Winter Service Operations Plan 2023/24

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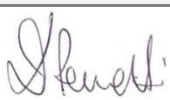
Checker	Daniela Pometti		October 2023
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EXECUTIVE SUMMARY

a) Introduction

The Winter Service is the obligation placed on local authorities to keep their streets and roads free from ice and snow, so far as is reasonably practical.

The Barnet Winter Operational Plan is the document that clarifies the winter gritting policy and the operational service plan to demonstrate how it intends to meet its obligation during the winter of 2023/2024.

The provision of the Winter Service Operational Plan is managed by the Barnet Council Highways Service (herewith known as Highways), with its operational delivery carried out by the Street Scene Service.

In October 2016 a revised Code of Practice for Highways Maintenance was published. This document outlined best practice nationally and recommended actions to be taken for Winter Service. This Winter Service Operational Plan considers the new guidance and has been assembled in line with its recommendations.

b) Synopsis

Barnet's Winter Service Policy and Plan includes the Winter Service Policy, as set out in the Code of Practice (B.7.2.), this being;

"Authorities should formally approve and adopt policies and priorities for Winter Service, which are coherent with wider objectives for transport, integration, accessibility and network management, including strategies for public transport, walking and cycling. They should also take into account the wider strategic objectives of the authority"

A review of the policy and plan is undertaken annually, this is to ensure that that the policy and plan are current.

c) Methodology

The Barnet Winter Service Operational Plan details how the Council will carry out its Winter Service. Once adopted for the approaching winter, this document will be published on the Council's website. The published version will, however have confidential contact names and numbers removed.

The method in determining which parts of the Council's Highway Network require treatment is undertaken using a prioritised approach. The carriageway and footway network have been categorised by assessing levels of usage, location (e.g. school, hospital proximity), route (e.g. emergency vehicle access, bus routes etc.) and physical characteristics (e.g. gradient, exposed areas etc.). The results of which will give a resilient (prioritised) network in extreme weather events.

The council receives its weather forecast information from MeteoGroup, backed up by weather stations provided by Vaisala.

When the weather forecast information indicates low temperatures, frost, ice or snow, action will be taken to implement the Barnet Winter Service Operational Plan.

d) Types of Winter Service activity, surface types, application methods

Although the Winter Service activity is commonly referred to as “gritting”, strictly speaking the normal material used is not grit, it is rock salt for de-icing. However, for ease of reference the terms ‘grit’ and ‘gritting’ are used in this plan.

The use of grit can have environmental consequences, it can adversely affect vegetation, pollute watercourses and lead to local flooding with grit build up in road drainage systems. It can also damage the road infrastructure, bridges, structures, utility apparatus and vehicles. Used responsibly, it can have minimal environmental impact. In the interests of sustainability, it is important to ensure that only the minimum amount of grit is used to deal with the prevailing conditions.

The treatment type and the treatment methodology are further explained in the following relevant sections of this Plan.

e) Policy Statement

The Council’s policy is to ensure, so far as is reasonably practicable, that safe passage along a highway is not endangered by snow or ice. The Council considers that the best way to achieve this is to prioritise certain locations and surface types. The operational procedures are covered by the Winter Service Operational Plan which is to be reviewed and published each year.

More detailed information about the Council’s priorities and policies are provided in the following sections of this Plan.

WINTER SERVICE OPERATIONS PLAN

1. Introduction

Adverse winter conditions can have a major disruptive impact on our community including businesses, education, transport, health, and social care.

Winter Maintenance of the highway network undertaken by the Council has a key role in mitigating these impacts.

1.1 Background

The Winter Service deals with regular, frequent, and reasonably predictable occurrences like low temperatures, ice, and snow, as well as exceptional weather events.

Although a specialised area, the Winter Service is a significant aspect of network management in terms of financial impact (both to the physical infrastructure and commercial disruption) and its perceived importance to road users. It can also have significant environmental effects.

This Winter Service and Operational Plan only applies to the Borough’s public highways, including footways. This does not include the Trunk Roads (A1, A41 and A406) and M1 motorway in the

Borough for which Transport for London and Highways England are the respective highway authorities. This Plan is to work alongside these agencies to ensure coordination and designation of duties and responsibilities.

For the avoidance of doubt car parks, areas within parks and areas of housing owned by the Authority are excluded from this Winter Service Operational Plan.

1.2 Objectives

The Borough's objective is to provide a Winter Service Policy that, so far as reasonably practicable, will allow for pre-defined carriageways and footways to be treated in accordance with their priority on the highway network and the prevailing weather conditions with the aim to minimise:

a) the safety risk to the highway users, and
b) the non-availability of the highway network through ice and snow.

This policy recognises that, given the length of the highway network in the Borough and the limited resources available, it is not practically possible to provide the service to all parts of the highway and is therefore necessary to create priorities.

The Winter Service Policy and Operational Plan can contribute significantly to each of the core objectives set out in the Well-Managed Highway Infrastructure (W-MHI) - Code of Practice for Highway Maintenance Management as described below:

Customer *(W-MHI - B7.1.7)*

In the Borough of Barnet, there is considerable user needs and expectations. These can be a major influence on customer satisfaction through demonstrating an efficient, effective, and proportionate response to winter conditions.

Safety *(W-MHI - B7.1.6)*

Safety is a consideration for the Winter Service, although statutory obligations and users' needs vary.

Serviceability *(W-MHI - B7.1.8)*

Maintaining availability and reliability of the highway network is a key objective of the Winter Service and one where user judgements of performance will be immediate rather than long~~er~~ term.

Sustainability *(W-MHI - B7.1.9)*

Low temperatures and the formation of ice can cause serious damage to the fabric of running surfaces and accelerated damage to the network. An effective Winter Service can contribute to a reduction in whole life costs.

2. Key Issues

2.1 Legal

There are two elements of legislation that relate to the provision of a Winter Service in England and Wales.

1. Section 41 (1A) of the Highways Act 1980, which was modified on 31 October 2003, by Section 111 of the Railways and Transport Act 2003. The first part of Section 41 now reads:
    a. The authority who are for the time being the highway authority for a highway maintainable at the public expense are under a duty, subject to subsections (2) and (4), to maintain the highway.
    b. (1) In particular, a highway authority is under a duty to ensure, so far as is reasonably practicable, that safe passage along a highway is not endangered by snow or ice.

This is not an absolute duty, given the qualification of "reasonable practicability" but it does effectively overturn previous legal precedence, albeit not with retrospective affect.

2. Section 150 of the Highways Act 1980 still imposes a duty upon authorities to remove any obstruction of the highway resulting from "accumulation of snow or from the falling down of banks on the side of the highway, or from any other cause."

In addition, the Traffic Management Act 2004 places a network management duty on all local traffic authorities in England. It requires authorities to do all that is reasonably practicable to manage the network effectively to keep traffic moving. In meeting the duty, authorities should establish contingency plans (that should align with the Authority's and the region's Civil Contingency Planning measures) for dealing promptly and effectively with unplanned events, such as unforeseen weather conditions, as far as is reasonably practicable.

The plan must also comply with the general duty imposed by Section 41 of the Highways Act 1980: to maintain those highways maintainable at public expense in a safe condition.

These requirements also note the following: Given the scale of financial and other resources involved in delivering the Winter Service, it is not considered reasonable to:

- Provide the Service on all parts of the Network
- Ensure carriageway, footways and cycle routes are kept free of ice or snow at all times, even on treated parts of the network

The council will provide a Winter Service which, as far as reasonably practical, will permit safe movement of traffic and minimise delays and accidents directly attributable to adverse weather conditions.

Through this Winter Maintenance Policy and Operational Plan, the Borough can demonstrate that they are meeting their current legal obligations and are doing so in a way which ensures that their resources are being deployed in the most economic, efficient, effective and environmentally friendly manner.

2.2 Policy and Guidance

Well-managed Highway Infrastructure (Code of Practice for Highway Maintenance Management) issued in October 2016 recommends that a highway authority should formally approve and adopt policies and priorities for Winter Service, which are coherent with wider objectives for transport, integration, accessibility, and network management, including strategies for public transport, walking and cycling. They should also consider the wider strategic objectives of the authority.

It goes on to recommend that Authorities should develop local service levels for Winter Service which define the Overall Winter Period, the Core Winter Period, the level of resilience and treatment networks and prepare a Winter Maintenance Policy Statement and produce a Winter Service Operational Plan and update it annually.

It is recommended that a 'risk' based approach should be adopted to assist in defining the scope of the Service.

2.3 Resource

London Borough of Barnet are responsible for providing all aspects of the winter service, including ensuring all appropriate resources are in place (labour, plant, vehicles, and grit), weather monitoring, decision making, supervision, monitoring and management of successful delivery of winter maintenance activity. Instructions on operational aspects of the service are issued by Highways to the Street Scene Service.

