

Royal Borough of Windsor and Maidenhead

Winter Service Plan



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CONTENTS

Section		Page
	External Distribution List	1
	Contents	2
	List of Appendices	3
1	Introduction	4
2	Winter Service Objectives	4-6
3	Winter Service Operations	6-8
4	Communication between the council and contractor	8
5	Role of the Winter Service Duty Manager	8-9
6	Weather Forecast Information	9-10
7	Salting	10-11
8	Public Media and Communications	11
9	Budgets	12
10	Appendices	13-33

LIST OF APPENDICES

APPENDIX A	Primary Salting Routes Secondary Salting Routes
APPENDIX B	Guidance Notes for duty managers regarding forecast information
APPENDIX C	Decision Matrix Guide
APPENDIX D	Treatment Matrix Guide
APPENDIX E	Salt Bins
APPENDIX F	Map of Road Weather Stations/Sensors
APPENDIX G	Precautionary Salting Process Map
APPENDIX H	Snow Clearing Process Map

1. INTRODUCTION

Winter Service – Statutory Duty

The legal position relating to the Highway Authority's responsibility in respect of the winter service is set out in an amendment to Section 41(1) Highways Act 1980 (c.66) (duty of highway authority to maintain the highway).

(1A) in particular, details that a highway authority is under a duty to ensure, so far as is reasonably practicable, the safe passage along a highway is not endangered by ice or snow.

The winter service that the Royal Borough of Windsor and Maidenhead ("the council") provides is believed to be sufficient, so far as is reasonably practical, to discharge the duty imposed by the legislation. However, it is important to recognise that the council has to prioritise its response to deal with winter weather due to logistics and available resources.

1.1 Winter Service Standards

In order to respond as quickly and efficiently as possible to its responsibilities the council has adopted policies and standards for each of the winter service activities and these are detailed within this document.

The council provides a winter service which, as far as reasonably practicable will:

- minimise the risk of loss of life and injury to highway users, including pedestrians and preventing damage to vehicles and other property
- keep the highway free from obstruction and thereby avoiding unnecessary delay to passage.

1.2 Council Maintained Highways

The council delivers the winter service on the borough's maintained highways.

1.3 Motorways and Trunk Roads

The Department for Transport (DfT) is the highway authority for motorways and trunk roads in the borough and National Highways acts for the DfT in this respect.

Responsibility for the operational maintenance of the motorways and trunk roads lies with National Highways. RBWM has no responsibility for the winter service activities on these roads. Close liaison exists between RBWM and National Highways during the winter service operational period.

2. WINTER SERVICE OBJECTIVES

The council's winter service policy follows the recommendations issued by the UKRLG (UK Road Liaison Group) and takes into account the recommendations contained in "Well Managed Highways Infrastructure" and NWSRG guidance. These documents are reviewed annually, and any recommendations are included within our policy where practical. Consistency with the policies of neighbouring authorities is considered and applied when reasonably practicable.

2.1. Salting

The council aims to provide a winter service enabling as far as is reasonably practical the safe movement of traffic on all A and B roads, and other well trafficked C roads throughout the borough.

Precautionary salting and / or the clearing of snow on the Primary Salting Routes will be carried out based on the information received from the weather forecasting service.

The primary road network is broken down into 4 individual salting routes.

This represents approximately **36%** of all highways (excluding motorways and trunk roads) in the geographical area of the borough.

The total length of the Primary Salting network is **149 miles (240 km)**.

The Secondary Salting Routes will only be salted and / or cleared of snow during particularly severe and prolonged hazardous weather conditions and where resources allow. The route includes: some busier residential roads; bus routes; roads leading to schools and hospitals; and rural roads which may become hazardous if left untreated during prolonged periods of particularly severe weather conditions.

The total length of the Secondary Salting network is **36 miles (58 km)**, which represents approximately 9% of the total highway network.

These routes are detailed in Appendix A.

Our policy is not to treat any of the footway network unless in extreme conditions and then only when resources are available.

Plans on the salting routes can be found on the borough website

<http://maps.rbwm.gov.uk/winterservicesmap.htm>

Consideration will be given to salting diversion routes where interruptions to the precautionary networks have occurred.

2.2 Footways

It would be impractical and financially draining to carry out precautionary salting of footways, pedestrian precincts or cycleways and therefore no provision has been made. However, there will be a certain amount of salt overspill onto footways and cycleways when precautionary salting is being carried out on adjacent carriageways. Salting of some footways and cycleways may be carried out on a priority basis during severe weather as resources permit, the decision for this will be taken by the council's highways department in conjunction with the contractor.

2.3 Car Parks

There is no provision for the salting of the council's car parks. However, during particularly severe and prolonged hazardous weather conditions and where resources allow council car parks will be gritted on an ad hoc basis following liaison with the council's car parks manager.

2.4 Snow Clearance

Objectives:

- to prevent injury or damage caused by snow
- to remove obstructions caused by the accumulation of snow (section 150 Highways Act 1980)

- to reduce delays and inconvenience caused by snow

Snow clearance on carriageways will be carried out on a priority basis.

The highway network is cleared in descending order of priority, concentrating firstly on the clearance of Primary routes followed by the Secondary routes (as per Appendix A), subject to limitations of resources and existing road layouts.

Once these routes are cleared resources may then be diverted to the clearance of the remaining roads on the network.

The contractor has in place contingency plans to call on other council contractors' labour and plant should the weather conditions be severe and prolonged.

Motorways and Trunk Roads

Clearance of snow from the motorways and trunk roads is the responsibility of National Highways and its consultants, contact will be maintained between National Highways and the council.

3. WINTER SERVICE OPERATIONS

The council provides its winter service through its highways term contractor Volker Highways ("the contractor") via their appointed duty managers. Their duties include all aspects of the winter service including:

- decision making with regards to when to salt
- carrying out the salting and snow clearing
- keeping to agreed timescales
- ensuring personnel are trained appropriately
- calibrating salt spreading vehicles at least annually
- maintaining appropriate salt stocks
- Carrying out risk assessments and putting control measures in place

See section 5.1 for more detail on the decision making process and role of the duty managers.

