review and reported annually to Committee.

2.5.1.3 The SCOTS Winter Service Roads Subgroup and the Scottish Salt Group regularly monitor salt stocks / days resilience and benchmark various performance measures.

### 2.5.2 Auditing

2.5.2.1 Auditing is carried out in three stages

- a) Internal auditing carried out by Land and Environmental Services staff.
- b) Internal auditing carried out by Policy and Development Section.
- c) External auditing carried out by SGS.

### 2.5.3 Updating

2.5.3.1 The Winter Maintenance Plan and Winter Maintenance Good Practice Guide is reviewed annually and amended and updated before the onset of Winter to include any revisions and changes to the service delivery.

2.5.3.2 The IMS has been updated to the standards specified in ISO9001:2008 and ISO14001:2004.





### Winter Maintenance Plan 2015-16

## ROUTE PLANNING FOR CARRIAGEWAYS, FOOTWAYS AND CYCLE ROUTES

### 3.1 General

3.1.1 The pre and post salting routes are reviewed on an annual basis taking into account any alterations to the roads which are treated under the specified gritting criteria.

3.1.2 The main treatment options are as follows:

- Precautionary pre salting
- Post salting
- Snow route

3.1.3 Routes have been devised to ensure efficient coverage within reasonable timescales.

3.1.4 Routes will be updated on an annual basis to accommodate changes to the network or other strategic assets.

3.1.5 Sets of Route Cards listing all precautionary salting routes are held in the offices of the Head of Infrastructure Services with appropriate sub-sets at Gartcraig Roads Operations depot.

### 3.2 Priority 1 Carriageways Routes for Precautionary Treatment

3.2.1 The following Priority 1 roads will be treated if it is forecast that ice or snow is likely to be present on road surfaces.

- All main bus routes registered at the end of the summer in any year within the City
- Roads or parts of roads not used by buses but being A or B Class roads or other roads connecting the preceding category to complete the major road network
- The dropping off points on public carriageways from the nearest gritted route for special school buses and ambulances
- The start points to the gritted route from fire stations; police stations; bus garages and emergency vehicle locations

- Roads to Park and Ride car parks
- Hills steeper than 1 in 10 gradients
- Industrial areas as appropriate

3.2.2 In addition arrangements are in place with SPT for the treatment of Park and Ride station car parks. Buchanan Street bus station and bus turning areas and with First Glasgow for the treatment of Scotstoun, Caladonia and Parkhead garages.



### 3.2.3

The Duty Controller will be responsible for deciding on the appropriate treatment and issuing instructions to Winter Supervisors. The Winter Supervisors will be responsible for ensuring the treatments are carried out.



3.2.4 The Duty Controller has authority to amend agreed treatments should updated forecasts or conditions make this necessary. Where changes in the expected weather are forecast the Duty Controller will contact the Winter Supervisors and instruct them to take the necessary action.

### 3.3 Priority 2 and Priority 3 Carriageway Routes for Post Treatment

3.3.1 Given the presence of ice or snow on roads and a forecast that these conditions will last for a period longer than it would take to treat these roads, appropriate treatment will normally take place between 0730 and 1830hrs the following day unless otherwise directed.

Priority 2 Carriageway Routes  
Locations which include the following amenities:

- Local Shopping
- Health Centres
- Day Care Centres
- Community Sports Centres

- Libraries
- Places of worship and any other places of local significance
- Appropriate link routes to main Priority 1 carriageways within each neighbourhood
- Industrial access roads not pre-salted

Priority 3 Carriageway routes.

- All remaining carriageways

### 3.4 Snow Routes for Clearance

3.4.1 At any time the priority is as follows:

- While snow is still falling, only the strategic routes and distributor roads will be ploughed and treated in order to target resources and to keep these routes open for traffic.
- After snow has stopped falling but is lying, precautionary routes will be ploughed and treated along with those covered by 3.3 as resources and conditions permit.

### 3.5 Priority 1 Footway Routes for Precautionary Treatment

3.5.1 The priority is as follows:

- Pedestrian Precincts
- Prioritised City Centre Footways with high pedestrian traffic
- Shopping Centres outwith the City Centre
- Access routes to Schools
- Hills steeper than 1 in 10 with moderate pedestrian traffic

### 3.6 Priority 2 and Priority 3 Footway Routes for Post Treatment

3.6.1 Priority 2 Footways  
Locations which include the following amenities:

- Local Shopping
- Health Centres
- Day Care Centres
- Community Sports Centres
- Libraries
- Places of worship and any other places of local significance



- Appropriate link routes to main Priority 1 footways within each neighbourhood
- A designated access through route through City and District Parks

Priority 3 Footways.

- All remaining footways

### 3.7 Routes for Cycle Route Treatment

- On road cycle routes will be treated at the same time as the carriageway on which they are located.
- Off road cycle routes will be treated at the same time as priority 2 footways.

### 3.8 Response and Treatment Times for Carriageway Treatments

- When ice is predicted to be present precautionary salting of routes should be completed generally within 5 hours from the instructed start of treatment.
- For Reactive Salting and Ploughing the time between the decision to start treatment and the start of treatment will be no more than one hour.