To deliver the service within the available resources, the precautionary gritting routes reflect the importance of the various traffic routes.

Funding for the winter maintenance precautionary gritting service based on a 'normal' winter period is provided via a ring-fenced revenue budget (reviewed to confirm its effectiveness and sufficiency). The occurrence of severe weather conditions which necessitates additional snow clearance to be undertaken, will require consideration to be given to provide additional financial resources to maintain the service; this will be provided through general contingency funds of the authority (with use made of available Invest to Save initiatives where appropriate).

ESPO framework is currently utilised to procure grit via Compass Minerals. This arrangement will be in place until April 2024, covering 2023/24 season. Council has a storage capacity of c1500 tonnes of grit at Oakleigh Depot which is its main operating base for Winter Maintenance Service during this season. Additional stock of c1000 tonnes is available via a legal agreement with Harrow Council. Within this agreement the Council shares the grit barn with Harrow Council, located at Forward drive, HA3. Combined arrangement would allow Council to start the Winter Season at levels set out in this plan. Restocking of grit used at Oakleigh Depot will be undertaken by Highways DLO team throughout the season.

2.4 Risk and Resilience

In the event of a Severe Weather Event, there may be a national shortage of grit. In such a situation, there are several actions that will be taken by Highways, including:

1.) Ensuring that grit stock holdings are always maintained at the agreed levels indicated in the table in Section 9

2.) Constant monitoring and recording of grit usage
3.) Regular engagement with LB Harrow and the Street Scene Operational Team to provide the above information
4.) Request LB Harrow to replenish the grit stocks at appropriate times and monitor receipt of deliveries along with the monitoring and reporting of stock levels including the request to procure additional grit deliveries
5.) Reporting of grit stock levels via the Department of Transport Salt Portal (DfT) as required
6.) Take a decision to only continue gritting the Resilient Network (Minimum Winter Network) thereby conserving grit usage

Highways will deploy a stock management system to ensure 12 days resilience at 4 runs per day on the resilient network.

There may also be other influencing factors that may affect the ability to treat the network of roads gritted in anticipation of ice. These factors include;

- Health pandemics affecting the available labour force
- Fuel shortages
- Gritter Vehicle breakdowns

The prevalence of the current COVID-19 pandemic from 2020 onwards means that resilience will need to be built into resource availability for Winter Service duties and that sufficient contingencies are in place to mitigate this emerging threat to 2023/24 service provision.

A spare gritter and driver will also be available (11 gritters to cover the 10 routes). Reducing the risk of not being able to deploy to all routes on occasions where vehicles breakdown. Fuel is provided from the Council's depot and in addition fuel cards are available to obtain fuel from other sources.

2.5 Environmental Implications

A balance is required between, the ever-increasing demands for wider coverage of the network in terms of gritting and the cost and environmental effects of doing so. With the ongoing threats of climate change this element of the Plan is to be regularly reviewed, to assess its suitability to changing weather patterns and the need to include highway related preparations, such as drainage and flooding.

The value of keeping roads open and relatively safe in icy conditions using grit is widely acknowledged. If roads are not cleared, the impact of accidents, congestion and increased fuel consumption are likely to be significant in environmental and economic terms.

The rock grit that is used as part of the Winter Service is a natural herbicide and will cause damage to flora and fauna as well as causing damage to concrete structures over time. Therefore, it is important that due care is taken, whenever possible in the decision-making process. Taking into account the amount of grit and specifically how much grit is used on the network. An effective Winter Service, which has determined appropriate gritting spread rates for a range of likely conditions, will contribute to minimising damage to the environment. In this respect this Plan has been aligned to the recommended spread rates as provided for in national guidance.

There is also a need to consider the carbon footprint of Winter Services and review how factors such as updated de-icing products, accurate temperature monitoring, fuel efficient vehicles etc. can assist in reducing the carbon usage of this activity.

2.6 Equalities Impact

Increasing the robustness of the Winter Maintenance Service can ensure that the Priority Road Network is available for all to use during periods of adverse weather.

An Equalities Impact Assessment is included in Appendix AC. This assessment includes the following:

- Main objectives and aims
- Information gathering/consultation
- Assessing the equality impact of the policy
- Action planning and time frames
- Monitoring & review
- Publication

2.7 Local Constraints

Vulnerable structures, interfaces with public railway transport systems and areas with specialised highway furniture, such as traffic calming measures, will be identified and the necessary treatments/ mitigations put in place.

3. Decision Making and Control Procedures

3.1 Responsibilities

Highways are responsible for reviewing the Winter Service Operations Plan each year and producing an updated version which takes account of lessons learnt from previous years operations and current and amended Codes of Practice and associated guidance documents. This Plan is produced and agreed so that it can be implemented in advance of each winter season commencement.

Highways will utilise a set decision making process as set out in this plan. Decisions are taken daily and communicated to relevant parties including Street Scene Services who carry out the gritting.

Highways will provide information on weather, decisions taken, pending actions instructed and actions completed so that The Highways Communications Team staff can provide regular updates to the Twitter feed related to Winter Service Operations. The Street Scene Services will assist Highways by recording and providing relevant information.

The Council are also responsible for ensuring that a suitable legal agreement exists with London Borough of Harrow for the shared use of the Harrow Council Grit Barn. A copy of this Agreement is attached as Appendix O.

The agreed distribution of responsibilities in 2023/24 are shown below in Table 3 below:
(Red cross indicates the lead party)

Responsibility	Highways	Street Scene Services	Other services
Review, update, and revise Winter Service Plan	✓		
Monitor requirements and compliant delivery of Winter Service Plan	✓		
Route optimisation - Update and revise route hierarchy	✓	✓	
Confirm agreements entered into by the Council	✓	✓	
Arrange weather forecasting consultancy	✓		
Extend or otherwise Winter maintenance season	✓	✓	
Winter Maintenance Duty Officer Rota and Training	✓		
Highways Winter Service decision making rota	✓		
Street Service Duty Manager driver and gritting operations management rota		✓	✓
Taking Decisions on precautionary gritting actions and implement these daily actions in clear instructions	✓		
Compliance to Driver/Staff working regulations	✓	✓	✓
Instigate severe weather event	✓		
Maintenance of fleet		✓ **Via Transport Team and ECON**	✓ **Transport Team integral to Street Scene Service**
Deployment of operational staff (in response to instructions issued by Highways)	✓	✓	✓
Spread rates of grit, widths of spread etc.	✓	✓ **Set up as instructed**	
Revision of contract snow clearing plant asset inventory		✓	
Media communications in snow conditions	✓	✓	✓
Arrange grit purchase, replenishment and storage		✓	
Instruct required maintenance and replenishment of grit bins	✓	✓ **Implement Instructions**	✓ **Implement Instructions**
Performance monitoring, record keeping and reporting	✓	✓	✓
Maintain weather station contract and monitor weather station data to assist in decision making	✓		
Dealing with enquiries/requests for service and taking actions/decisions	✓	✓ **Implement actions only**	✓ **Implement actions only**
Maintain a grit supply contract	✓	✓	
Manage grit use and replenishment		✓	
Reporting grit usage and stock holdings on the TfL Portal as required	✓		
Ensuring resources are in place and maintained	✓	✓	✓
Record keeping and reporting as required	✓	✓	✓
Precautionary gritting decision making	✓		
Severe Weather Event decision making	✓	✓	✓
Identify and implement road closures	✓	✓ **Implement Closure Instructions**	

Table 1 - Winter Service Major Responsibilities

3.2 Treatment Decisions

Current arrangements on the criteria considered and decision-making process on when to carry out precautionary and reactive winter maintenance are based on best practice.

The process of communicating and actioning treatment decisions is outlined in Figure 2.

The decision-making process as to whether to carry out some form of winter maintenance action is carried out by nominated Highways duty officers. These officers form a duty rota to cover the whole of the winter period, a copy of the rota is show in Appendix L.

All Highways duty officers are required to have received basic weather forecast training, with the Highways Winter Service Provider, prior to commencement of the role. Further refresher training will be made available where appropriate.

The decision form shown in Appendix T is completed and filed electronically by the Highways Duty Officer.

When the potential for widespread and persistent ice and/or snow is forecast, that is likely to result in additional action other than just precautionary gritting the Highways Duty Controller will declare a **'**Severe Weather Event' and proactively engage with the Council's client team representatives, along with significant external stakeholders and third parties.

When a 'Severe Weather Event' is declared it will Pass to the Severe Weather Coordination Team.

During a Severe Weather Event Priority 1 carriageway network will be treated initially. It may become operationally impossible to maintain the Priority 1 network and/or grit stocks may be depleted and need to be conserved. In such circumstances, it may be necessary to decide (in consultation with the appropriate external highway and infrastructure bodies) that only the Resilience Road Network will be treated.

