

**Place Department**

**HIGHWAY SERVICES**

**WINTER MAINTENANCE PLAN**

**2020/2021**



[www.enfield.gov.uk](http://www.enfield.gov.uk)

## **EXECUTIVE SUMMARY**

This plan details the London Borough of Enfield's Winter Maintenance arrangements for 2020/2021.

It has been developed in response to the Highway Authority's statutory duty under the Highways Act, Railways and Safety Transport Act and Traffic Management Act.

The strategy adopted for Enfield has been developed in accordance with the recommendations set out in the Well Managed Highway Infrastructure - "A Code of Practice" and guidance offered by the National Winter Service Research Group.

Winter maintenance involves treating the public highway to:

- Prevent ice from forming (precautionary salting)
- Melt ice and snow already formed (post salting).
- To remove snow under extreme conditions

Precautionary and post salting activities are often referred to as gritting.

The plan has been developed from an understanding of local conditions and takes account of the current resource availability. It identifies the Council's policy on route prioritisation; describes client/contractor relationships; and outlines operational procedures.

## **WINTER MAINTENANCE PLAN 2020-2021**

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## 1. POLICY STATEMENT

- 1.1 The London Borough of Enfield has categorised the treatment of public highways by precautionary salting, post salting and snow clearance into three priority groups i.e :-

### **Carriageways**

**Priority 1-** Principal roads, main commuter routes, all bus routes, emergency services facilities, access to main industrial areas and access for Council critical service provision; total length 195 km (see map appendix 1.)

**Priority 2 -** All other borough roads that are not included on the priority 1 gritting network when instructed to do so.

When ice is predicted the Council will initially pre-treat all priority 1 carriageways. Depending on the weather forecast received, treatment of the priority 1 carriageways may continue using the available resources in an efficient manner to treat for ice and or snow.

There is no pre treatment of priority 2 carriageways unless directed to by Director of Environment & Operational Services

### **Footways / Footpaths**

There is no precautionary or post treatment of footways and footpaths following typical overnight frosty conditions.

In exceptional conditions, when there is a forecast for heavy snow fall with a prolonged cold spell to follow, resulting in snow existing on footways for a few days, the salting of Strategic footways/footpaths will be undertaken by the Council's Street Cleansing team. The decision to commence footway salting will be made by the Director of Environment & Operational Services and it will be made having given suitable consideration to existing salt stocks and long-range forecasts.

### **Cycleways**

There is no current precautionary or post treatment of the off-carriageway cycle network within Enfield following typical overnight frosty conditions. Any part of the cycle network that is formed in the carriageway but separated only by delineators will receive treatment if the associated carriageway forms part of the Priority 1 network.

- 1.2 The cost effectiveness of the winter maintenance service will be ensured by:

- separating client and contractor responsibilities,
- prioritising and optimising winter maintenance routes,
- deploying salt or clearing snow on an assessment of need.

- 1.3 The 2020-2021 winter maintenance budget is included within the Highway Services Revenue Budgets. This budget includes the base costs and sufficient operational

expenditure to enable priority 1 salting/snow clearance work to be undertaken in an average year.

- 1.4 There is no identified funding for Priority 2 carriageway salting work, any footway treatments or off-carriageway cycle network treatment.
- 1.5 Ice prediction/weather forecasts will be obtained from Vaisala Bureau Services and the MetDesk Weather service provider. Daily forecasts will be obtained and reviewed by Enfield Councils' dedicated decision makers between the 1st November and 31<sup>st</sup> March each winter season. The ability to start prior to the 1<sup>st</sup> November can be achieved if the long range weather forecasts demonstrate prior inclement weather conditions.
- 1.6 In the advent of any National shortage of salt supplies, Enfield may introduce a reduced gritted carriageway network known as the "resilience network". This network includes all bus routes throughout the borough and some other main link roads into and across the borough and is shown in appendix 5