3.1 Winter Service Season

The winter service period runs from the second Monday of November to the first Sunday of April but may be extended further into April depending on the prevailing weather conditions.

3.2 Salt

Currently the council uses a product called Safecote across the borough for all salting. The potential benefits when added to dry rock salt are as follows:

- 82% less corrosive than rock salt – reduced maintenance of vehicles
- No wash down of vehicles required
- Has anti-caking agent that prevents lumps forming and makes loading easier

- 30% less is required e.g. spread rate of 7gm per square metre should achieve the same as 10gm per square metre of rock salt
- Targeted spread – reduced snaking effect
- Faster reactivity – does not require trafficking
- Improved residual characteristics – enhanced reactivation
- Less damage to road surfaces
- Bio-degradable
- Environmentally friendly – reduced chloride usage

There is currently a minimum stock level in place of 300 tonnes.

To be effective, salt / Safecote must be spread evenly and at rates to suit prevailing weather conditions. Excessive salt spreading is undesirable on both environmental and economic grounds. It is therefore essential that the spreading equipment is calibrated annually and the controls marked accordingly for spreads of:

- 10 g/m² for normal pre-salting and 20 g/m² and 40 g/m² for more severe conditions using normal rock salt
- 7 g/m², 14g/m² and 28g/m² respectively using Safecote
- Details of recommended treatments for different conditions are set out in Appendix D but in all cases the contractor will be responsible for ensuring appropriate salt spread rates for the prevailing weather conditions.

3.3 Calibration of spreaders

- spreaders to be calibrated before the start of each season and following incidents or conditions that may require recalibration
- calibration procedures to be in accordance with recommendations in Well Managed Highway Infrastructure and NWSRG guidance

3.4 Salt bins (see Appendix E)

Highway Bins

There are at present 79 salt bins that are provided throughout the borough. These are repaired and replenished throughout the winter period as necessary. At the end of the winter, all salt bins should be collected, salt returned to the stockpile and the bins cleaned and stored away during the summer months.

The criteria for provision of salt bins is as follows :-

- (i) The bin should not be sited on a salting route unless it is intended for use on an adjoining road, which is not on the salting route.
- (ii) Only sited where there is a steep and / or hazardous gradient, and where there are occupied buildings nearby.

- (iii) If it is possible for a lorry to gain access in order to install a bin and fill it with salt, then a location near subway or footbridge is acceptable.
- (iv) In cases of special needs.

No further salt bins will be provided unless follows these guidelines.

Salt bins will only be refilled during office hours Monday to Friday 09.00 – 17.00.

Non Highway Bins

In addition to the 79 yellow highway bins there are approximately another 94 green salt bins located throughout the borough, which are the property of parish councils or residents associations who are responsible for their up keep and future maintenance.

4. COMMUNICATION BETWEEN THE COUNCIL AND THE CONTRACTOR

4.1 Customer Services Centre (CSC)

The CSC are responsible for dealing with requests, enquiries and complaints from customers across a range of services including the winter service. Routine calls regarding policy / gritting routes etc. will be handled direct by the CSC, however during normal working hours calls requiring immediate action will be passed to the duty manager for any action they deem necessary.

4.2 Control Room

Outside normal working hours the duty manager can be contacted via the council's control room; therefore emergencies reported by customers or emergency services will be taken direct by the council's control room and directed to the duty manager. The contractor is required to provide the council with a comprehensive list of phone numbers in order that the council's control room can immediately pass necessary information out of hours to the duty manager.

5. ROLE OF WINTER SERVICE DUTY MANAGERS

The contractor will provide the necessary duty managers throughout the operational winter service period on a rota basis. Each duty manager is available 24 hours a day during his / her week on duty to cover the geographical area of the borough.

The duty manager is responsible for (this is not an exhaustive list):

- receiving forecast information from the forecast provider MeteoGroup
- monitoring current weather conditions
- issuing salting instructions for the precautionary salting networks
- posting the forecast decision on the MeteoGroup system
- assisting and advising during snow events and severe weather events
- establishing liaison/contact with the police, the council's control room, and the CSC as necessary
- receiving calls during working hours from the CSC/control room in respect of the winter service and taking any action deemed necessary
- receiving calls out of normal working hours from the council's control room in respect of the winter service and taking any action deemed necessary

- specific responsibility for liaising directly with the MeteoGroup forecaster and disseminating winter service information to the council, neighbouring boroughs and emergency services as necessary.

5.1 Decision making procedures

All decision-making in respect of the winter service salting routes is the responsibility of the duty manager on behalf of the council.

The council may pass information received by customers, emergency services or other agencies to the duty manager, and there may be liaison between the duty manager and the council regarding the ongoing winter service.

Using the forecast data provided, the duty manager will make his / her decision regarding precautionary salting as appropriate. To assist with this process, guidance notes are provided as shown in Appendices B, C and D respectively.

Flow charts showing the procedures for salt spreading and snow clearing operations are shown in Appendices G & H respectively.

The duty manager's decision is recorded on the MeteoGroup system and they instruct the drivers to mobilise. This is done via telephone and confirmed by email.

6. WEATHER FORECAST INFORMATION

Weather Information Systems

An effective and efficient winter service is only possible with reliable and accurate information about weather conditions. Without this information it is not possible to make effective and appropriate decisions on the winter service operations. The council utilises the best weather information available from its weather forecast provider, currently MeteoGroup, to ensure that decisions are based on the most accurate data available.

6.1 Weather Reports

During the winter service period the council and its contractor receive detailed weather forecasts and reports specifically. This data is based upon national weather forecasts and the data collected from 3 roadside weather stations based at M4 Membury, A332 Windsor, A355 Tuns Lane, Slough which are used for the production of local forecasts by the MeteoGroup. These sites were chosen to reflect the 3 climatic zones within the County of Berkshire. In addition there are a further 7 sites across the county that provide real time meteorological data, of which two are forecasting sites (M4 Shurlock Row and A34 Membury Bypass).