In advance of and during a 'Severe Weather Event' daily joint meetings of the Coordination Team will take place, led by the Highways Duty Controller, to pre-plan and provide feedback on operations and priorities to RAG identified chief officers and members, together with informing the Council's website. Meetings of such may be virtual or require personal attendance subject to circumstances.

In the event of forecast snow accumulations, the Coordination Team will expand to include other Highways Managers and Council staff, both engineering and administrative, to provide ongoing support 24/7 as necessary. To ensure the meetings are fully inclusive and reflect the potentially difficult and dangerous travel situation, these meetings will normally be conducted by conference call.

Contact details for the Severe Weather Coordination Team are shown in Appendix AB.

Position	Team Duties
Highways Duty Officer	Core
Highways Standby Officer	Core
Highways Duty Controller	Core
Street Scene Services Duty Manager	Core
Street Scene Director	Optional

Director of Traffic and Transportation	Optional
Highways Operations Director	Optional
LBB Resilience Advisor (Gold and Silver Command)	Core
LBB Communications Manager	Core
Highways Communications Manager	Core
Highways Member Liaison	Core

Table 2 - Severe Weather Coordination Team (Core and Optional)

Severe Weather Definition Indicators: Telephoned advice and updated forecasts from the Meteogroup should be sought. Some, or all, of the following may detrimentally affect the highway network:

- Snowfall forecast to settle
- Severe disruption to the network affecting all users
- Adverse impact on essential services
- Snow that has thawed and caused ice
- Forecast Freezing rain /Ice/Snow
- Introduction of the Resilient Road Network for Operational purposes
- The need to conserve grit stocks
- Localised flooding events

This will typically necessitate:

- Continual or repeated treatment of roads.
- Hand clearance / treatment of footways to clear the hazards / obstructions to ensure pedestrian safety.
- Deployment of flooding response and/ or drainage maintenance teams

When a Severe Weather Event is declared the Council may implement the current Resilient Road Network identified by the list of roads included at Appendix E.

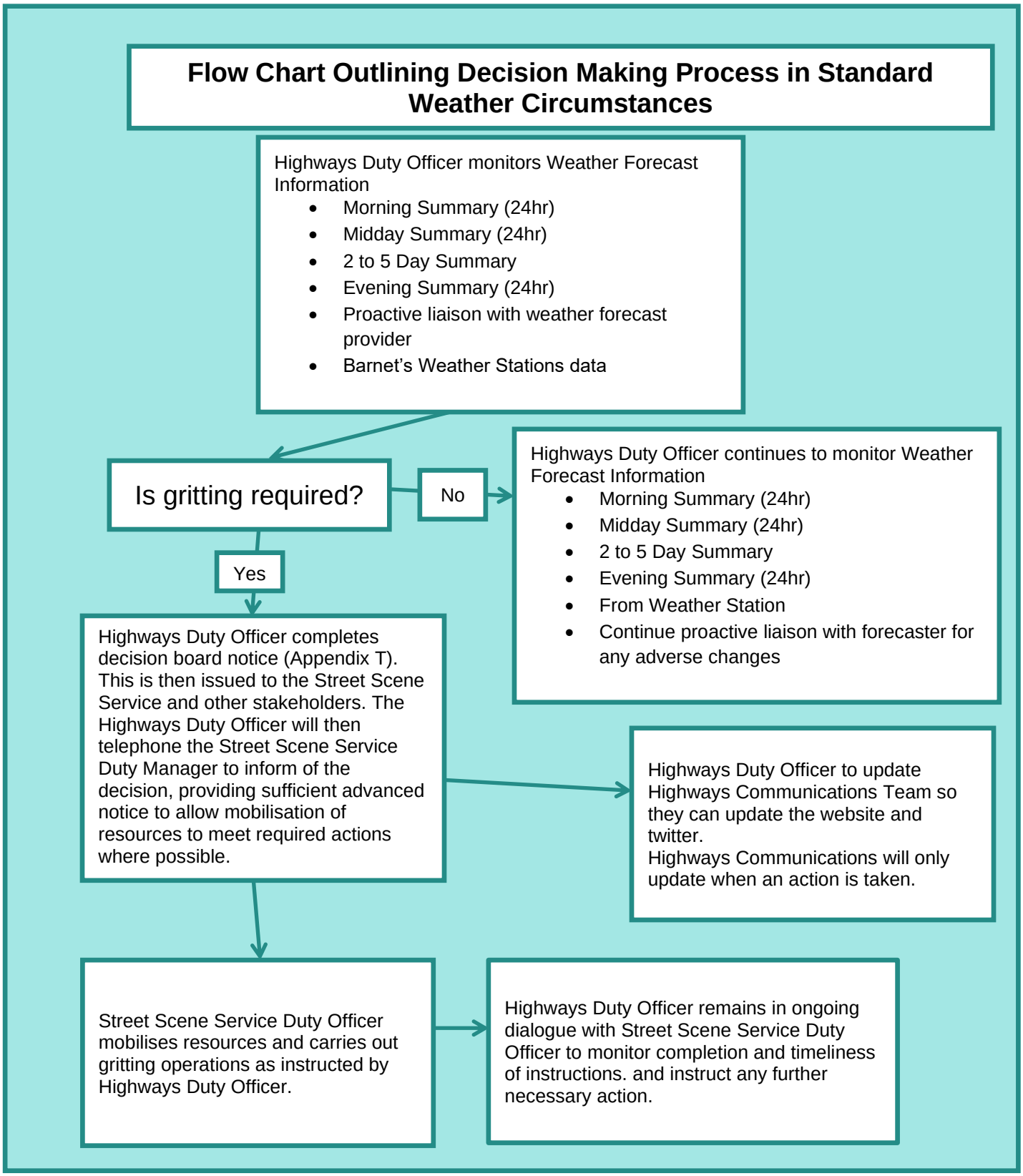

Figure 1 - Decision making process in Normal Winter Conditions

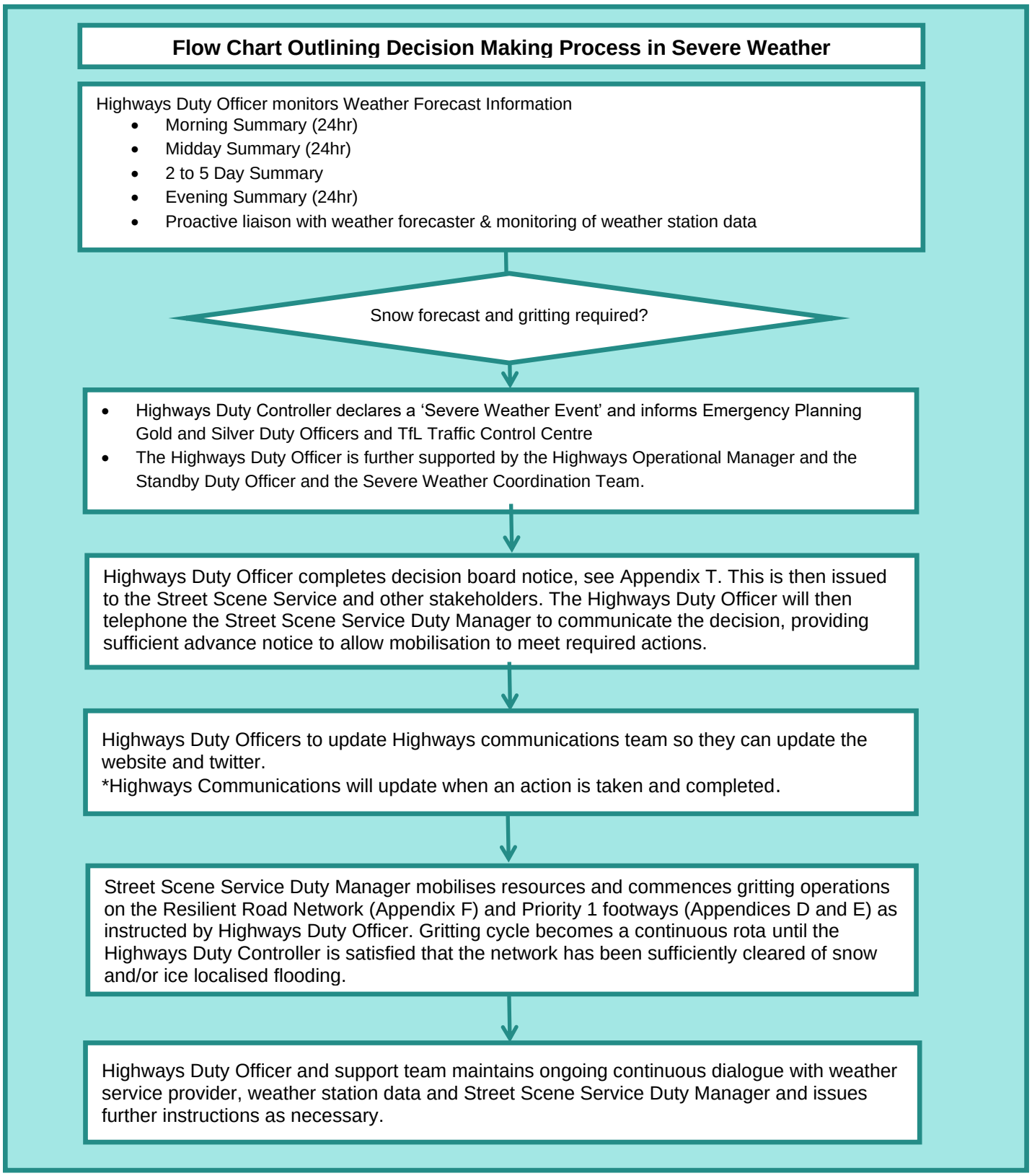

Figure 2 - Decision making process in Severe Weather Conditions

Decisions made throughout the winter maintenance period are recorded using the form shown in Appendix T.