## **2. THE CLIENT/CONTRACTOR RELATIONSHIP**

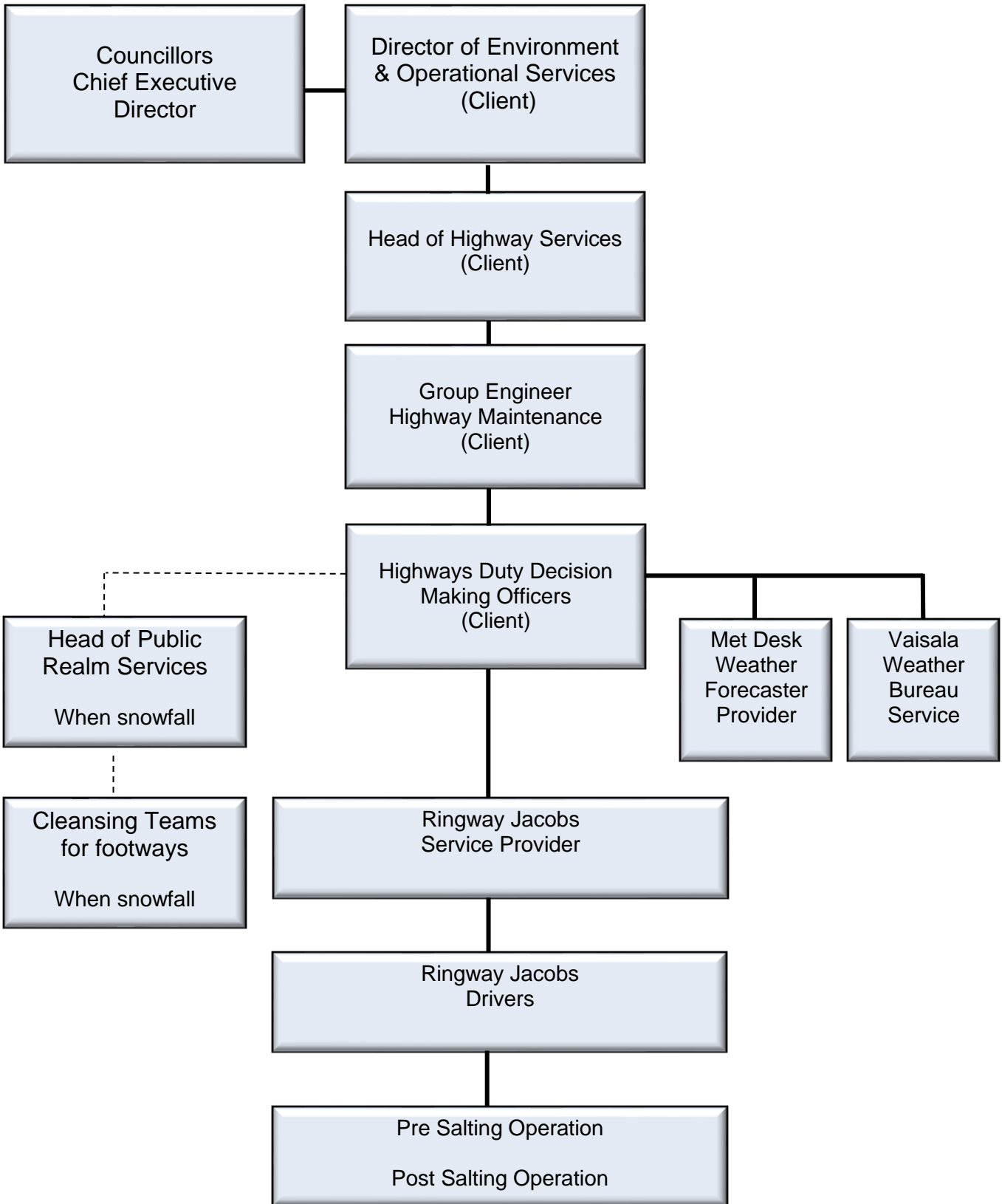
### **2.1 Client responsibilities** (see organisational chart page on 7)

- Maintain and calibrate the Weather Stations
- Ensure the MetDesk reports will be in the required format.
- Provide the MetDesk and the Weather Station System Maintenance Company with a list of contact names and telephone numbers.
- Prepare, review, and update annually the winter maintenance plan.
- Identify and specify standards of performance.
- Define road and footway priorities.
- Optimise routing efficiencies.
- Maintain a map of priority 1 routes.
- Day to day decision making.
- Performance monitoring.