### 3.9 Response and Treatment Times for Footway and Cycle Route Treatments

- Priority footways will be treated as carriageways (see 3.8). All other footways and footpaths will generally be treated during normal working hours (07.30-18.30).

### 3.10 Allocation of Plant, Vehicles, Equipment and Materials to Route

- The road network within the city boundary is serviced by the Gartcraig Roads depot.
- The treatment of footway routes is carried out from local operational depots of Land and Environmental Services.

- Salt supplies are replenished at local depots as required.

### 3.11 Location and Maintenance of Salt Bins

- 1360 No. Salt bins are sited locally for self-help by the public and are refilled as required. These are supplemented by temporary 1 tonne grit sacks placed strategically throughout the City during severe conditions.

- Salt bins will be placed at various agreed locations throughout the City.

- A salt bin should not be sited within 200 metres of another or on a footway which is on a priority footway gritting route, to a nominal number of 20 per neighbourhood
- Salt bins should not obstruct the passage of pedestrians
- A salt bin should not be sited on a footway outside an individual's house without their specific agreement
- Salt bins will not be provided in private areas

## 4

Winter Maintenance Plan 2015-16

## WEATHER PREDICTION AND INFORMATION

### 4.1 Forecasting, Patrols and Other Decision Support Information



#### 4.1.1

The support information for use in ‘Decision Making’ will usually be a combination of:

- a) the road weather forecast.
- b) road and weather monitoring data.
- c) actual condition of the network.



4.1.2 Land and Environmental Services has contracted MeteoGroup to supply forecasts of Glasgow each day over the period 1st October to 15th May.

4.1.3 The road weather forecasts are provided by MeteoGroup via a computer link to Land and Environmental Services during the normal working day or a portable computer to the Winter Controller outwith normal hours.

4.1.4 Should any problems exist with the computer systems for obtaining the weather forecast, alternative arrangements are in place.

4.1.5 Ice Detection Outstations are installed at 4no. selected locations within the city and the Council has access to a further 6 in the Greater Glasgow area. Access to information from the stations is available to the Winter Controllers via portable computers.

4.1.6 The data available from the outstations, which can be presented in both graphic and tabular format include:



- a) road surface temperature
- b) deep road temperature
- c) air temperature
- d) wind speed and direction
- e) relative humidity
- f) precipitation
- g) surface state (including level of salt present on road surface)

4.1.7 MeteoGroup also has direct access to the information from the outstations, which improves the accuracy of their forecasts.

## 4.2 Information to be Provided

### 4.2.1 Specification of Forecasts

- a) Monitoring Summary - available from around 07.00 hours.

This forecast is for the next 12 hours.

- b) Main Lunchtime Forecast - available between 12.00 and 14.00 hours.

This forecast contains a 36 hour text forecasting giving

- i) details and confidence of hazards from Ice, Hoar Frost, Snow, Fog, Strong Wind and Rain.

- ii) wind speed and direction, road state and snow depth accumulations.

- iii) a 2 - 10 day forecast of expected hazards of Ice, Hoar Frost, Snow, Fog, Strong Wind and Rain with comments on the outlook.

- c) Evening Update - available from around 19.00 hours.

This forecast provides the same information as the lunchtime forecast, with any changes highlighted.

4.2.2 MeteoGroup carries out 24 hour monitoring of conditions and if these vary significantly they will contact the Duty Controller to advise of the change and, when appropriate, will issue an updated forecast.

4.2.3 MeteoGroup provides a 24 hour consultancy service for the Duty Controller for advice and clarification of forecasts.

## 4.3 Timing and Circulation of Information

### 4.3.1

The Duty Controller will receive the weather forecast each day between the hours of 12.00 and 1400 and will assess and consult with the second named Duty Controller (verifier) on the forecast and any other relevant data and decide what action to take if any. An instruction will then be issued to the relevant staff and external bodies detailing the action proposed (see instruction sheet opposite). Each night at 19.00 hours a weather update is received by the Duty Controller who will then issue instructions accordingly to relevant staff who are available out of hours.

NETWORK REPORT ACTION FOR WEATHER REPORT

NETWORK MANAGEMENT ACTION FOR WEATHER REPORT

**ACTION FOR WEATHER REPORT**

Action Report issued on \_\_\_\_\_ Duty Controller \_\_\_\_\_  
 Time of weather report \_\_\_\_\_ Phone Number \_\_\_\_\_  
 (Y/N) \_\_\_\_\_ Verifier \_\_\_\_\_  
 Action \_\_\_\_\_ Date \_\_\_\_\_

Treat carriageway priority route at \_\_\_\_\_ gms/sqm  
 Include city centre \_\_\_\_\_  
 Treat footways incl. footbridges start at \_\_\_\_\_  
 Include city centre \_\_\_\_\_  
 Snow routes \_\_\_\_\_  
 Drivers to report to depot by \_\_\_\_\_ hrs  
 Winter Supervisors to be on duty for \_\_\_\_\_ hrs  
 Gritting to commence \_\_\_\_\_ hrs  
 Fit blades to vehicles \_\_\_\_\_

Additional weather warnings (state)  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Additional comments (state)  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Glasgow City Council

### 4.3.2

If the weather changes out with these times MeteoGroup will contact the Duty Controller with a revised forecast.