The Decision Matrix for precautionary treatments based on road surface conditions and predicted weather conditions. An example is shown below and is included in Appendix X.

ROAD SURFACE TEMPERATURE	FORECASTERS CONFIDENCE LEVEL	FORECASTED PRECIPITATION	PREDICTED CONDITIONS		
			WET	WET PATCHES	DRY
FORECASTED TEMPERATURES OF ABOVE 0.7 DEGREES	LOW	NO RAIN			
		NO HOAR FROST	RESERVE DECISION ON WHETHER TO GRIT UNTIL 6.30PM FORECAST	RESERVE DECISION ON WHETHER TO GRIT SEEPAGE ROUTES ONLY	NO ACTION
		NO FOG	AND MONITOR WEATHER STATIONS	AND MONITOR WEATHER STATIONS	
FORECASTED TEMPERATURES OF BETWEEN 0.1 DEGREES AND 0.7 DEGREES	LOW	NO RAIN			
		NO HOAR FROST	GRIT	GRIT SEEPAGE ROUTES ONLY	NO ACTION
		NO FOG		AND MONITOR WEATHER STATIONS	
FORECASTED TEMPERATURES OF BETWEEN 0.1 DEGREES AND 0.7 DEGREES	HIGH	NO RAIN			
		NO HOAR FROST	RESERVE DECISION ON WHETHER TO GRIT UNTIL 6.30PM FORECAST	NO ACTION	NO ACTION
		NO FOG	AND MONITOR WEATHER STATIONS	AND MONITOR WEATHER STATIONS	

<table>
<tr><th rowspan="2">ROAD SURFACE TEMPERATURE</th><th rowspan="2">FORECASTERS CONFIDENCE LEVEL</th><th rowspan="2">FORECASTED PRECIPITATION</th><th colspan="3">PREDICTED CONDITIONS</th></tr>
<tr><th>WET</th><th>WET PATCHES</th><th>DRY</th></tr>
<tr><td rowspan="6">FORECASTED TEMPERATURES OF 0.1 DEGREES OR LOWER</td><td rowspan="6">HIGH OR LOW</td><td>NO RAIN</td><td rowspan="3">GRIT BEFORE FREEZING</td><td rowspan="3">GRIT BEFORE FREEZING</td><td rowspan="3">PRECAUTIONARY TREATMENT OF SEEPAGE ROUTES ONLY</td></tr>
<tr><td>NO HOAR FROST</td></tr>
<tr><td>NO FOG</td></tr>
<tr><td>EXPECTED HOAR FROST</td><td rowspan="2">GRIT BEFORE FREEZING</td><td rowspan="2">GRIT BEFORE FREEZING</td><td rowspan="2">GRIT BEFORE FREEZING</td></tr>
<tr><td>EXPECTED FOG</td></tr>
<tr><td>EXPECTED RAIN BEFORE FREEZING</td><td colspan="3">COMMENCE GRITTING WHEN RAIN STOPS</td></tr>
<tr><td>EXPECTED RAIN DURING FREEZING</td><td colspan="3">GRIT BEFORE FROST AND REVIEW WHETHER FURTHER GRITTING NECESSARY</td></tr>
<tr><td>FORCASTED SNOW</td><td>HIGH OR LOW</td><td>SHORT PERIOD OF SNOWFALL EXPECTED</td><td>GRIT BEFORE SNOWFALL COMMENCES</td><td></td><td></td></tr>
<tr><td>FORECASTED SNOW</td><td>HIGH OR LOW</td><td>LONGER PERIOD OF SNOWFALL EXPECTED</td><td>GRIT BEFORE SNOWFALL COMMENCES</td><td></td><td>AND CONTINUE AS NECESSARY</td></tr>
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Table 3 - Decision Matrix for Winter Service

3.3 Dealing with requests for adding roads to the Priority 1 network

Requests for roads to be added to the Priority 1 Network will be considered as part of each annual review of this Plan.

The process assesses each defined section of the network against a range of operational factors which collectively reflect the level of use and importance of particular routes or localised parts of the carriageway and footway networks.

The review decision will be communicated to the requester with the reasons for the decision made.

3.4 Dealing with requests for gritting

During normal precautionary gritting operations requests for gritting (usually away from the Priority 1 network) are likely to be received from various sources, including (but not limited to):

i) Residents and businesses
ii) Councillors and MPs
iii) Council Officers from various departments

iv) Police
v) Other emergency services
vi) Bus Operators
vii) TfL
viii) Other London Boroughs
ix) Highways England
x) Places of education
xi) Hospital facilities and vulnerable group housing

Requests for service shall not distract from agreed priorities set out in this plan.

Adequate processes will be in place to ensure that all requests for service are reviewed by the Highways Duty Officer, and a decision made on what, if any, action will be taken. All such decisions will be based on risk to network users, compliance with priorities set out in this plan and suitable resources being available.

At no point will resources be redirected from Priority 1 or Resilient Road Network operations unless there are very exceptional circumstances. The decision will be communicated to the requester, via the customer service hub, with reasoning to justify the decision.

Should a decision be to conduct additional gritting the Highways Duty Officer will communicate this requirement to the Highways Street Scene Service Duty Manager, to allow required resources to be deployed to carry out the requested operation.

It is essential that detailed records are retained of all requests and decisions made.

4. Service Provision

4.1 Winter Maintenance Period

For the purposes of winter maintenance planning the winter maintenance season runs from 23 October 2023 to 7 April 2024. The core winter period runs from the beginning of November to the end of February.

4.2 Precautionary gritting – Treatment before the onset of freezing conditions

Details from the National Winter Service Review Group (NWSRG) – Section 8 Spread Rates for Precautionary Gritting.

Spread rates for precautionary treatments before frost and ice are given in the Table 6 below. The table provides recommended spread rates for dry grit for a range of weather and road surface conditions with ‘fair’ spreader delivery anticipated. The distinction between good and fair reflects vehicle spreader capacity.

Road Surface Temperature (RST) when frost/ice is predicted	Spread Rate Capability (Fair) (in g/m2)	
	Dry/Damp Road	Wet Road
At or above -1.0°C	8	8
-1.1°C to -2.0°C	8	11
-2.1°C to -3.0°C	9	17
-3.1°C to -4.0°C	12	23
-4.1°C to -5.0°C	14	28
-5.1°C to -7.0°C	20	39
-7.1°C to -10.0°C	27	54
-10.1°C to -15.0°C	38	75

Table 4 - NWSRG Recommended Spread Rates for Precautionary Gritting – Dry Gritting (g/m²) Treatment Matrix (Fair) (NWSRG Treatment Matrix 8.6.7)

NOTE: The NWSRG Section 8 Spread Rates for Precautionary Gritting Key Notes 1 to 13 (refer to Appendix Y) must be considered when using the spread rate tables above.

4.3 Residual grit

A decision to consider residual grit in deciding on amending the spread rates will only be taken when the air humidity is forecast to be dry, the dew point temperature is predicted to remain below the road surface temperature, and the road is forecast to remain dry. Also, that these parameters are predicted to remain as such throughout the forecast period.

Therefore, the presence of residual grit can be taken into account in the decision-making process and this may result in the spread rate being reduced to less than that suggested in table above, but should not extend to a no treatment decision being taken. The following is to form part of the decision process and taken into account when considering residual grit levels.

- Number of hours elapsed since previous treatments
- Recent weather conditions
- Current weather forecast information
- Road Weather Information Station grit level readings
- Visual checks on the network

If a decision is taken based on residual grit, then the above actions/considerations must be reviewed and details recorded to justify the reasoning for the decision.