### **2.2 Contractor's functions**

- Provision of adequate, suitably trained operatives during the winter maintenance period.
- Ensure the communications are available and operational between drivers and supervisory staff.
- Ensure the gritting vehicles are calibrated correctly.
- Organisation of day-to-day operations.
- The provision of covered storage of the salt and salt loading.
- To grit roads as specified within the Borough in accordance with the specification for Winter Maintenance as and when directed by the Client decision maker.
- Completion of daily record sheets.
- Ensure that maintenance runs are regularly carried out on the gritting fleet to ensure reliability.
- Provide and maintain an operational depot within the Borough boundaries.
- Provide and maintain adequate gritting vehicles.
- Provide covered storage with a minimum quantity of 1000 tonnes of salt
- To report any non-compliance on salting routes to client as soon as practicable.

# WINTER MAINTENANCE OPERATIONAL ORGANISATION CHART



### 3. CARRIAGEWAY & FOOTWAY HIERARCHY & ROUTE PLANNING

3.1 The Council's road hierarchy and highway classifications are described in Enfield's Highway Asset Management Plan.

For winter maintenance purposes:

- **Priority 1** work includes Principal roads, main commuter routes, all bus routes, emergency services facilities, access to main industrial areas and access for Council critical service provision; total length 195 km (see map appendix 1.)
- **Priority 2** work includes all other district/borough roads not treated under Priority 1
- **Strategic footways/footpaths** - (see map appendix 2).

3.2 Priority 1 – The Priority 1 network of roads has been through a route optimisation process using specialised software programmes to produce 4 efficient gritting routes.

Priority 2 treatment will require authorisation from the Director of Environment and Operational services and will generally be on a case by case basis.

### 4. WEATHER FORECASTS

4.1 The availability of accurate weather forecasts at appropriate times in the decision-making process is essential for the delivery of a high-quality service and to ensure maximum efficiency from the Service. For this purpose, the Council has contracted Vaisala Ltd for their Weather Station Bureau Services and the MetDesk for weather forecasts. This will include the below for the duration of the Winter Maintenance period.

- 24-hour forecasts,
- Web portal providing instant access to current weather forecasts,
- Dedicated sensor monitoring,
- 24-hour access to dedicated forecasters,
- Updates as required via dedicated web portal,
- Alerts from the duty forecasters of any forecast fluctuations/changes in weather conditions.



- 4.2 There is a weather monitoring station located at The Ridgeway, Enfield EN4 and a remote road condition and weather monitoring installation, located in Ridge Avenue N21. Information from these sites is fed into the decision-making procedure matrix and is used by the Highways duty decision making officers to predict treatment needs. VAISALA TMI LTD carries out the calibration and maintenance of the ice prediction/weather monitoring station and associated software.
- 4.3 The Highways duty decision making officers use weather forecasts obtained from the MetDesk to decide if a treatment is required. If a treatment is necessary, the forecast is used to determine the appropriate salt spreading rate and treatment time.
- 4.4 Highways duty decision making officers, at Enfield Civic Centre, receive two weather forecasts a day and routinely monitor these throughout each day and night during the winter maintenance period. Highways duty decision making officers will also receive supplementary reports at other times of the day, dependent on the severity of the weather. The Vaisala Bureau database provides access to temperature and sensor data and records the weather during the winter maintenance period.
- 4.5 Weather forecasts are received from the MetDesk from 1<sup>st</sup> November until 31<sup>st</sup> March each winter season. This may be extended dependent upon the long-range weather forecast.