6.2 Weather Forecasts

The weather forecaster is MeteoGroup. The information received each day includes the following

- (i) detailed 36 hour forecast
- (ii) evening update forecast
- (iii) realistic site specific temperature graphs (three sites)
- (iv) site specific snow prediction (two sites)
- (v) early morning summary forecast

(vi) 2 – 10 day forecast

The 24-hour forecast is received at approx. 1300 hours each afternoon. The main features of this forecast are as follows:-

Readiness Colour

This is based on the traffic light colours: green, amber or red. The definitions are:-

Green - no snow or ice expected
Amber- risk of snow or ice
Red - ice, snow or drifting snow expected

Hazards

This section includes the hazards causing the red or amber readiness colours as well as other weather hazards such as heavy rain, high winds or fog, which could accompany a green readiness colour. Where possible a qualifying time is given. For example, icy patches expected after 2300 hours.

Minimum Temperatures

Minimum air and road temperatures for, all roads, urban roads and bridge decks are provided.

Confidence Statements

This consists of high, moderate or low confidence for each of the hazards described above, together with a qualifying statement. For example: low confidence regarding extent of showers this evening but high regarding road temperatures falling below zero.

24 Hour Weather Summary

This is a general summary of the forecast for the period from midday to midday.

At approximately 1900 hours each evening, a forecast update is issued by MeteoGroup and is viewed by the duty manager. If further information is required the duty manager can make use of the 24-hour consultancy service provided by the MeteoGroup when a discussion can be held with the duty forecaster (see section 5.1 for further information on decision making procedure).

7. SALTING

7.1 Precautionary Salting

Precautionary salting will take place on the scheduled routes on a pre-planned basis to help prevent the formation of ice, frost and / or the accumulation of snow on carriageway surfaces.

7.2 Post Salting

Post salting will necessarily take place on the scheduled precautionary salting network to treat ice, frost and snow that may have already formed on carriageways in between salting runs. Post salting may in exceptional circumstances be carried out on roads or sections of roads beyond the scheduled precautionary salting routes such as in the case of burst water mains for example.

7.3 Spot/ad-hoc Salting

Spot salting may take place only on parts or sections of the scheduled Primary Salting Route either to help prevent formation of ice, frost and / or accumulations of snow or as a treatment to ice, frost and the accumulation of snow that has already formed on the carriageway. The duty manager will evaluate and consider if spot treatment is suitable and reasonably practicable, using the following criteria below:

- has the request come from the emergency services?
- is there an ongoing emergency at the location?
- do we have multiple reports of hazardous conditions at the location?
- what are the prevailing and forecast weather conditions at this location based on the latest forecast from the weather forecast provider?

If the road is not on the Primary Salting Route no spot/ad hoc salting will take place. Instead, the matter will be passed back to the police by the council following liaison with the duty manager so that they can use their powers to close the road if they deem it necessary.

7.4 Instructions for Salting the Precautionary Network

Instructions for precautionary salting of the network will be issued as per the tables at Appendices C and D.

All winter service vehicles are in radio / mobile phone contact with the depot in order that instructions can be passed and current information relayed back from supervisors to operatives. All vehicles are equipped with GPS, which can track the vehicle, record its speed and when the vehicle is spreading the salt.

The duty manager will issue the instructions for precautionary salting of the network for each of the precautionary routes. These decisions will be posted on the MeteoGroup system.

7.5 Route Treatment Times

The response time for precautionary salting of the Primary Salting Route is 1 hour from the instructed commencement, and the treatment time is 3 hours although this may be extended in severe weather conditions.

8. PUBLIC AND MEDIA COMMUNICATIONS

8.1 Neighbouring authorities and other agencies

The Winter Service Plan is circulated to all adjacent authorities and winter maintenance decisions are emailed daily by the duty manager via the MeteoGroup system to neighbouring authorities throughout the winter season and vice- versa.

8.2 The media

Communication with communities, businesses and emergency services during winter is essential to delivering an effective service. Local media organisations will be informed when instructions for salting the precautionary network are issued. The duty manager will keep the council informed of its winter service decisions in order that the council website can be updated regularly and the council also uses social media to communicate decisions and actions taken.

9. BUDGETS

It should be noted that whilst snow clearing operations will be undertaken in accordance with the Winter Service Plan, there is no budget for this work.

However, a supplementary report will be prepared and submitted to the council as soon as possible after snow clearing has been completed in order for any necessary budgetary adjustments to be agreed.

10. APPENDICES

APPENDIX A

Primary Routes
<u>Ascot</u>
Cheapside Road
Chobham Road
High Street – Ascot (A329)
Station Hill (A330)
Watersplash Lane – to Borough Boundary
Windsor Road (A332) to Borough Boundary
Winkfield Road (A330) to junction with Kennel Ride
New Mile Road
<u>Bisham</u>
Marlow Road to B. Boundary & entrance to bridge (Plant to turn 40m prior to bridge – DO NOT CROSS BRIDGE)
Quarry Wood Road
<u>Bray / Holyport / Braywoodside</u>
Ascot Road (A330) – north of A3095 junction (becomes Hawthorn Hill Road)
Ascot Road (A330) – south of A308 (becomes Touchen End Road)
Ascot Road (A330) – Holyport Green to Moor Farm
Bray Road (B3028)
Braywick Road (A308)
Cannon Hill (A308)
Drift Road – Howe Lane to Borough Boundary
Fifield Road
Fifield Lane
Forest Green Road (B3024)
Harvest Hill Road
Hawthorn Hill Road (A330) – becomes Touchen End Road (A330)
Hibbert Road (part)
High Street – Bray (B3028)
Holyport Road – including section to A330 Ascot Rd
Howe Lane – Drift Rd to B3024 junction – to Borough Boundary
Littlefield Green (B3024)
Moneyrow Green (from Holyport to Forest Green Road)
Oakley Green Road (B3024 & B3383) to A308
Paley Street (B3024)
Stompits Road
Touchen End Road (A330) – becomes Ascot Road (A330)
Upper Bray Road (B3028)
Windsor Road (A308)
<u>Burchetts Green</u>
Bath Road (A4)