4.4 Precautionary carriageway treatments for snow or freezing rain

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

- To facilitate the breakup and dispersal of ice and snow by trafficking, treatments must be made before snowfall and freezing rain so that sufficient de-icer (dry salt) is present on the surface to provide a debonding layer.
- There is a single snow plough facility available for immediate use in the borough during 2023/24. This decision has been taken after considering the benefits against the risks of

deploying snow ploughs in an urban area like Barnet. It is considered that the risks of moving snow into parked vehicles and road junctions is likely to be more problematic than not utilising ploughs. The provision of snow plough(s) will be kept under review and any future consideration will be dependent on rubber bladed ploughs being available together with suitable mounting frames, fixtures and fittings on 3.5t vehicle(s) in the contractor's maintenance fleet. Drivers employed to drive ploughing vehicles will also be suitably trained and certificated.

- Consideration should also be given to the type and depth of snow forecast – refer to diagram below:-

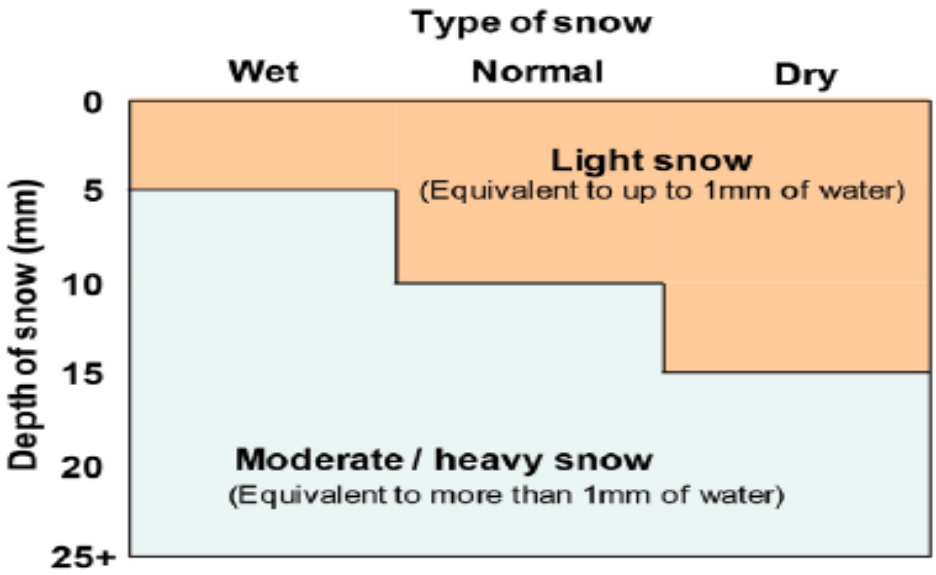

Figure 3 - Consideration of the type and depth of forecast snow

TREATMENTS BEFORE SNOWFALL AND FREEZING RAIN	
Weather Conditions	
Light to Moderate/Heavy Snow forecast	Spread: 20-40 g/m2 of dry grit
Freezing Rain forecast	40 or 2x20 g/m2of dry grit
Note: in situations where time constraints dictate, a treatment of 20 g/m2 across the whole of the scheduled network before the commencement of snowfall or freezing rain will typically prove more advantageous than a treatment of 40 g/m2 on only part of the network.	

Table 5- Precautionary Treatments Before Snow or Freezing Rain (NWSRG Treatment Matrix 9.8.5)

4.5 Treatments during snow and freezing rain

- In accordance with the NWSRG Practical Guide for Winter Service - Treatments for Snow and Ice (refer to Appendix Y), reference should be made to the tables below when considering treatments and spread rates:

Timing of treatment	Treatment type
During freezing rain, or accumulations of ice	Grit spreading
During snowfall	Grit spreading
After snowfall • When there is slush on the road • When there is compacted layers of snow and ice	Grit spreading

NB: Adapted from NWSRG as ploughing not typically deployed in Barnet

Table 6 - Timing of Treatment (NWSRG Treatment Matrix 9.4.4)

TREATMENTS DURING SNOW AND FREEZING RAIN		
No Ice or compacted snow on surface	**Ice or compacted snow on surface**	
	Is traffic likely to compact subsequent snowfall?	
	YES	**NO**
To provide a de bounding layer, spread: 20-40g/m2 of dry grit	To provide a de bounding layer, spread: 20-40g/m2 of dry grit	No de-icer should be spread

NB: Adapted from NWSRG as ploughing not typically deployed in Barnet; only dry grit is utilised in Barnet

Table 7 - Treatments during snow and freezing rain (NWSRG Treatment Matrix 9.9.1)

TREATMENT FOR THIN LAYERS OF ICE (LESS THAN ABOUT 1MM THICK)	
Forecast weather and road surface conditions	
Lower of air or road surface temperature Above -5°C	Spread: 40g/m2 of dry grit
Lower of air or road surface temperature At or below -5°C	Spread: 40g/m2 of grit
Note 1: Grit is ineffective in the short term at temperatures below -7°C.	

NB: Adapted from NWSRG as only dry grit is typically utilised in Barnet

Table 8 - Treatment for thin layers of ice (less than 1mm thick) (NWSRG Treatment Matrix 9.10.4)

TREATMENT FOR LAYERS OF COMPACTED SNOW AND ICE	
Medium Layer Thickness (1 to 5mm)	**High Layer Thickness (greater than 5mm)**
For initial treatment, spread: 40g/m2 of grit For successive treatments: spread: 20g/m2 of grit/abrasive mix (50:50)	For initial treatment, spread: 40g/m2 For successive treatments, spread: 20g/m2 After traffic has started breaking up the layer, spread: 20g/m2 of grit, so grit can penetrate the layer and reach the road surface

NB: Adapted from NWSRG as ploughing not typically deployed in Barnet, and only dry grit is utilised in Barnet.

Table 9 - Treatment for layers of compacted snow and ice (NWSRG Treatment Matrix 9.11.3)

4.6 Continuous working for the clearance of persistent Ice and Snow

During times of persistent ice and or snow, it may be necessary to carry out continuous gritting. As this type of operation will increase costs to the authority, the instruction to commence all day continuous working will be taken by the Highways Duty Controller, in consultation with the Severe Weather Coordination Team at the earliest opportunity.

4.7 Procedure to be undertaken when treatment of the Priority 1 carriageway network is considered inoperable

During a Severe Weather Event it may become operationally impossible to maintain the Priority 1 network or grit stocks may be depleted and need to be conserved. In such circumstances, it may be necessary to decide that only the Resilience Road Network will be treated.

The decision to adopt the Resilient Road Network may also be imposed by the London Local Authority Gold and Transport for London, as part of a Pan-London Resilient Road Network, or taken by the Council itself. The Council's Communications and Customer Contact Unit Teams must be made aware of the decision immediately, so that this can be communicated to the stakeholders referred to in section 3.4 above to help manage their expectations.

For further information on the Pan-London Resilient Road Network and the resilient network within Barnet, refer to Appendix Z.

5. Performance Monitoring and Record Keeping

5.1 General

The annual review of the Winter Service Operational Plan will take into consideration experiences gained during the previous Winter season, and to take account of any changes in the Well-Managed Highway Infrastructure Code of Practice and associated guidance.

5.2 Gritting /Snow Clearing Decision Making

At the time of the Highways Duty Officer making a decision as to whether or not to grit and or clear snow, a Decision Form shall be completed in every case as per the forms detailed at Appendix T. The Highways Duty Officer will also make a log of all contact made in the decision making.

All decisions made will be communicated, via the MeteoGroup online portal, to the stakeholders identified in Appendix J and Appendix K.

The timing of decisions and the requested times to commence gritting actions will take account of realistic mobilisation timescales, particularly regarding resource travelling times and gritter loading operations. The Highways Duty Officer will endeavour to provide 2 hours' notice to the Street Scene Duty Officer of a decision to commence winter maintenance operations.

5.3 Operational Activities

During pre- winter season, time is to be allowed for dry-runs of the gritting routes to ensure driver competence and note any physical changes/ alterations or potential hazards along the prescribed routes.

Once instructions have been issued to the Highways Street Scene Service Duty Manager the Highways Duty Officer will monitor the condition of the priority road network by maintaining dialogue with the Street Scene Service Duty Manager to review progress in operational delivery and specifically to ensure that requested actions have been appropriate for the prevailing conditions and that required outcomes have been successfully achieved.

Where it is apparent that the original request has not had the desired outcome, the Highways Duty Officer will issue further instructions as necessary to the Street Scene Service Duty Manager, which may entail further deployment of all or partial resources.

Once the decision and requirements have been communicated to the Highways Street Scene Service, the Street Scene Service Duty Manager will make all necessary arrangements to mobilise the required resources in accordance with the specific instructions given. This will include loading of the gritter vehicles to be ready to be deployed to the routes at the required times. Where necessary it will also require the mobilisation of Street Scene staff to conduct hand gritting of the priority footpaths.

The Street Scene Service Duty Manager will advise the Highways Duty Officer of any unexpected problems arising. Maintaining a record of when gritting commenced and when it was completed for each route. The Street Scene Service Duty Manager will also check all operational vehicles are suitable for use prior to the commencement of the gritting run and that they are suitably calibrated to achieve the required spread rates.