## 5. SUPERVISORY AND OPERATIONAL PERSONNEL

### 5.1 Client Officers

To cover the client responsibilities identified in section 2, the Council will directly employ the following officers:

CARRIAGEWAY WINTER MAINTENANCE	FOOTWAY WINTER MAINTENANCE
Director of Environment & Operational Services	Director of Environment & Operational Services
Head of Highway Services	Head of Public Realm Services
1 x Group Engineer	Senior Operations Manager
1 x Principal Highway Officer	
2 x Senior Highway Officers	

The percentage of time each officer will be required to allocate to winter maintenance activities will vary from year to year depending on the:

- severity of weather conditions
- frequency and extent of salting/snow clearance activities
- competence/reliability of operational contractors
- competence/reliability of plant and materials

### 5.2 Operational Personnel

The provision of labour for operational activities is the responsibility of the Council's Highways Contractor (Ringway Jacobs) and Enfield's Street Cleansing Services teams

The Highways Contractor, Ringway Jacobs, will provide 24-hour cover during the winter maintenance season and during operational periods: 1<sup>st</sup> November until 31<sup>st</sup> March. Any extensions to the service will be monitored and agreed in advance, where possible, of any forthcoming weather events.

### **5.3 Rotas/Standby Arrangements**

Rotas/standby/call out arrangements for carriageway winter maintenance operations are formulated and implemented by the Highways Services Contractor.

### **5.4 Health and Safety**

All staff employed directly by the Council are required to comply with corporate and departmental safety arrangements. Contractors will need to demonstrate to the satisfaction of client officers that they comply with all relevant current health and safety legislation and their approved method statement.

## **6. PLANT & VEHICLES**

6.1 The Contractor will provide compliant gritting vehicles for the winter season.

6.2 Full fleet inventory. (see appendix 3 below)

## **7. CONTRACTOR'S OPERATIONAL COMMUNICATIONS SYSTEMS**

7.1 All gritter drivers are provided with mobile phones to ensure communications are maintained with the Contractor's Depot (or Service Control Centre for out of hours) and the Contractor's supervisors.

7.2 All contractor's supervisory staff will be provided with mobile phones to enable them to keep in contact with the Service Control Centre and emergency services.

## **8. MATERIALS & STORAGE FACILITIES**

8.1 Dry salt is purchased from dedicated salt mines in the United Kingdom. The material is of a high quality and is supplied ready crushed, graded and suitable for loading straight into gritting vehicles.

8.2 Salt stocks are held at the Contractor's Depot.

8.3 The minimum stock of salt to be held at the Contractor's Depot at the beginning of the winter season is 1000 tonnes. A salt stock management system is used to ensure a minimum salt stock of 500 tonnes is retained throughout the season. Salt stocks are replenished by the contractor. Towards the end of the winter season and only with the agreement from the client, the quantity held will be reduced allowing for new salt to be delivered and used year on year.

8.4 In extreme circumstances where we may find that salt levels are significantly reduced, Mutual aid would be sought from adjoining boroughs or Transport for

London. In the event of this situation continuing a localised salt cell may be introduced, with salt distribution being managed by Transport for London and the Department for Transport.

## **9. BUDGET**

- 9.1 Winter maintenance of principal roads, borough roads and footways is funded from the Council's revenue accounts.
- 9.2 Budget provisions for winter maintenance activities are reviewed annually. Assessment of budget needs is based on historic fixed and variable costs involved in service provision.

## **10. MEDIA COMMUNICATIONS**

- 10.1 Highway Services have a dedicated winter service web page (Gritting and Snow Clearance) on the Council's web site to provide information to the public during winter. This information comprises, treatment route plans and self-help guidance.
- 10.2 All Winter Maintenance decisions are shared with other weather critical departments throughout the Borough, adjoining boroughs and Transport for London. (see appendix 6)
- 10.3 If prolonged periods of snow or ice were to be predicted and/or occurred, public announcements/warnings would be distributed via the Council's web site, Twitter, Facebook and possibly the local radio, local press and the Council's free newspaper. The Council also maintains close links with the police and other emergency services, other Boroughs, Transport for London, and their agencies.