Burchetts Green Road
<u>Cookham</u>
Cannondown Road (B4447)
Choke Lane
Church Road
Dean Lane
High Street – Cookham (B4447)
Hills Lane
Lower Cookham Road (A4094)
Lower Road
Maidenhead Road (B4447)
Marlow Road (A308)
Ray Mead Road (A4094)
Spring Lane
Station Hill
Sutton Road/Ferry Lane (A4094) – Sutton Close to Sheepphouse Road
Sutton Road/Ferry Lane (A4094) – to Borough Boundary
Switchback Road North (B4447)
The Pound (B4447)
Whyteladyes Lane
Winter Hill Road
<u>Datchet</u>
Ditton Road (B376) joins Horton Rd & Majors Farm Rd B470
High Street – Datchet
Horton Road (B376) – from B470 leading to Datchet Road, Horton
London Road (B470) – becomes Majors Farm Road
Majors Farm Road (B470) to Borough Boundary
Queens Road
The Green – Datchet (B376)
Riding Court Road.
<u>Horton</u>
Horton Road, Horton, From Stanwell Road to Boundary
<u>Eton</u>
Eton Road (B3026)
Eton Wick Road (B3026) to cattle grid at Borough Boundary
Keats Lane – at end of B3026 Eton Wick Road
Pococks Lane (B3026)
Slough Road (B3022) – north to Borough Boundary
Slough Road (B376) – becomes Datchet Road (B376)
High street Eton
Eton Court
<u>Hurley</u>
Henley Road (A4130) to Borough Boundary

<u>Knowl Hill</u>
Bath Rd (A4) to Borough Boundary (by junction with Knowl Hill Common & Star Lane)
<u>Maidenhead</u>
All Saints Avenue
Altwood Road – including Haddon Road
Bad Godesberg Way (A4)
Bath Road (A4)
Belmont Road
Boyn Hill Avenue
Boyn Hill Road
Boyn Valley Road
Bridge Avenue
Bridge Road (A4) to Borough Boundary over Maidenhead Bridge
Bridge Street
Broadway
Castle Hill (A4)
Cookham Road (B4447)
Courthouse Road
Craufurd Rise (A308)
Curls Road
Fane Way (Larchfield Road to Curls Road)
Forlease Road
Frascati Way
Furze Platt Road (A308)
Gardner Road (B4447)
Gardner Road/Switchback Road South to A308 junction
Grenfell Place
Grenfell Road
Gringer Hill (A308)
Henley Road (A4130)
High Street – Maidenhead
Highway Avenue
King Street (A308) – junction with Queen Street to Braywick Road
Kings Grove
Larchfield Road
Norden Road
Norreys Drive
Oldfield Road (B3028)
Park Street (Broadway to York Road)
Pinkneys Drive (Henley Rd to A308 junction)
Pinkneys Road
Queen Street
Sheephouse Road

Shoppenhangers Road
Spencers Road
Stafferton Way inc. Link Road Section
St Cloud Way (A4)
St Ives Road
St Marks Crescent
St Marks Road
Suffolk Road (Curls Road to Norreys Drive)
Wootton Way
York Road
<u>Old Windsor</u>
Burfield Road (B3021)
St Lukes Road (B3021)
Straight Road (A308)
Crimp Hill – to Borough Boundary
<u>Shurlock Row</u>
Binfield Road (B3018) – from The Straight Mile to Borough Boundary
The Straight Mile (B3018) within Borough Boundary
<u>Sunninghill / Sunningdale</u>
Bagshot Road (B3020)/Sunninghill Road (B3020) - to Borough Boundary
Brockenhurst Road (A330)
Broomhall Lane (B383)
Buckhurst Road (B383) to Borough Boundary
Devenish Road (A330)
High Street – Sunninghill (B3020)
Kings Road
London Road (A30) Borough Boundary to Borough Boundary
London Road (A329) East to Borough Boundary
Rise Road
Silwood Road (B383)
Station Road (B383)
Sunninghill Road (B3020)
<u>Waltham St Lawrence / White Waltham / Cox Green</u>
Broadmoor Lane/Twyford Road (B3024) to Borough Boundary
Cannon Lane (Bath Rd to Woodlands Park Rd junction)
Church Hill
Highfield Lane
Milley Road / Milley Lane – to Borough Boundary
Sherlock Road (B3024 Broadmoor Road to B3018 The Straight Mile)
Shoppenhangers Road
The Street (becomes Milley Road)
Waltham Road to Borough Boundary
Woodlands Park Road

<u>Windsor</u>
Albert Road (A308)
Alma Road – Goslar Way to Clarence Road
Arthur Road
Charles Street
Clarence Road – east of A308 roundabout
Clarence Road (B3024) – west of A308 roundabout
Clewer Hill Road
Datchet Road (B3021)
Datchet Road (B376) to Borough Boundary
Datchet Road (following on from King Edward VII – B470)
Dedworth Road (B3024)
Frances Road
Goslar Way (A308)
Goswell Road
High Street – Windsor, follows on from Sheet Street
Imperial Road (B3175)
King Edward VII Avenue (B470)
Kings Road (A332) – to junction with Sheet Street (B3022)
Maidenhead Road – leads to Arthur Road
Maidenhead Road (A308)
Mounts Hill (B383) – from Borough Boundary to Borough Boundary
Osborne Road (A308)
River Street
Sheet Street (B3022)
Sheet Street Road (A332) to Borough Boundary
Smiths Lane
Southlea Road (B3021)
St Leonards Road (B3022)
Thames Avenue (B470)
Thames Street (B3022)
Vale Road (B3025)
Victoria Street
Windsor & Eton Relief Road (A332) – to Borough Boundary
Windsor & Eton Relief Road (A335) – to Borough Boundary
Windsor Road (B470)
Winkfield Road (B3022) from Clewer Hill Rd to Borough Boundary
<u>Wraysbury / Horton</u>
Coppermill Road
Datchet Road
High Street – Wraysbury
Staines Road (B376) to County Boundary and M25 interchange
Stanwell Road to Borough Boundary
Station Road
Welley Road (B376)
Windsor Road (B376)

Wraysbury Rd (B376) – following Staines Rd to County Boundary by Lammas Drive junction