An opportunity for rapid ‘lessons learnt’ reviews need to be considered for unexpected issues during the winter maintenance periods, allowing toolbox talks to incorporate any outcomes and assimilate them into the ongoing Plan.

In times of snow, it is likely that specific requests will be received for gritting of specific roads and footpaths. All such requests will be dealt with in accordance with the procedure identified in section 3.4 above.

5.4 Reporting throughout the Winter Maintenance Period

Highways and Street Scene will collate, record, and communicate information on all activities undertaken throughout the winter maintenance period. These reports will be based on section 5.7 below.

5.5 GPS Records

All vehicles are equipped with Exactrak GPS Tracking and records of gritting / snow clearing actions will be retained in this secure system.

Reports can be generated from this system which can be used to verify when and what gritting actions took place.

5.6 Record Keeping and Reporting

Highways will maintain comprehensive records of all daily data obtained from weather forecasts and weather stations. All decisions are taken based on this data, what actions were instructed, how these were delivered in terms of outcomes, how these relate to compliance with the plan and all other arising issues.

Highways will produce regular reports which may include some or all the following:

- The daily weather forecast information used to make decisions
- The decisions taken – including the timing of such decisions
- Details relating to the decision and instructions given to the Operational Team, including which carriageway routes, any footways and what spread rates
- The outcome of the instructions given – successfully completed, timings, etc
- Any further necessary actions arising
- The grit used and balance of remaining stocks
- Orders placed to replenish grit stocks to align with Planned stock levels
- Any deviations from planned actions – such as accommodating urgent requests
- Number of requests received, and actions taken on these
- Lessons learnt reports
- Comparison with Forecasted temperatures, weather station recorded temperatures and actual temperatures – to assist in monitoring accuracy of forecasting
- Compliance with Contractual KPI's
- In times of snow, provide update emails to those listed in Appendices K, L, AB and AC to keep them regularly appraised of ongoing actions being planned and completed

Key performance indicators (KPIs) can also be reviewed for appropriateness and ongoing performance improvement.

6. Route Hierarchy

6.1 Introduction

The network hierarchy, incorporates all elements of the highway network, including carriageways, footways, cycle routes, highway structures, lighting, and rights of way. The hierarchy should consider current and expected use, resilience, and local economic and social factors such as industry, schools, hospitals and similar, as well as the desirability of route continuity and of a consistent approach for walking and cycling paths.

Further revisions of the gritting routes will incorporate environmental factors such as carbon usage, improved de-icing products etc.

Winter Service operations are geared to the safe movement of traffic. To ensure operations are effective the relative importance of roads and footpaths is identified in relative priority of classes of road as shown in the table below.

It must be noted that should national grit shortages or other weather and operational conditions dictate, a reduced network may be adopted (The Resilience Road Network). Roads not indicated by any priority will be treated as and when resources are available and only after Priority 1 routes have been cleared, followed by Priority 2 routes.

Where there is a need to close road(s) in a Severe Weather Event the Highways Duty Officer or Controller will make and implement the decision while communicating details to the Severe Weather Coordination Team, other authorities and partners, together with stakeholders.

	Carriageways	Footways
Priority 1	Refer to schedule in Appendix A	Refer to schedule in Appendix D
Priority 2	Refer to schedule in Appendix B	

Table 10 - Priority Class

Priority 1 roads are pre-treated with grit when snow, ice or frost may form. Priority 2 Carriageways and Priority 1 Footways are normally post–treated, subject to resources being available, to deal with snowfall or continued icy conditions.

It must be emphasised that in times of accumulated snow, Priority 1 roads will be treated first; until these routes are found to be safe and running, the treatment of Priority 2 roads will not commence. However, treatment of Priority 2 and remaining roads are always subject to resources being available.

The completion of all roads on each route is always subject to vehicle accessibility and availability.

6.2 Priority 1 Roads

The Priority 1 roads totalling to approximately 240km (or 32% of the Borough's road network) have been split into ten routes and are gritted from the Barnet Oakleigh Depot. This is so that all routes can be completed in 3 hours, or as close to 3 hours as possible, subject to road conditions on the road network.

Routes 1,2,3 and 6 of Priority 1 roads cover the coldest and more exposed areas of the borough (hilly, northern areas) and other areas that are subject to ground water seepage. Two routes (routes 1 and 3) are also known as "Cold or Seepage Routes" which are prioritised on marginal nights, thereby creating operational and environmental savings.

The Council has 11 dedicated gritting vehicles, as well as two small towable spreaders to cover these routes and footways. This allows for some spare capacity (contingency) in case of vehicle breakdown. The roads included within these ten routes are listed alphabetically in Appendix A and shown in map form in Appendix C.

6.3 Priority 2 Roads

The Priority 2 roads have been split into 22 routes and these roads are listed alphabetically in Appendix B. These cover approximately 167.7 km, or 23% of the Borough's road network.

Treatment of Priority 2 roads may commence after Priority 1 roads have been completed and found to be safe and running; however, treatment is always subject to adequate resources being available. Priority 2 roads are normally post-treated to deal with snow accumulation, and these 22 routes may take several days to complete as they are likely to be treated in conjunction with keeping the Priority 1 roads safe and running. The order in which the 22 routes are treated will be determined by considering any local variations in conditions, so that the worst areas are treated first. When deciding on how best to deploy resources to the Priority 2 routes the needs of other Council Services such as the Refuse collection service will be taken into consideration.

6.4 Remaining Roads

Remaining roads are not normally treated unless resources are available, after Priority 1 and 2 roads have been completed and found to be safe and running.
However, to optimise the efficiency of the available gritting vehicles, ~~and~~ depending on local conditions, the gritting of Priority 2 roads and remaining roads may be combined in times of snow.

6.5 Priority Footways

As a result of Clause 41 (1A) of the Highways Act 1980, the duty of the local authority has been extended to include footways and the Council will treat the Priority 1 Footways listed in Appendix D.

Following the declaration of a Severe Weather Event, where snow and ice persist on footways, it is likely that the Council's Street Scene, Refuse Collection and Greenspaces Services will be prevented from carrying out their normal duties. These additional resources may be available to be deployed on snow / ice clearing duties. This reactive treatment will be undertaken on a hierarchical basis, depending on the weather conditions and where reasonably practicable*.* Footways leading to and within identified centres of population, at transport hubs, on steep slopes and at other vulnerable locations may be treated first, followed by transport hubs and any key strategic locations.

Where there is sufficient advanced warning and resources are available every effort will be made to treat Priority 1 Footways before snow falls to provide a de-bonding layer which is effective in breaking up and dispersing compacted snow.

Priority 2 footways will only be considered for reactive treatment once all Priority 1 footways are clear, subject to resources being available.

6.6 Resilience Road Network

Following the heavy snow in February 2009 and the recommendations that the Council has received from various government and other professional bodies, the Council's Resilience Road Network has been defined as that comprising of the core or strategic transport routes providing access to emergency services, main bus routes and train/underground stations. The roads included in the Council's resilience network are shown on a plan (Appendix F) and listed alphabetically in Appendix E. The length of the resilience road network is estimated at approximately 171.3 km or 23% of the whole of the road network. The Council's resilience road network has been approved by TfL as part of a London wide coordination exercise.

It is anticipated that this would only occur in severe conditions where it is proving difficult to safeguard the Priority 1 network or where grit stocks are becoming limited.

The Council may be directed to concentrate on only treating the Resilient Road Network or the Highways Duty Controller may decide to do if the circumstances dictate.

Grit re-stocking arrangements during the winter season have been revised to ensure that, the Council has sufficient grit to cover a resilience period of at least 12 days / 48 runs. In addition to the minimum quantity of grit to be maintained. In addition to this stock, the Council will benefit from the significant pan London Strategic stockpile which will be released if London encounters a winter of significant snow fall or shortage of grit, in line with the strategic release protocol.

The roads included within the Resilient Road Network are listed alphabetically in Appendix E.