### 4.3.3

Any amendment made to previous instructions after an update from MeteoGroup, either by phone or during the evening update will be passed to the Winter Supervisors immediately and the appropriate paperwork amended.

## 4.4 Reporting Procedures

### 4.4.1

Routine operating decisions will be reported as in section 4.3.

### 4.4.2

During extreme conditions such as heavy snowfalls when the treatment is limited only to Snow Clearing Routes appropriate senior personnel are regularly updated on the situation.

## 4.5 Maintenance of Ice Detection Equipment.

### 4.5.1

Maintenance arrangements are in place for these outstations and the appropriate company carries out any essential maintenance.

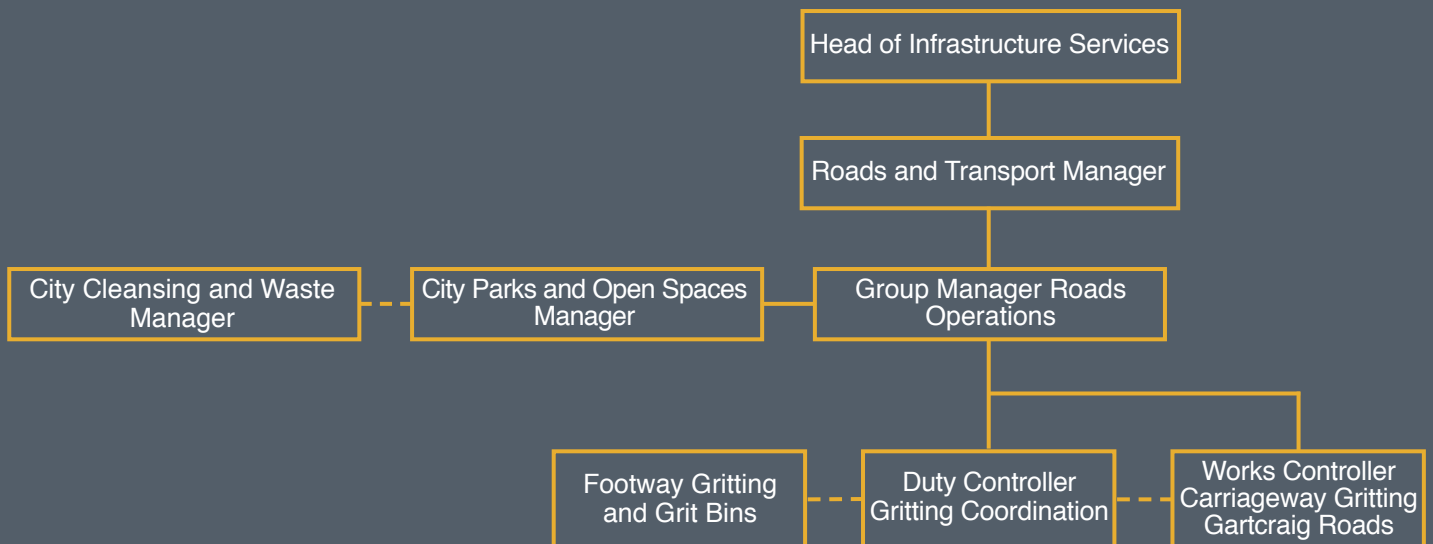
## 5

Winter Maintenance Plan 2015-16

## ORGANISATIONAL ARRANGEMENTS AND PERSONNEL

### 5.1 Organisation Chart and Employee Responsibilities

5.1.1 The organisation of staff for Winter Maintenance is shown on the chart below.



### 5.1.2 Employee Responsibilities

5.1.2.1 The Duty Controller is responsible for monitoring the road and weather conditions, for reaching an appropriate decision on treatment of the network and passing on the information to the Winter Supervisors who are responsible for overseeing the work.

5.1.2.2 The role of the Winter Supervisor is to utilise and manage effectively all resources under his control i.e. labour, plant and materials to effect swift treatment of the road network. He will also complete all relevant records timeously.

5.1.2.3 The Works Controller will ensure adequate resources are available for the supervisor to undertake his duties efficiently with regard to performance indicators.

5.1.2.4 It is the role of the Winter Maintenance Operatives to carry out gritting duties in a safe and efficient manner.

- 5.1.2.5 More detailed explanations of the roles of the winter maintenance operatives is included in the Winter Maintenance Good Practice Guide.
- 5.1.2.6 All personnel involved in the Winter Maintenance Service should acquaint themselves of the duties, responsibilities and working procedures necessary for them to carry out their tasks in an effective and efficient manner. Also driver and operative refresher training is provided every year.
- 5.1.2.7 The contact details and numbers are listed below:

a) During normal working hours

**Roads and Transport Manager**  
David Russell 07885 933183  
**Group Manager Roads Operations**  
Brendan Frankgate 07747 565249  
**Group Manager Roads Operations**  
Norrie Campbell 07880 401973  
**Group Manager Roads Operations (RTO)**  
Cameron Neill 07824 087480  
**Parks Ops Manager**  
Stephen Egan 07748931067  
**Asst Parks Ops Manager (South)**  
Thomas McMenamin 07919 228026  
**Asst Parks Ops Manager (North)**  
Gavin Jackson 07919 228149  
**Cleansing Services Manager (South)**  
Dougie Gellan 07795 232313  
**Cleansing Services Manager (North)**  
Martin McKelvie 07796 996391  
**Asst Cleansing Services Manager (NW)**  
Eddie Scanlon 07919 228125  
**Asst Cleansing Services Manager (NE)**  
David McGoldrick 07919 228004  
**Asst Cleansing Services Manager (South)**  
Charlie Molony 07919 228161