Secondary Routes
<u>Ascot</u>
St Georges Lane and Wells Lane– Loop from A329 to A329.
<u>Bray / Holyport / Braywoodside</u>
Hibbert Road (part)
<u>Burchetts Green</u>
Burchetts Green Lane
<u>Cookham Dean / Cookham Rise / Cookham</u>
Bigfrith Lane
Grubwood Lane
High Road
Hockett Lane – Bigfrith Lane to Winter Hill Road
Long Lane
Maidenhead Road – B4447 Maidenhead Rd to B4447 Cookham Rd
Road between Bigfrith and Church Road
School Lane (Cookham Village)
Winter Hill Road – north of Choke Lane junction
<u>Datchet</u>
Ditton Park Road – to Borough Boundary
<u>Eton</u>
Colenorton Crescent – Moores Lane
<u>Hurley</u>
Hurley Lane
Hurley High Street
Temple Lane
<u>Knowl Hill / Warren Row</u>
Warren Row Road to junction Hatch Gate Lane
<u>Maidenhead</u>
Access road to the police and fire station
Badminton Road – including Great Hill Crescent
Blackamoor Lane (Ray Mill Road West to Ray Park Road)

Blenheim Road
Blenheim Road to Halifax Road
Camley Gardens
College Road
Cranbrook Drive
Fane Way (Curls Road to Norreys Drive)
Farm Road
Farmers Way
Furze Platt Halt (is part of Harrow Lane)
Halifax Road
Halifax Way
Harrow Lane
Headington Road (Farm Road to Camley Gardens junction)
Lancaster Road (Blenheim Road to Halifax Road)
Linden Avenue
Fire Station Court
Malvern Road
Oaken Grove
Park Street (Broadway to end of Cul-de-sac)
Queensway
Ray Mill Road East
Ray Mill Road West
Ray Park Avenue
Ray Park Road – becomes Ray Street
Rutland Road
Summerleaze Road – becomes Blackamoor Lane
Westborough Road
<u>Sunninghill / Sunningdale</u>
All Souls Road
Bedford Lane
Bouldish Farm Road
Charters Road
Church Road
Coronation Road – to Borough Boundary
Cross Road
Dry Arch Road
High Street – Sunningdale
Liddell Way
Lower Village Road
Lyndhurst Road – A330 Brockenhurst Rd to All Souls Rd
Oliver Road – East of A330 Brockenhurst Rd
Oriental Road – from Lower Village Rd to Sunninghill High St B3020
Queens Road
Ridge Mount Road
St Georges Lane – Between Oliver Road and Lower Village Road.
Victoria Road – All Souls Rd to A330 Brockenhurst Rd

<u>Waltham St Lawrence / White Waltham / Cox Green</u>
Bissley Drive
Brook Lane
Cox Green Lane
Cox Green Road – north of Shoppenhangers Rd roundabout
Hungerford Lane – east of Brook Lane junction
Foliejohn Way
Lowbrook Drive
Sawyers Crescent – Woodlands Park Rd to White Paddock western junction
School Road (West End)
Wessex Way
Westacott Way
Woodlands Park Avenue
<u>Windsor</u>
Aston Mead
Bolton Avenue
Bolton Road
Bulkeley Avenue
Burnetts Road – From Aston Mead to Smiths Lane
Dedworth Drive
Foster Avenue
Gallys Road
Guards Road
Hanover Way – From Dedworth Drive To Vale Road
Hatch Lane
Hemwood Road
Kentons Lane
Parsonage Lane
Peel Close
Perrycroft – Clewer Hill Rd to Rycroft junction
Ruddlesway
Rycroft
St Leonards Rd – north of A308 to Victoria Street
Springfield Road (Westmead to Bulkeley Avenue)
St Andrews Avenue – becomes St Andrews Crescent and Bell View
Testwood Road
Tinkers Lane
Tudor Way
Vansittart Road – between Arthur Road & Clarence Road
Westmead
White Horse Road
William Street
Wolf Lane
Wolf Lane to Foster Avenue

GUIDANCE NOTES FOR DUTY MANAGERS REGARDING FORECAST INFORMATION

- i) At approximately 1300 download all data from MeteoGroup and inspect 24 hour forecast and graph and appropriate maps (it is likely that your decision will be made at this time).
- ii) At approximately 19:00 download the evening update from MeteoGroup and inspect forecast graph and text for any updated information. The forecast graph will continue to have actual road surface temperatures plotted every hour until midday the following day. This information can be obtained any time by downloading from MeteoGroup. If a decision can still not be made it may be necessary to consult the forecaster at the MeteoGroup weather centre.
- iii) It is the responsibility of each duty manager to advise by email, if necessary, National Highways consultants of his / her decision regarding precautionary salting as soon as is practicable after the decision has been made.
- iv) It is the responsibility of each duty manager to record all action taken and file for future reference for a period of six years.

APPENDIX C

Decision matrix guide

Predicted road conditions

Road surface temperature	Precipitation	Wet	Wet patches	Dry
Expected to fall below 0.5° C	<u>No</u> rain <u>No</u> hoar frost <u>No</u> fog	Salt before frost	Salt before frost (see note a)	No action likely, monitor weather (see note a)
Expected to fall below 0.5° C	<u>No</u> rain <u>No</u> hoar frost <u>No</u> fog	Salt before frost	Salt before frost (see note a)	No action likely, monitor weather (see note a)
Expected to fall below 0.5° C	<u>Expected</u> hoar frost <u>Expected</u> fog	Salt before frost	Salt before frost (see note b/c)	Salt before frost (see note b/c)
Expected to fall below 0.5° C	<u>Expected</u> rain <u>BEFORE</u> freezing	Salt after rain stops (see note d)	Salt after rain stops (see note d)	Salt after rain stops (see note d)
Expected to fall below 0.5° C	<u>Expected</u> rain <u>DURING</u> freezing	<u>Expected</u> rain <u>DURING</u> freezing	Salt before frost, as required during rain and again after rain stops (see note e)	Salt before frost, as required during rain and again after rain stops (see note e)
Expected to fall below 0.5° C	<u>Possible</u> rain <u>Possible</u> hoar frost <u>Possible</u> fog	Salt before frost	Salt before frost	Monitor weather conditions
<u>Expected</u> snow	<u>Expected</u> snow	Salt before snow fall (note f)	Salt before snow fall (note f)	Salt before snow fall (note f)

The decision to undertake precautionary treatments should, if appropriate, be adjusted to take account of residual salt or surface moisture.