## **11. PERFORMANCE MONITORING**

**Purpose** - To determine a measure of efficiency in undertaking winter service salting operations.

**Description** - The percentage of occasions that all salting routes were completed within the planned salting time.

**Definition** - The percentage is calculated from the total number of salting treatments over the winter period. The winter period will vary according to climatic conditions and from year to year.

**Reasoning** - To maintain a network free from icy conditions it is essential to complete all salting operations before the onset of freezing conditions leading to the formation of ice. E.g. That treatment is completed before the weather forecast predicted a zero temperature time.

## 12. DECISION MAKING PROCEDURES

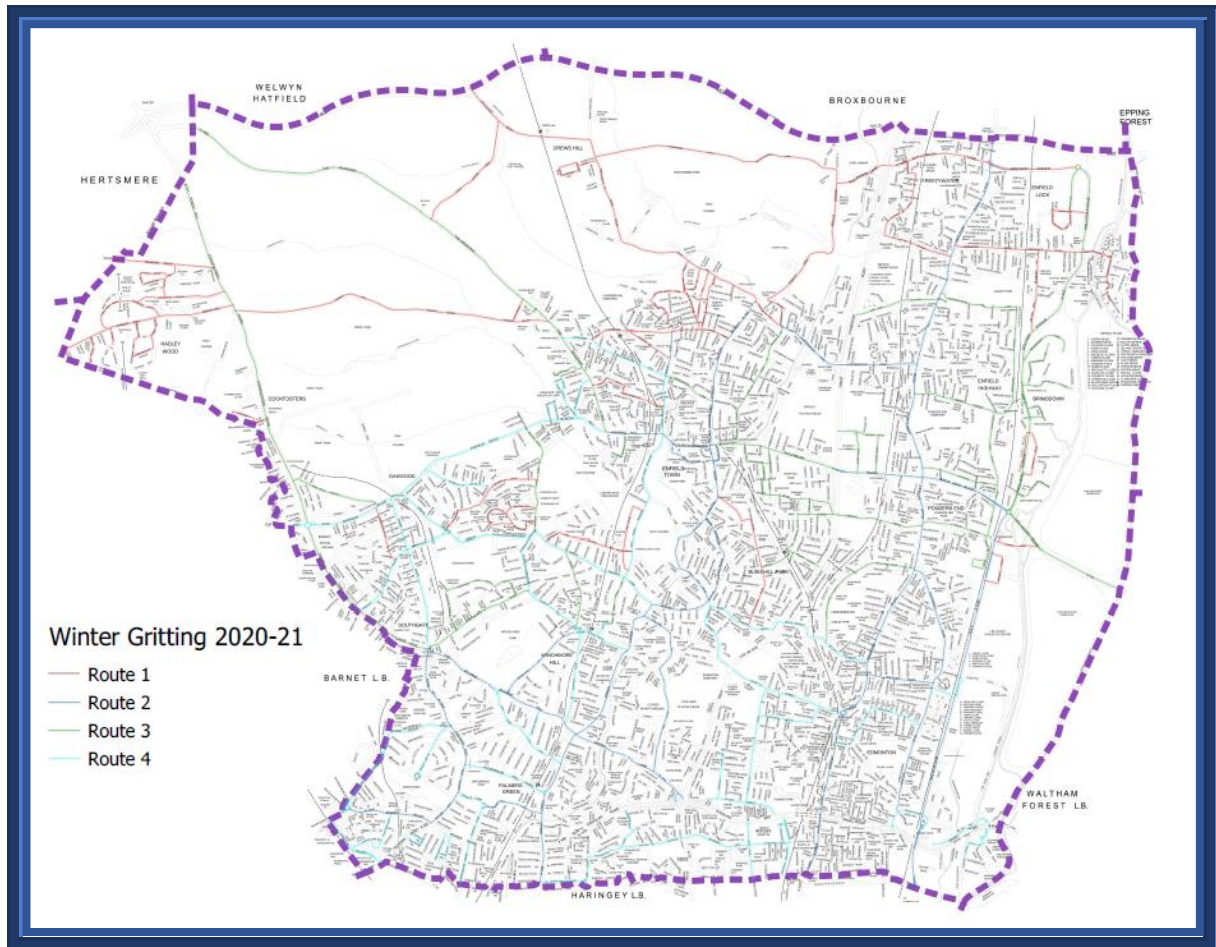
The process of deciding when to treat carriageways is as follows:

Between 1st November and 31<sup>st</sup> March each winter year, daily forecasts are obtained by the Highways duty decision making officers using a direct link with MetDesk forecasting. These forecasts are read in conjunction with actual temperature readings and sensor data from the boroughs' weather station located at The Ridgeway. The temperature forecast along with thermal mapping information enables the Highways duty decision making officers to determine when to grit the priority 1 network or other selected routes from within this network. A forecast is obtained between 1200 and 1500hrs each day, generally it is received by midday of each day. A further forecast is received at approx. 1800hrs. If weather conditions change dramatically from that which is forecasted, the weather forecasters will telephone the Highways duty decision making officer with the updated forecast and this will also be uploaded onto the bureau service.

- When all the predicted conditions are known, the Highways duty decision making officer refers to a decision matrix to determine what action will be necessary.
- Depending on the forecast, a visual inspection may be made by the Highways duty decision making officers at specific points in the Borough to assist with the decision and review road conditions.
- Following the visual inspection, a decision is made by the appropriate Highways duty decision making officer(s) whether to fully salt, or to retain on standby to cover for any rapidly changing conditions.

## APPENDIX 1

### Map of Carriageway Priority 1 Gritting Routes

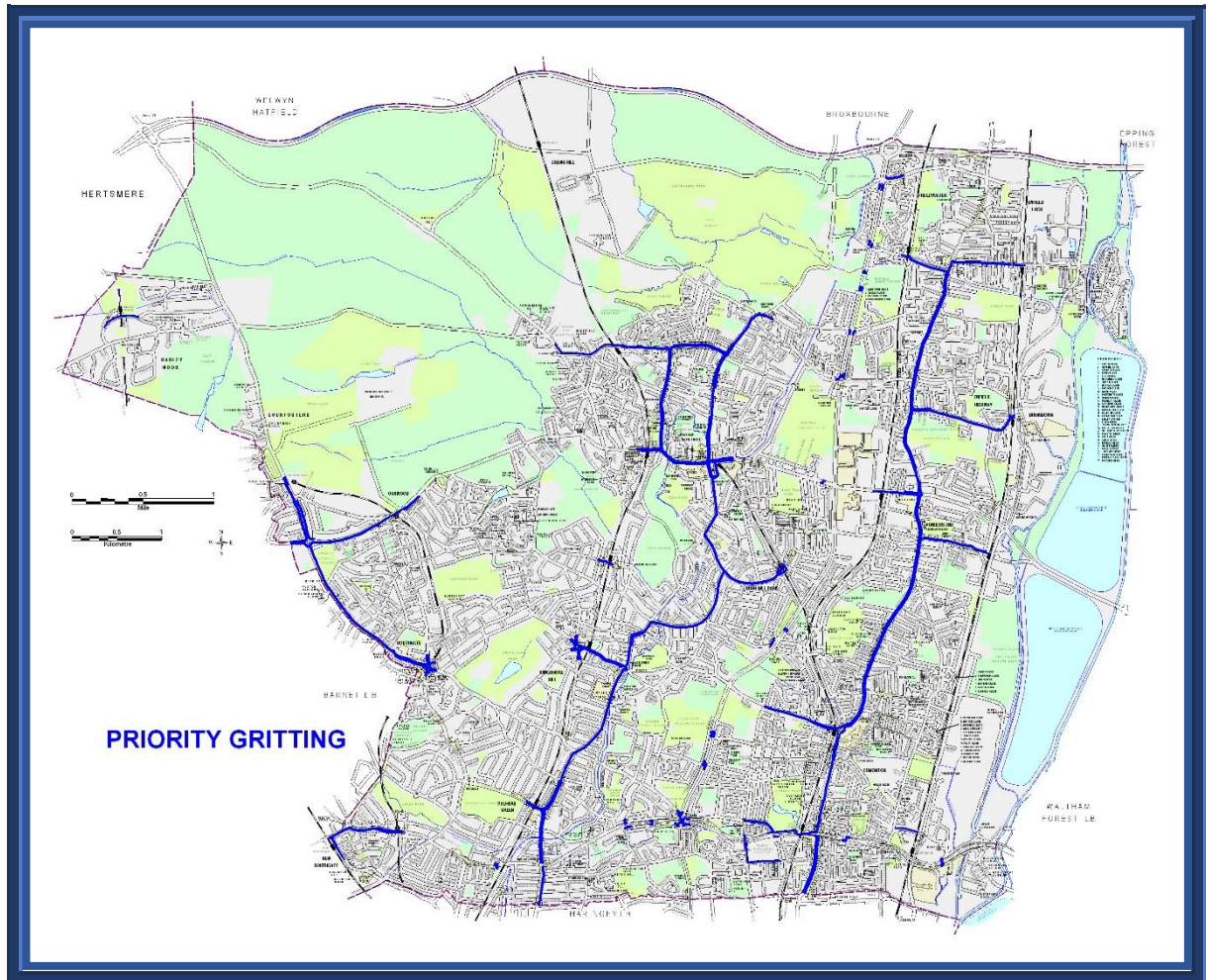


An interactive Winter Gritting Map can be found at

<https://new.enfield.gov.uk/services/roads-and-transport/gritting-and-snow-clearance/>

## APPENDIX 2

### Map of Strategic Footway / Footpaths Gritting Routes



### APPENDIX 3

#### (Contractor's Vehicle Fleet Inventories)

<b>No. of Vehicles</b>	<b>Vehicle Type</b>	<b>Body</b>	<b>Load Capacity</b>
4 number vehicles	Mercedes Arocs	Econ body	6m3
1 spare vehicle	Mercedes Arocs	Econ body	6m3