Land and Environmental Services Directorate  
**Executive Director**  
Brian Devlin 0141 287 9100  
**Assistant Director**  
George Gillespie 0141 287 9106  
**Head of Infrastructure Services**  
Andy Waddell 0141 287 0438

b) Outwith normal working hours all contact should be made to RALF 0800 373635 or 0141 287 1062.

## 5.2 Employee Duty Schedule, Rotas and Standby Arrangements

- 5.2.1 Special arrangements will be made to ensure the availability of trained labour and supervisory staff for the winter maintenance period.
- 5.2.2 At Gartcraig Roads Operations depot sufficient LGV drivers will be available to provide 24hr cover.
- 5.2.3 A rota system is in operation for Duty Controllers and the Winter Supervisors.

## 5.3 Additional Resources

- 5.3.1 During severe weather conditions the Head of Infrastructure Services may augment resources from other Glasgow City Council Departments, ALEOs and / or private contractors.
- 5.3.2 There is a three year framework contract in place for the private contractors.
- 5.3.3 All private contractors must supply a list of contact numbers which must be available 24 hours a day and 7 days a week.
- 5.3.4 All operatives and private contractors are trained annually in all aspects of Health and Safety in respect to the operation before being accepted as suitable service providers.

## 5.4 Training

- 5.4.1 Duty Controllers and Supervisors should have received MeteoGroup Open Road Forecast Training every three years.
- 5.4.2 Winter Supervisors and Winter Maintenance Operatives should have received training on all aspects of their duties.
- 5.4.4 All Winter Maintenance Operatives will undergo a familiarisation exercise with all plant and procedures before the onset of the Winter Maintenance period.

## 5.5 Health and Safety Procedures

- 5.5.1 The Head of Infrastructure Services is responsible for the Health and Safety procedures for operational staff and details are included in the Winter Maintenance Good Practice Guide.
- 5.5.2 During winter maintenance operations, drivers / operatives must adhere to the following health and safety documentation:-
- Glasgow City Council Health and Safety Policy
  - Departmental Health and Safety Policy Statement
  - Health, Safety and Welfare at Work Employee Handbook
  - Roads / Lighting Safe Working Methods
  - Risk / Assessments for Individual Activities

## 6

Winter Maintenance Plan 2015-16

## PLANT, VEHICLES AND EQUIPMENT

### 6.1 Plant, Vehicles and Equipment

The availability of vehicles and ancillary is detailed below.

Description	Capacity	Quantity
Permanently Mounted Gritters	9 cu metre	7
Demountable Gritters	6 cu metre	14
Demountable Mini Gritters	0.6 cu metre	2
Trailed Gritters	3-6 cu metre	12
Trailed Gritters (Footway)	0.5 cu metre	34
Pedestrian Spreader	0.5 cu metre	9
Snow Ploughs	-	37
Large tractor units with mounted gritters and ploughs		9
Mid-range tractor unit with mounted gritters and ploughs		10
All terrain vehicles / small tractors with mounted gritters and ploughs		22
Pedestrian mowers with 1.3m footway ploughs		47

6.1.1 Global Positioning System (GPS) tracking equipment is installed in the large carriageway gritting vehicles to establish accurate treatment records.

6.1.2 The large carriageway gritting vehicles are fitted with route navigation devices to assist drivers.

### 6.2 Location of Plant, Vehicles and Other Equipment

6.2.1 Land and Environmental Services will normally operate carriageway gritters from Gartcraig Roads depot.

6.2.2 Other gritting equipment will be towed behind tractors and mechanical street sweepers for the treatment of footways.





The necessary equipment will be located and operated from the appropriate local depot.

### 6.3 Garaging, Servicing and Maintenance Arrangements

6.3.1 Land and Environmental Services Transport Section will supply, maintain and repair the dedicated salting vehicles.

6.3.2 Land and Environmental Services Roads Operations has other vehicles that can be used for Winter Maintenance duties and are available as per operational needs.

### 6.4 Contact and Hire Arrangements for Contract Plant



#### 6.4.1

During severe weather conditions the Roads and Transport Manager may augment resources from other Glasgow Council Departments, ALEOs and private contractors.



6.5.3 ACP Salt (Safecote), is the principal de-icing agent used in Glasgow, and will be supplied in compliance with BS3247 (1991).

6.5.4 The original copies of road salt test certificates will be kept as part of the Roads Operations IMS to allow both internal and external auditing of the Winter Maintenance Service.