All decisions require continuous monitoring and review.

This is used for guidance only, duty manager to make final decision.

- a) Particular attention should be given to the possibility of water running across carriageways and other running surfaces e.g. off adjacent fields after heavy rains, washing off salt previously deposited. Such locations should be closely monitored and may require treating in the evening and morning, and possibly on other occasions.
- b) When a weather warning contains reference to expected hoarfrost, considerable deposits of frost are likely to occur. Hoarfrost usually occurs in the early morning and is difficult to cater for because of the probability that any salt deposited on a dry road too soon before its onset, may be dispersed before it becomes effective. Close monitoring is required under this forecast condition that ideally should be treated just as the hoarfrost is forming. Such action is usually not practicable and

salt may have to be deposited on a dry road prior to and as close as possible to the expected time of the condition.

- c) Hoar frost may be forecasted at other times in which case the timing of salting operations should be adjusted accordingly.
- d) If, under these conditions, rain has not ceased by early morning, crews should be called out and action initiated as rain ceases.
- e) Under these circumstances rain will freeze on contact with running surfaces and full pre-treatment should be provided even on dry roads. This is a most serious condition and should be monitored closely and continuously throughout the danger period.
- f) Weather warnings are often qualified by altitudes, in which case differing action may be required from each depot.

APPENDIX D

Treatment Matrix Guide for Salting Operations

Weather Conditions Road Surface Conditions Road Surface Temperature (RST)	Treatment			
	Air Temp	Safecote Salting (g / m ²)	Normal Salting (g / m ²)	Ploughing
Frost or forecast frost RST at or above -2 ^o C		7	10	No
Frost or forecast frost RST below -2 ^o C and above -5 ^o C		14	20	No
Frost or forecast frost RST at or below -5 ^o C and above -10 ^o C and dry or damp road conditions		14	20	No
Frost or forecast frost RST at or below -5 ^o C and above -10 ^o C and wet road conditions (existing or anticipated)		2 x 14	2 x 20	No
Light snow forecast (<10mm)		14	20	No
Medium / heavy snow forecast		2 x 14	2 x 20	No
Ice formed (minor accumulations)	above -5 ^o C	14	20	No
Ice formed	at or below -5 ^o C	2 x 14	2 x 20	No
Snow covering exceeding 30mm		14 – 28 (successive)	20 – 40 (successive)	Yes
Hard packed snow / ice	above -8 ^o C	14 – 28 (successive)	20 – 40 (successive)	No
Hard packed snow / ice	at or below -8 ^o C	salt / abrasive (successive)	salt / abrasive (successive)	No

Rate of spread for precautionary treatments may be adjusted to take account of residual salt or surface moisture.

APPENDIX E

Borough Maintained Highway Salt Bins

	Location of Salt Bin	Area	
1	Watersplash Lane – junction with Cheapside Road	Cheapside	
2	Watersplash Lane – junction with Dorian Drive		
3	Alleyns Lane – junction with Bradcutts Lane	Cookham Dean	
4	Bigfrith Lane – junction with School Lane		
5	Bigfrith Lane – top of access to Lower Coombe End		
6	Cookham War Memorial by Popes Lane		
7	Hills Lane – junction with Dean Lane		
8	Popes Lane – verge at back of parking area outside Valentine		
9	Cottage		
10	Stonehouse Lane – junction with Winter Hill		
11	Terrys Lane – by letterbox near junction Grange Road		
12	Honey Lane – junction with Henley Road		Hurley
13	Pudding Hill – junction with Warren Row Road		Knowl Hill
14/15	Belmont Park Avenue – junction with Belmont Park Road / Belmont	Maidenhead	
16	Road		
17	Brunel Road – near the Brunel Centre		
18	Castle Drive – junction with St Marks Road		
19/20	Clare Road – junction with Boyn Hill Road		
21	Courtlands – both ends of square		
22	Denham Close – junction with Wentworth Crescent		
23/24	Footbridge between Holmanleaze and Maidenhead Moor		
25	Kidwells Park Subways		
26/27	Malvern Road – junction with Queensway		
28	Moorbridge Road Subways		
29	Raymond Road – junction with St Marks Road		
30/31	Rushington Avenue – junction with Braywick Road		
32	Sainsbury’s Subways		
33	Stamford Road – junction with Wentworth Crescent		
34	Stamford Road – junction with Lingholm Close		
35	Cannon Lane – junction to Claires Court School		
36	Bramble Drive		
37	Hungerford Drive – outside 26		
38	Altwood Road - Spur off Altwood Road		
39	College Rise – junction with College Road		
40	Highway Avenue – outside shopping parade		
41	Brunel Road – by turning circle		
42	Derwent Drive – rear of No. 39		
43	Switchback Road North – adjacent to No. 21		
44	Sunderland Road – near shops		
45	Gainsborough Drive – junction with A329 London Road		North Ascot
46/47	Sutherland Chase – junction with Ancaster Road / Sutherland Chase cul-de-sac		