6.7 Impact on Footways when in state of Resilience

Once a decision to adopt the Resilient Road Network is taken, the Council, via the Highways Service, will make risk-based decisions on whether to treat any footways and in making such decisions the following considerations will be considered:

- Whether it is safe to deploy resources
- Whether resources are available
- Whether grit stock levels are seriously depleted and need to be conserved

6.8 Resourcing of normal pre-cautionary gritting and Severe Weather events

It is recognised that during a Severe Weather Event some of the Council's services will not be provided and the resources associated with these services may be utilised on winter service operations. The table below show likely deployment in such circumstances:

Severity of Weather	Council Services affected by Weather		Resources to be deployed in Winter service operations
Low (likely to be sub-zero temperatures only)	×	Refuse Collection	Highways Street Scene Service gritting Priority 1 roads utilising resources from the gritting operations rota, which includes drivers from the Street Scene Services.
	×	Street Scene (Cleansing Service)	
	×	Street Scene (Green Spaces)	
	×	Parking Enforcement	
Medium (forecast of potential snowfall and or light snow accumulations)	×	Refuse Collection	Highways Street Scene Service gritting Priority 1 roads and potentially Priority 2 roads, utilising resources as above. Street Scene resources treating Priority 1 Footways. Street Scene resources refilling grit bins when priorities permit.
	✓	Street Scene (Cleansing Service)	
	✓	Street Scene (Green Spaces)	
	×	Parking Enforcement	
High (Continuous snowfall with greater	✓	Refuse Collection	Highways Street Scene Service gritting Priority 1 roads and potentially Priority 2 roads, including appropriate refuse rounds, utilising resources as above – in extreme situations of continued

accumulations of snow evident)	✓	Street Scene (Cleansing Service)	snowfall this may require a rota change over to ensure driver hours are managed. Street Scene resources treating Priority 1 Footways. Street Scene resources refilling grit bins when priorities permit.
	✓	Street Scene (Green Spaces)	
	✓	Parking Enforcement	

Table 11 - Council Services affected by Weather and contributing to winter service provision

It should be noted that gritting operations are restricted to areas of adopted public highway and resources are prioritised in accordance with this plan. Therefore, Council owned car parks and other Council owned property not part of the public highway is excluded. Asset managers will be required to also adopt a risk-based approach to winter service operations.

For the avoidance of doubt Car Parks, areas within Parks and areas of housing owned by the Authority are excluded from this Winter Service Operational Plan.

6.9 Communications

The Council's winter service actions will be communicated to neighbouring highway authorities, other agencies (Highways England, London Underground Limited (LUL), TfL, Network Rail etc.) and stakeholders so that activities can be co-ordinated regionally. The London Resilience Group coordinates an up-to-date contact list of winter service personnel which can be found in Appendix I. Contact details will also be distributed to Internal staff and Councillors as listed in Appendices K and L.

In the event of a Severe Weather Event, the Highways Duty Controller will arrange for forecast updates, actions taken, planned actions and successful outcomes, etc. to be circulated to those listed in Appendix AB.

This information can also be utilised by the Councils Communications team, to provide updated messaging on the website, twitter etc.

Communications will aim to educate residents to be prepared, self-reliant to always drive and walk safely considering the prevailing weather conditions. The Council is keen that residents are encouraged to self-help by clearing snow outside their houses. More information on this is provided in section 10 of this plan.

6.10 Road Closures

In line with Civil Contingency plans, pre-set routes are in place to accommodate road closures; coordination with neighbouring authorities is key to the effective use of these diversions, as the altered traffic flows could affect other networks. It is recognised that road closures may be required on the Priority 1 road network, with signed diversions taking traffic temporarily onto Priority 2 roads. In such cases, the diversionary route will be treated as part of the Priority 1 network and will continue to be treated for the duration of the closure.

It should be noted that where a road cannot be made sufficiently safe during adverse conditions, it may be necessary for Highways to close the road.

7. Weather Forecasts and Weather Station Ice Detection Systems

7.1 Weather Forecast

Highways will operate the MeteoGroup system for 2023/24. The inputting of decision data is to be carried out using the form included at Appendix T.

There are two existing weather stations in the borough with the service provided by Vaisala. Data from these weather stations will be reviewed by Highways Duty Officers to assist in making appropriate decisions, and specifically to check and monitor the accuracy of the forecasts.

Where it is evident, from the monitoring of the weather station data, that temperatures will be lower than forecasted temperatures. This may require a decision to be taken to deploy gritting resources to ensure, compliance with the decision triggers identified in this plan.

Forecasted and actual recorded temperatures from the weather stations will be recorded and included as part of record keeping data and included in regular reporting.

The Highways Duty Officer will maintain regular dialogue with the forecaster in between forecasts when any type of severe weather conditions are predicted.

The Forecasting Services received from MeteoGroup are as follows:

- 3 x 24-hour summary forecasts presented at 06:00, 12:00 and 18:00, including an hourly breakdown of predicted conditions
- A morning summary
- A 2-5-day forecast issued by 06:00 hrs
- Site data and graphs for 2 sites
- 24-hour consultancy during the winter season with proactive advice available on request
- Forecast monitoring and notification of any significant variation to a previous forecast
- Actions Message board and emailing facility

Details of the current weather forecasting consultancy are given at Appendix N.

7.2 Weather Stations

The services provided by Vaisala include weather station maintenance, data collection and Bureau facilities with 2 weather stations installed at:

- A411 Barnet Road, at its junction with Barnet Gate Lane, and
- East End Road, at its junction with Basing Way.

The Council also has access, through Vaisala, to other weather stations managed by London Borough of Enfield, TfL and Highways England. See Appendix U for a map of the Vaisala weather stations located in and around Barnet.

The Highways Duty Officer will regularly review the data from the weather stations and use this to compare against the predicted temperatures provided by the weather forecasting provider. Where the actual temperatures provided from the weather stations show that the forecast temperatures

are overstated, it may be necessary to make further decisions on required gritting actions, especially on occasions where the forecast is predicting slightly above zero temperatures which would not on its own trigger gritting action. This monitoring will also provide confidence in the forecast data and should be used to raise any concerns regarding accuracy with the forecast provider, MeteoGroup.

8. Operational Communications

8.1 Operational Communications

Effective delivery of the Winter Service requires collaborative working and ongoing communications between the Highways and Street Scene Service Duty Officers during usual precautionary gritting operations. The Severe Weather Coordination Team members, and partners, during Severe Weather Events.

When a decision to undertake precautionary gritting is made, the standard communications are issued, with joint branding, this is circulated via email and text to the parties listed in Appendices K and L. Copies of the distribution lists are kept on MeteoGroup and offline. These are live documents that are regularly updated prior to and during the winter period.

In the event of a Severe Weather Event, the Highways Duty Controller is responsible for managing the procedure in Figure 3. Contact details for the Severe Weather Event Coordination team and other stakeholder operational staff are shown in Appendix AB.

8.2 Websites

London Borough of Barnet Website:

https://www.barnet.gov.uk/citizen-home/parking-roads-and-pavements/Roads-and-Pavements/Winter-Maintenance.html

The website includes a copy of the Winter Service policy document, details of routes that are treated, the location of grit bins and general advice for residents.

Other information and advice on various Council services will be included on the website when available.

X (formally Twitter)
www.twitter.co.uk - @BarnetCouncil

The London Borough of Barnet provides updates on gritting actions, once they have been taken, using the social networking site, Twitter. Updates are sent directly to followers when decisions on treatment are made. Highways are responsible for providing regular and accurate data to allow the Communications team to post updates.

Publicity

It is important that both pedestrians and motorists are aware of and understand the Council's approach to winter maintenance. Together with advice on how to prepare for and undertake a journey safely in Severe Weather Event.

Highway users should regularly refer to the Council's website for information.

8.3 Winter Service Requests

During normal operational hours the Council's Customer Call Centre will take any calls received from the public between 09:00-17:15 Monday – Thursday and 09:00-17:00 on Fridays. The Out of Hours Service Desk will be responsible for calls received between 17:00 – 09:00 Monday to Friday and at weekends. All calls related to the Winter Service will be passed onto the Highways Duty Officer and/or the Highways Out of Hours Duty Officer who will prioritise any required action accordingly.

A copy of the Highways Out of Hours Duty Officers Rota is included at Appendix V.

All requests for service via the hub will be recorded and responded to using standard scripts then, directed to the Highways Duty Officer in normal office hours and the Highways Out of Hours Officer at all other times. A record will be maintained of all requests received, decisions taken, reasons for decisions, actions requested and outcomes achieved. All decisions will be based on the priorities detailed in this Plan.

Individuals contacting the Call Centre will be advised of the outcome, whether this is to take action or not. This will assist with managing expectations and potentially reduce repeat requests.

9. Salt Stocks

9.1 Salt

It is recognised that salt is environmentally damaging. To gain the most economic and environmentally satisfactory solution, it is essential that the minimum amount of salt is used to obtain the best effect. This plan, including reduced spread rates and the inclusion of technology capable of automatically adjusting spread widths depending on road width and prevailing conditions will assist in minimising any detrimental impacts. In Barnet, 6mm dry salt is used for precautionary salting in advance of forecast ice and snow. Although 6mm salt is more expensive than 10mm, because of its size and consistency, it is less prone to 'bounce' off road and footway surfaces when being spread at the optimum vehicle speed of 30mph. This greatly assists in reducing the impact on adjacent properties, structures, grass verges, vegetation etc.

All gritting vehicles, other plant and equipment, including the salt barn, are located at the Oakleigh Depot, N11 1HJ.