### 6.6 Fuel Stocks and Locations

6.6.1 Fuel stocks for the dedicated salt spreading and other vehicles being used for winter maintenance operations are provided at some Land and Environmental Services depots and other various Glasgow City Council depots located throughout the city. The vehicles should remain topped up ready for immediate use. Standard Council fuelling arrangements apply.

### 6.5 Calibration Procedures

6.5.1 Pre-winter checks and calibration on all vehicles, plant and equipment, used by Land and Environmental Services for winter maintenance will be carried out by the beginning of October and confirmation of their readiness will be given to the Head of Infrastructure Services.

6.5.2 Land and Environmental Services Transport will ensure that the controls of all spreading equipment are calibrated in accordance with Section 13, Well Maintained Highways, and clearly marked for specified rates of spread up to a maximum of 40 g/m<sup>2</sup>. Guidelines for spreading rates of salt are detailed in section 7.4.3.

## 7

Winter Maintenance Plan 2015-16

## SALT AND DE-ICING MATERIALS

### 7.1 Location and Capacity of Stocks for Salt and Other Materials

- 7.1.1 Salt will be kept in salt barns at Gartcraig and Nitshill.



#### 7.1.2

The quantity of salt held in stock at the start of November 2015 will be 23,000 Tonnes and 4000 Tonnes grit stone.



- 7.1.3 A weightbridge system is in place at the depots for stock control and salt usage purposes.

- 7.1.4 The operational depot will supply weekly reports on salt usage to the Head of Infrastructure Services who will place supplementary orders for salt as required.

### 7.2 Testing Arrangements

- 7.2.1 Salt for use on roads during winter should be to the requirements of BS 3247 'Salt for Spreading - Fine Rock Salt'.

### 7.3 Loading Arrangements

- 7.3.1 The operational depot is responsible for ensuring a loading shovel is available for loading the salting vehicles. A 'backup vehicle', in case of breakdown of the primary loading shovel must be available at the depot at all times during the winter period.

### 7.4 Treatment Requirements

- 7.4.1 Pattern of Spreading

- 7.4.1.1 The gritters are to be set to salt a 6 metre width of carriageway which will be both lanes of single carriageways or both lanes of one side of a dual carriageway or 4 lane road.

- 7.4.1.2 The gritter will generally travel in the left-hand lane and the spreading pattern will be set to cover both lanes unless multiple passes are required on a wide one way road.

#### 7.4.2 Salt Spread Rates

Table 1  
Precautionary Treatment - Salt Spread Rates

Salt Type	Precautionary Treatment for Frost / Ice	Column K
		Good Cover Medium Traffic Normal Loss
Dry Salt	Table H9 - where the road surface is dry no action is needed even when conditions are below zero RST at or above -2 C and damp road conditions	10g/m <sup>2</sup>
Treated Salt		10g/m <sup>2</sup>
Dry Salt	RST at or above -2 C and wet road conditions	10g/m <sup>2</sup>
Treated Salt		10g/m <sup>2</sup>
Dry Salt	RST below -2 C and above -5 C and dry or damp road conditions	15g/m <sup>2</sup>
Treated Salt		10g/m <sup>2</sup>
Dry Salt	RST below -2 C and above -5 C and wet road conditions	20g/m <sup>2</sup>
Treated Salt		1 x 20g/m <sup>2</sup> then monitor and treat as required
Dry Salt	RST at or below -5 C and above -10 C and dry or damp road conditions	20g/m <sup>2</sup>
Treated Salt		1 x 20g/m <sup>2</sup> then monitor and treat as required
Dry Salt	RST below -5 C and above -10 C and wet road conditions	1 x 20g/m <sup>2</sup> then monitor and treat as required
Treated Salt		1 x 20g/m <sup>2</sup> the monitor and treat as required

Table 2  
Snow and Freezing Rain -Salt Spread Rates

Salt Type	Precautionary Treatments Before Snow or Freezing Rain	Light or Medium Traffic	Heavy Traffic
Dry Salt	Light Snow Forecast	20g/m²	20g/m²
Treated Salt		15g/m²	15g/m²
Dry salt	Moderate / Heavy Snow Forecast	20g/m²	40g/m²
Treated Salt		15g/m²	30g/m²
Dry Salt	Freezing Rain Foecest	1 x 20g/m² then monitor	
Treated Salt		1 x 15g/m² then monitor	





7.4.2.1 The variable nature of winter conditions makes it difficult to define exact treatments and salt applications. Guidance on appropriate spread rates is given above.

7.4.2.2 Sustained low temperatures occur only rarely. In this event however, account will be taken of the need to increase the rate of spread of salt. Below  $-7^{\circ}\text{C}$  the de-icing action of untreated salt is reduced.

## 7.5 Rock Salt Purchasing Arrangements and Self Help

7.5.1 Rock salt and treated rock salt are procured via Scotland Excel. The tender will include the request delivery of salt before the start of winter and also include for further deliveries of salt, upon demand, to replenish the stockpile as necessary.

### 7.5.2 Salt Conservation

7.5.2.1 During periods of extreme weather and potential restrictions on the supply chain, GCC will implement nationally agreed salt conservation measures. Additionally, GCC will liaise with neighbouring local authorities via Strathclyde Emergencies Co-ordination Group concerning mutual aid and other assistance.