	Location of Salt Bin	Area
48	Hurstwood – junction with Woodlands Ride	South Ascot
49	Llanvair Drive – on grass verge at bottom of hill	
50	Priory Road – junction with Ridgemount Road	Sunningdale
51	Ridgemount Road – junction with London Road	
52	Armitage Court – junction with Branch Road	Sunninghill
53	Cardwell Crescent – junction with Truss Hill Road	
54	Fox Covert Close at junction – on north verge	
55	Highclere – on grass verge	
56	Kings Road – junction with Tenby Drive and Pinehurst	
57	Murray Court – junction with St Marys Hill	
58	Norton Park – north footway outside Jane Anne Court	
59	Quince Close – junction with Lower Village Road	
60	Sunninghill Footpath 36	
61	Truss Hill Road – junction with Lower Village Road	
62	Basford Way – on grass verge	Windsor
63	Bell View – junction with St Andrews Crescent	
64	Camm Avenue – junction with Keeler Close	
65	Camm Avenue – junction with Foster Avenue	
66	Duncannon Crescent – junction with Hemwood Road	
67/68	Franklyn Crescent – both ends	
69	Foster Avenue – junction with Wolf Lane	
70	Gilman Crescent – junction with Bryer Place	
71	Hemwood Road – junction with Stroud Close	
72	Hemwood Road – junction with Wilton Crescent	
73	Hemwood Road – junction with Wolf Lane	
74	Lovejoy Lane – on grass verge	
75	Perrycroft – junction with Rydings	
76	Washington Drive – junction with Wolf Lane	
77	Washington Drive – cul-de-sac junction at top of hill	
78	Wolf Lane – junction with Poolmans Road	
79	Rowland Close – junction with Hemwood Road	

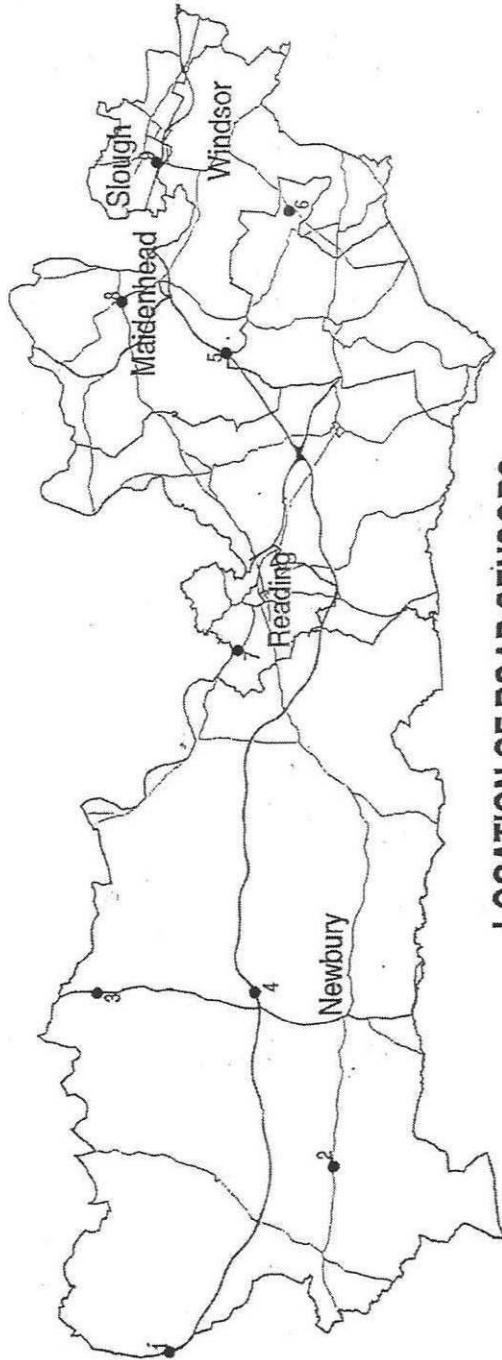
Parish/Ward and Resident Groups Maintained Salt Bins

Location of Salt Bin	Owner
Ancaster Drive, Ascot	Ancaster Lodge Residents Association
Balmoral Gardens, Windsor	Balmoral Gardens Residents
Laburnham Road Lower Boyndon Road Lower Boyndon Road junction with Clare Road Grenfell Road Kings Grove Lexington Avenue	Boyn Hill Ward
Calder Court, Maidenhead	Calder Court Freehold Limited
St James the Less, Henley Road, Maidenhead	Church Council
Clewer Youth & Community Centre, Parsonage Lane, Windsor	Clewer Youth & Community Centre
Coxbarrow Close junction with Lower Road Gorse Road Grange Road junction with Burnt Oak Hillcrest Avenue junction with Lyndhurst Avenue Rosebank Close Stubbles Lane junction with Bigfrith Common Terrys Lane – bottom end Warners Hill junction with Dean Lane Whyteladyes Lane junction with Broom Hill Whyteladyes Lane junction with Dean Lane	Cookham Parish Council
Cox Green Road Farmers Way Shopping Parade Farmers Way junction with Cannon Lane Lowbrook Drive adjacent to Parish Council Noticeboard Wessex Way Shopping Parade	Cox Green Parish Council
Eton Court Car Park Windsor & Eton Town Bridge (Eton side)	Eton Town Council

Location of Salt Bin	Owner
Bell Lane Shops Village Hall Car Park Moores Lane junction with Eton Wick Road	Eton Wick Ward
Avenue Road junction with Fisheries Road, Bray	Fisheries Residents Association
Guards Club Road, Maidenhead	Guards Club Road Association
Hargrave Road, Maidenhead	Hargrave Road Residents
Bells Lane junction with Stanwell Road Coppermill Road (North and South end) Dawn Redwood Close junction with Park Lane Outside Recreation Ground, Stanwell Road Pickins Piece	Horton Parish Council
Bottle Lane junction with A4 Bath Road, Knowl Hill Choseley Road, Knowl Hill Coronation Road junction with A4 Bath Road, Knowl Hill Honey Lane (top end and near Dew Drop Inn), Hurley Hurley Village Hall, High Street Hurley Jubilee Road junction with A4 Bath Road, Knowl Hill Knowl Hill Village Hall, The Terrace Warren Row Road	Hurley Parish Council
Hurstwood – top end	Hurstwood Residents
Hythe End Road, Wraysbury	Hythe End Road Residents
School Lane, Littlewick Green	Littlewick Green Montessori School
Oakdene, Sunningdale, Ascot	Oakdene Residents
Almhouses, Crimp Hill Road Church Road – on bend near Ham Lane Crimp Hill Cemetery Parish Path, Recreation Ground – both ends The Memorial Hall, Straight Road Youth Club, Robin Willis Way	Old Windsor Parish Council
Pool Lane off Broadmoor Road	Pool Lane Caravan Site
Lincoln Road, Maidenhead Sunderland Road, Maidenhead	Pinkneys Green Community Forum
Rushington Avenue, Maidenhead	Rushington Avenue Residents Association