## APPENDIX 4

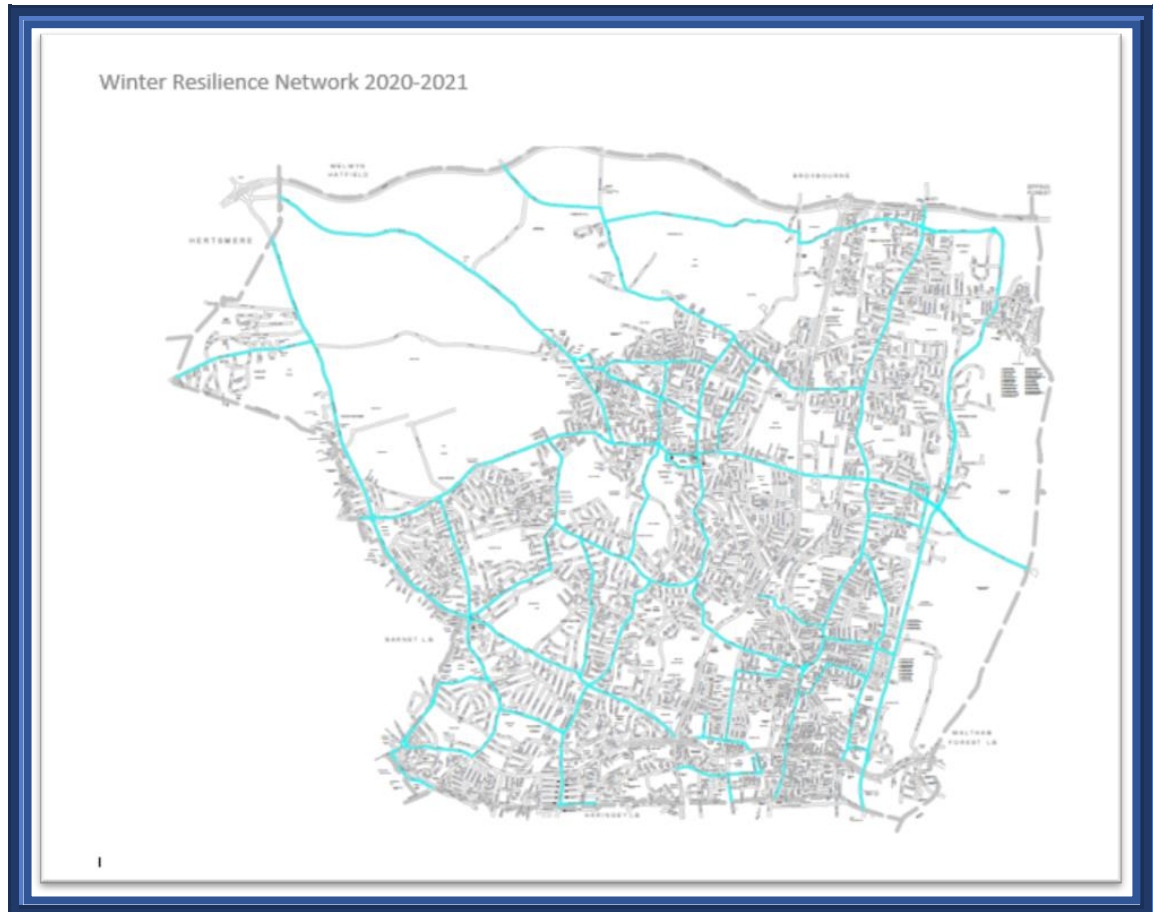
### MetDesk Definitions

#### Example below

Contact a Forecaster: 01296 628 373		highways@metdesk.com									
<b>24 Hour Summary for London Borough of Enfield</b>											
Forecast Issued:	30th April 2019 17:18:06 BST	Forecaster:	Helen Checketts								
Forecast Period:	Tuesday 30/04/19 12:00 to Wednesday 01/05/19 12:00	Forecaster DDT:	01296 628373								
Headline	EVENING UPDATE: NO CHANGES - RSTs WELL ABOVE ZERO TONIGHT										
Confidence	HIGH										
General Synopsis	Skies remaining largely clear during the first part of the night, before cloud builds towards dawn. RSTs well above zero tonight. Mostly cloudy and dry tomorrow morning.										
<b>Forecast Hazards and Temperatures</b>											
Domains	Readiness Colour	Min RST	RST < 0	Min Air	Ice	Hoar Frost	Snow / Level (m)	Drifting	Heavy Rain	Fog	Freezing Rain
Enfield Area Wide	GREEN	PS 6.5	N	PS 4.9	N H	N H	N H N/A	N H	N H	N H	N H
Snow Summary	None.										
<b>Wind Summary</b>					<b>Readiness Colour Coding</b>						