The minimum salt stockholding table is depicted below:

Location	Minimum Storage					
	1 Nov 2023	1 Dec 2023	1 Jan 2024	1 Feb 2024	1 Mar 2024	1 Apr 2024
Harrow Depot Salt Barn (1000T max)	1000	1000	1000	1000	1000	1000
Oakleigh Road Depot (1500T max)	1500	1300	1200	1100	900	600
Total stock	**2500**	**2300**	**2200**	**2100**	**1900**	**1600**

Table 12 - Minimum salt stockholding by location

NOTES

1) If the weather is “Severe” and the rate of usage is more than predicted the salt stock will be reviewed more frequently and orders raised to as necessary to maintain the minimum salt level.
2) A record of available stock and daily usage will be maintained to provide a daily stock total. As new deliveries are received these will be reflected in this daily record.
3) The above minimum stock levels may not be maintained if there is a national shortage of grit.
4) The resilient salt stock required is based on 12 days continuous deployment (4 runs per day) and is 1536 tonnes (48 runs x 32 tonnes per run).
5) The operational salt stock (in addition to the resilient salt stock) is 1500 tonnes at the start of the season and is reduced on a sliding scale throughout the season.

The salt held in the Harrow Grit Barn is replenished by the London Borough of Harrow in accordance with the Agreement shown in Appendix O.

Highways is responsible for identifying the minimum stockholding requirements at the beginning of the winter season, and throughout the season in accordance with this plan.

10. Grit Bins

10.1 Policy for the Provision of Grit Bins by the highway authority

The Council has provided 486 grit bins in various strategic locations throughout the Borough, to allow residents to hand grit public roads and footways in their locality during adverse weather conditions. Each grit bin is identified by a unique reference number and location as shown in Appendix G.

All applications from residents for the provision of a new grit bin will be considered on their own merits. As a means of prioritising applications; the gradient of the road; the presence of bends; whether the road is north facing or leads to the main road and the proximity of the nearest grit bin may be considered.

It will also be necessary to consider the overall impact on service efficiency of increasing the current number of grit bins as with this already high number, it is extremely resource intensive to maintain and replenish the bins throughout the winter period.

Grit bins are provided to allow residents and motorists to spread grit on the public highway in adverse weather conditions. Where it is evident that an existing bin is being inappropriately used for gritting activities off the public highway, it may be removed from service.

Each bin is checked annually and refilled before the start of the winter season. Bins that are either broken or worn will be replaced as necessary. If requests are received for replenishment of grit in grit bins, these will be considered and prioritised as appropriate.

10.2 The Snow Code

The Department for Transport has published a 'Snow Code' offering advice for residents and businesses on clearing pavements. Full details of the code can be viewed on the Council's website and on the DirectGov website below:

https://www.gov.uk/clear-snow-road-path-cycleway

Extracts from this Code are produced below:

Clearing snow from a road, path, or cycleway

Individuals are encouraged to clear snow and ice from pavements fronting their property. It is unlikely that an individual will be found liable if the area has been cleared carefully and no hazard created. This is done in conjunction with appropriate local volunteer organisations groups that safeguard/ support vulnerable groups etc.

How to clear snow and ice

When you clear snow and ice:

- do it early in the day - it's easier to move fresh, loose snow
- don't use water - it might refreeze and turn to black ice
- use grit if possible - it will melt the ice or snow and stop it from refreezing overnight (but don't use the grit from gritting bins as this is used to keep roads clear)
- you can use ash and sand if you don't have enough grit - it will provide grip underfoot
- pay extra attention when clearing steps and steep pathways - using more grit may help

10.3 Post Snow Clearance

Consideration is given to post snow clearance as the atmospheric temperatures rise, can lead to the increased risk of localised flooding, due to rapid ice-melt and/ or blocked drainage systems. A close level of internal and external coordination is therefore required to ensure the rapid and timely redeployment of qualified staff, and suitable vehicles/ plant at adequate levels to the appropriate locations.

Further provision will be needed post winter season to review the location and extent of damaged highway surfacing, infrastructure, and furniture. Along with the reinstatement of routine gully cleansing in the spring and summer seasons.

11. Vehicles and Plant

11.1 Introduction

The age, size, composition, and standard of the vehicle fleet all have a major impact on the economy, efficiency and effectiveness of the Winter Service Operation and the effectiveness of this plan.

11.2 Winter Maintenance Fleet

The Council's winter service fleet is made up of eleven 18T ECON gritters which are hired via the Council's Transport Team. All gritters are provided by ECON. As the operational plan currently includes ten Priority 1 routes this allows for one spare gritter to respond to any vehicle breakdowns.

All eleven of these frontline gritters use Exactrak GPS route information and vehicle tracking software so that documentary evidence of what a vehicle is doing at any one time can be accessed and analysed. Data recorded during a gritting run includes vehicle speed, whether it is gritting or running dry, the direction of travel and the GPS location, all at 5-minute intervals.

All the vehicles are accurately calibrated at the beginning of the season and additional checks on the rate and width of spread are carried out at monthly intervals throughout the winter period.

Regular maintenance checks are undertaken by ECON throughout the winter season, and they are 'on call' to quickly rectify any defects or mechanical problems.

Most vehicles are single manned during normal precautionary gritting and post gritting for ice. However, on some occasions there is a requirement for double manning e.g., where the route consists of narrow roads or vehicle movements that require the presence of a banksman. Several Operational Safe Working Procedures and associated Risk Assessments are in place with the DLO to cover loading and driving of gritter vehicles.
Drivers generally cover the same route as familiarity helps to make the operation more efficient. However, new on-board technology can assist new drivers to better understand their routes and what is expected of them.

The Council owns two ploughs re are two ploughs that can be attached to the frontline gritters. However, ploughing is not a planned response during the 2023/24 winter season and would only be considered in exceptional circumstances due to the dangers attached to ploughing in an urban area with many parked cars and speed humps/tables.

There are two loading shovels (telehandlers) available for winter service. They are located at the Harrow grit barn and the Oakleigh Road depot.

The frontline gritting vehicles are calibrated to achieve various spread rates from 8 gm2 in Barnet, all in accordance with this plan.

Several hand propelled gritters are available and used when gritting Priority 1 and 2 Footways.

12. Staff Rotas and Working time

All winter maintenance activities are monitored and recorded by the Street Scene Service Duty Manager and Fleet Manager to ensure drivers are operating under the GB Domestic Regulations.

12.1 Summary of requirements for drivers

Winter Service activities are managed under GB Domestic Regulations. Staff volunteering to be included on the winter service driver rota must be aware of and comply fully with the following:

- Working Time Directive (opt out must be formally signed)
- GB Domestic Regulations
- Working Time Regulations
- Emergency exemptions

12.2 Staff Rotas

The staff rota for the drivers can be found in Appendix M.

The Street Scene Service Duty Officer is responsible for ensuring compliance with the above requirements. To help facilitate this, two shift rotas have been developed with some spare capacity built in.

All staff who form the rota are on standby to react whenever needed for the winter service functions.

Highways operate the following:

- A Winter Service Duty Officer Rota for all gritting decision making and as the first point of contact with partners and contractors when a Severe Weather Event occurs. Details are provided in Appendix L
- A Highways Out of Hours Rota for general highway issues and support during Severe Weather Events. Details are provided in Appendix V.A Winter Service Duty Controller who will lead the collaborative working arrangements with all partners on Highway and Communication matters when a Severe Weather Event is declared.

13. Review of Winter Maintenance Policy & Operational Plan

13.1 General

Highways is responsible for reviewing the Winter Service Policies, Plans and Procedures on an annual basis.

Whilst conducting this review the following will be taken into consideration (not an exhaustive list):

- Lessons Learnt from the previous winter period operations
- Any specific requests received for changes to be implemented

- Any changes in legislation
- Review of Environmental considerations, covering emerging legislation, carbon usage and innovative environmental applications and processes
- Review the coordination between Winter Services and Flood/ Drainage management
- Alignment to existing Codes of Practice and guidance documents, ensuring that any deviations are recorded with the reasons for these decisions
- Any changes in personnel, supplier and/or contract arrangements, including identifying and acting on those that need changing/renewing
- Review the effectiveness of the administration and management processes over the previous season
- Any new advancements that may be considered to improve service efficiency and effectiveness or reduce cost – examples being thermal mapping and on-board and technology
- Consider public feedback for the Winter Service provision
- Review KPI for appropriateness and ongoing annual performance levels
- Operational base issues
- Type of grit
- Route optimisation/review

The review will be undertaken with key stakeholders and the relevant third-party organisations to allow sufficient time to communicate any proposed fundamental changes to the Council. Allowing for appropriate approval processes (potentially committee approvals) to be obtained.

Based on the above, this Plan will document the continuous improvement in Winter Service and ensure that it meets all recommendations, legislative requirements and industry best practice and guidance, whilst also addressing local constraints and issues.