Location of Salt Bin	Owner
Alma Road Coach Park	ShopMobility Windsor
Park Corner, Windsor	Spencer Denny Age Concern Centre
High Street, Maidenhead	St Mary's Church
Charters Way Dale Lodge Road junction with Leacroft Park Crescent Park Drive – junction with High Fields Recreation Ground off Broomhall Lane Sidbury Close junction with Church Road	Sunningdale Parish Council
Bouldish Farm Road Bowden Road junction with The Terrace Cavendish Meads junction with Bagshot Road Coronation Road near St Francis Church / School Oaklands Drive junction with The Avenue School Road junction with Village Road South Ascot Recreation Ground Sunninghill Road, by Public Convenience Queens Road, entrance to Car Park Victory Field entrance, London Road	Sunninghill and Ascot Parish Council
The Pagoda, Maidenhead	The Pagoda Residents
Turpins Green, Maidenhead	Turpins Green Residents
Butchers Lane junction with Waltham Road Manifold Way junction with Waltham Road The Dell off Cannon Lane White Waltham Car Park	White Waltham Parish Council
Acre Passage, Windsor Goswell Hill, Windsor King Edward Court Shopping Centre, Windsor Peascod Street, Windsor	Windsor & Eton Town Partnership (Businesses)
Wood Close near Trevelyan School entrance	Wood Close Residents
Woodlands Close junction with Llanvair Drive	Woodlands Close Residents
Car Park, High Street Welley Road opposite junction with The Avenue	Wraysbury Parish Council

APPENDIX F

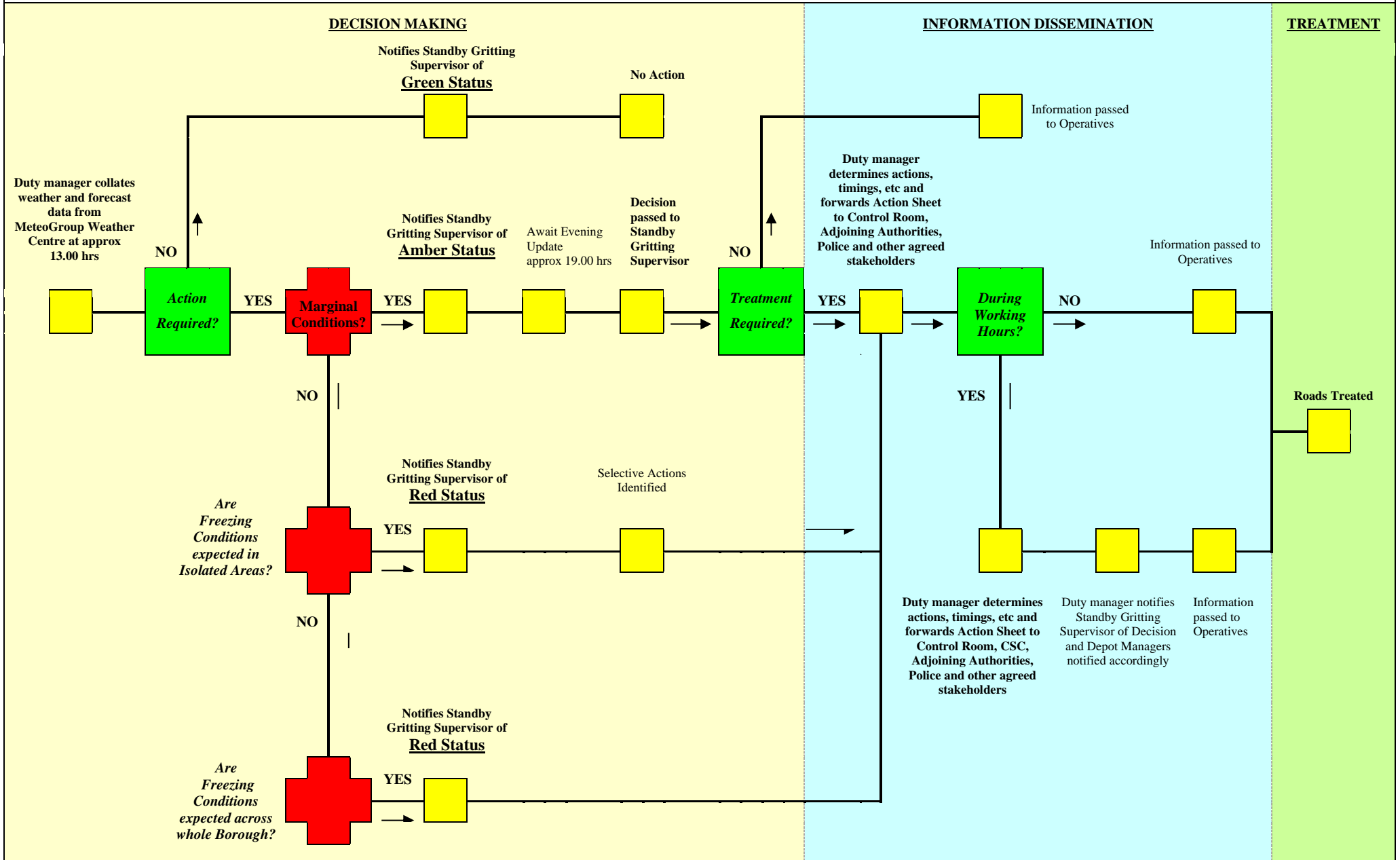


LOCATION OF ROAD SENSORS
within the geographic area of Berkshire

- | | |
|--------------------|---------------------|
| 1, M4 Membury | 6, A332 Windsor |
| 2, A4 Halfway | 7, A329 Reading |
| 3, A34 East Ilsley | 8, A4 Bad Godesberg |
| 4, M4 Chieveley | 9, A355 Tuns Lane |
| 5, M4 Shurlock Row | |

PRECAUTIONARY SALTING PROCESS MAP

APPENDIX G



SNOW CLEARING PROCESS MAP

APPENDIX H