### 7.5.3 Supply of salt to others

7.5.3.1 There will be a charge for this service, consisting of the cost of the salt plus any depot loading and / or delivery charges. Salt will only be released with authorisation from the Head of Infrastructure Services upon receipt of an official order.

### 7.5.4 Salt for Self-help

7.5.4.1 In addition to the grit bins and temporary grit sacks, small quantities of salt (10kg MAX) will be available to the public for self loading in their own containers at the depots listed (on the right).

The hours of salt availability at the depots are Monday to Sunday.

### Local Parks

Victoria Park

Greenfield Park

Springburn Park

Kings Park

### Disposal Complexes

Dawsholm Complex  
Dalsholm Road

Easter Queenslie Complex  
Easter Queenslie Road

Shieldhall Complex  
Bogmoor Road

Further advice and guidance on self-help issues can be found at [www.glasgow.gov.uk/winter](http://www.glasgow.gov.uk/winter)

## 7.5.5 Carbon Footprint

7.5.5.1 The introduction of the Local Authority Carbon Emissions Programme which was initially trialled in Scotland in 2003 became legislation in the UK under the Climate Change Act in November 2008. It sets a target for the UK to reduce carbon emissions to 80% below 1990 levels by 2050. It also set an interim target of a 34% reduction by 2020 (with the potential to increase this to a 42% cut given an international agreement) and established the concept of carbon budgets.



Glasgow has introduced ACP (Agricultural Co-Products) treated rock salt for use on priority routes. This processed salt is applied at lower spread rates than untreated salt resulting in gritting vehicles achieving greater treatment distances.





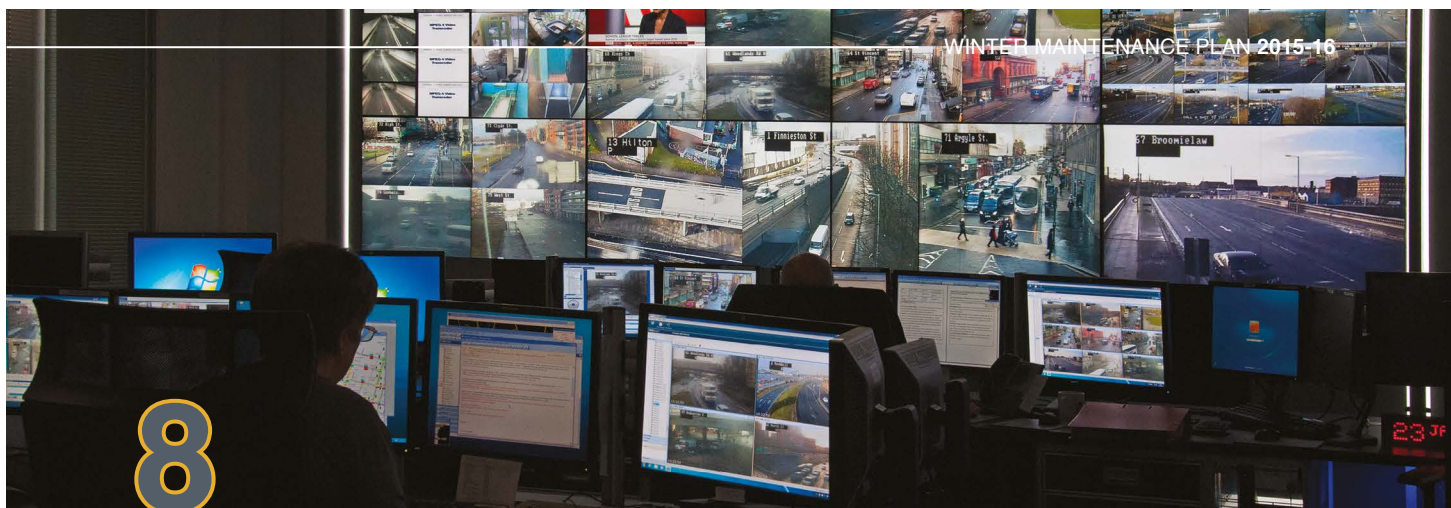


Gritter bodies have been changed from diesel to hydraulically powered units, which when considered with the reduction in vehicles within the gritting fleet has resulted in a significant reduction of CO2 emissions.

To date with efficiencies made to the gritting fleet, the Council have reduced their emissions by approx. 21.58 tonnes of carbon and this does not include any reduction for reduced treatments which ACP treated salt's residual ability allows for delivery of reduced volumes of salt.

#### 7.5.6 Environment

- 7.5.6.1 Research has shown that ACP treated salt reduces corrosion by 82% therefore reducing damage to roads infrastructure and vehicles.