Enfield Area Wide	30/04/19 1200-1800	30/04/19 1800-0000	01/05/19 0000-0600	01/05/19 0600-1200	<b>GREEN</b>	Road surface temperatures are expected to remain above plus 1C (or above 2C on a low confidence scenario)					
Direction	W	SE	S	SW	<b>AMBER</b>	1. Road surface temperatures are expected to drop to between (and including) zero and 1C 2. Road surface temperatures are expected to drop below zero but roads are predicted to remain dry 3. On a low confidence marginal forecast, amber may be used if road surface temperatures are expected to drop between 1 and 2C					
Speed (mph)	1-5	4-7	3-5	3-4	<b>RED</b>	Road surface temperatures are expected to fall below freezing with ice and/or hoar frost and/or snow accumulations and/or freezing rain likely.					
Gust (mph)	11	15	8	10							

## APPENDIX 5

### Resilience Gritting Network Map (Ref: National Salt Shortage)



**APPENDIX 6**

**Decision Distribution List**

<b>Enfield Distribution List</b>
Communications Team
Emergency Planning
Facilities Management
Parking Services
Street Cleansing Services
Transport Operations
Waste Services
<b>External Partners Distribution List</b>
Barnet Council
Haringey Council
North London Waste Authority
Transport for London
Waltham Forest Council