## Winter Maintenance Plan 2015-16

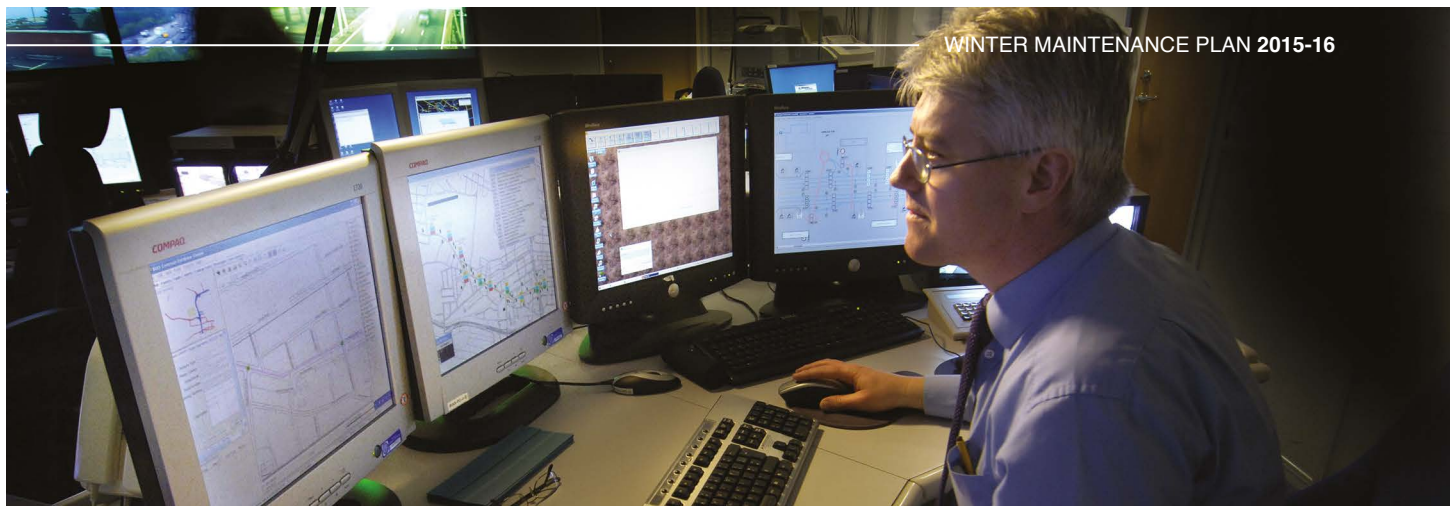
# OPERATIONAL COMMUNICATIONS

## 8.1 Technical Systems Information

- 8.1.1 Good communications are essential to ensure speedy and effective response to winter conditions.
- 8.1.2 The 'Winter Maintenance Good Practice Guide' contains contact details, usually telephone numbers, for communication with the Weather Forecast Provider, Police, Media, Emergency Services, Public Transport Operators and Motoring Organisations.
- 8.1.3 The Duty Controller and Winter Supervisors will be issued with mobile phones so they may be contacted at any time regarding Winter Maintenance Operations.
- 8.1.4 The Head of Infrastructure Services will keep a list of all telephone contact numbers for his operational personnel on Winter Maintenance Service standby duties. This list will be distributed to the Winter Supervisors and also included in the Councils emergency contacts directory. It will be the responsibility of each individual to inform the Winter Supervisors of any change to the contact numbers.
- 8.1.5 During salting and snow clearance operation each vehicle is fitted with a serviceable radio or a mobile phone to maintain contact with the operations depot.
- 8.1.6 All large carriageway gritting vehicles are fitted with a GPS system which allows the sections of road which have been treated to be clearly identified along with a time of treatment.
- 8.1.7 The large carriageway gritting vehicles are fitted with route navigation devices.
- 8.1.8 The Head of Infrastructure Services is responsible for operational communications equipment.

## 8.2 Reporting Arrangements and Protocols

- 8.2.1 The Duty Controller will report the 'Daily Decision' to the personnel and offices identified in the Winter Maintenance Plan as soon as possible after it has been reached.



- 8.2.2 The standard method of distributing this proforma will be by e-mail and copies will be posted on depot notice boards.
- 8.2.3 The GPS system installed on vehicles will record the roads treated and the time of treatment.
- 8.2.4 During any period of severe weather the Duty Controller will prepare a daily report on the previous 24 hour road conditions and treatments for the Executive Director. The report will be required by 09.45 hours daily.
- 8.2.5 The operations depots will report details of salt usage and of plant breakdown daily.
- 8.2.6 The operations depots will report details of all additional plant and labour hired from other Departments or Contractors as soon as practical.

### 8.3 Operational Records

- 8.3.1 Operational records to be completed:

ANS

Action for Weather Report

Daily Winter Gritting Summary Record Sheet

Daily Winter Gritting Work Record

Non Conformance of Supplied Materials



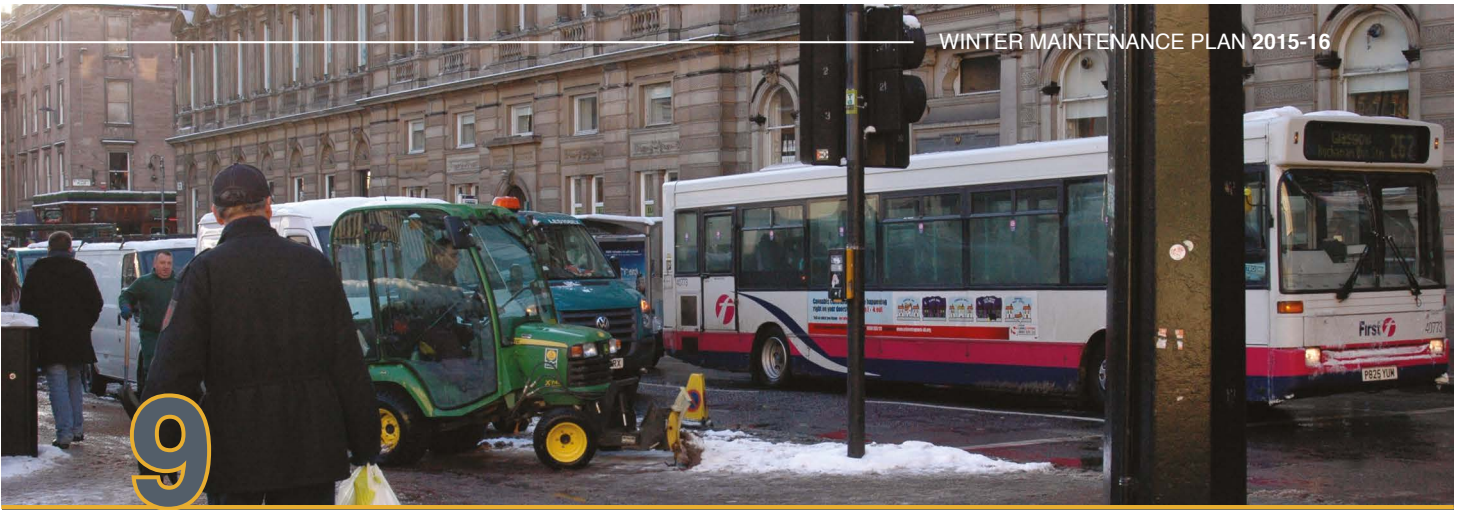
8.2.7

During prolonged spells of severe weather a decision will be made on whether to set up a manned 24 hour Severe Weather Hub at the Glasgow Ops. Centre at Eastgate, 727 London Road.



- 8.2.8 Winter Supervisors will report progress with gritting and snow clearing operations during any prolonged spells of severe weather to the Duty Controller.





## Winter Maintenance Plan 2015-16

# INFORMATION AND PUBLICITY

## 9.1 Local Press and Broadcast Information

- 9.1.1 It is important that the general public is aware of and understands the City Council's approach to the Winter Maintenance Service. Publicity is to be given before the beginning of the winter period describing the level of service provision and operational contact points.
- 9.1.2 During the winter period and particularly during prolonged spells of snow and ice, information will be made available to the public via:
- a) Press Releases
  - b) Local Television and Radio Stations
  - c) GCC Connect Website
  - d) Social Media - Twitter
- 9.1.3 The Head of Infrastructure Services is authorised to respond to the Press, Radio and Television on matters relating to local road conditions.

## 9.2 Publicity

- 9.2.1 General advice and information for the public concerning the Winter Maintenance Service will be available via:
- a) An article each winter in the Council's magazine, distributed free to all homes in the city.
  - b) Connect web page: Connect provides driver, snow code, snow warden and live gritting information. Driver information advises how to plan and prepare for winter driving. Snow code advises members of the public how to self help safely and legally. Snow wardens are Neighbourhood Improvement Volunteers who assist with organised neighbourhood gritting information. Live gritting information tracks gritters in real time.
  - c) 5 Variable Message Signs which will display winter and severe weather forecasts.



### 9.3 Other key Local and National Contact Information

- 9.3.1 The Head of Infrastructure Services will inform the Police Force Control and TRAFFCOM of forecasts predicting extreme conditions.
- 9.3.2 Reports from the Police or TRAFFCOM of dangerous road conditions will be acted on as soon as practicable.
- 9.3.3 The Head of Infrastructure Services will consult the Police and advise TRAFFCOM when any road is closed due to winter weather conditions.

### 9.5 Responsibilities and Guidance for Providing Information

- 9.5.1 The Head of Infrastructure Services is responsible for guidance of the information to be supplied.



#### 9.3.4

RALF (0800 37 36 35 or 0141 287 1062) as Land and Environmental Services Customer Care Centre is responsible for dealing with the general public's telephone inquiries about the Winter Maintenance Service.



- 9.3.5 RALF is operational 24 hours a day 7 days a week.

### 9.4 Records

- 9.4.1 Records will be retained by the Council for 3 years and retained in archives for a further 7 years.



#### “ 1.1.1.1

The Council has a statutory obligation under Section 34 of the Roads (Scotland) Act 1984 to take such steps as it considers reasonable, to prevent snow and ice endangering the safe passage of pedestrians and vehicles over public roads.

”



## How to contact us

ADDRESS 231 George Street, Glasgow G1 1RX

EMAIL [les@glasgow.gov.uk](mailto:les@glasgow.gov.uk)

VISIT [www.glasgow.gov.uk/roads](http://www.glasgow.gov.uk/roads)

PHONE 0141 287 9000

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in an alternative language or format please contact  
0141 287 9000