Environment, Culture and Communities
Highway Asset Manager: Anthony Radford-Foley

BRACKNELL FOREST COUNCIL

HIGHWAYS WINTER SERVICE PLAN 2016/2017

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FINAL VERSION 23 September 2016

Anthony Radford-Foley
Highways Asset Manager
Environment, Culture and Communities
Bracknell Forest Borough Council
Time Square
Market Street
Bracknell
Berkshire
RG12 1JD

Tel: (01344) 352000

Internal

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BRACKNELL FOREST COUNCIL

HIGHWAYS WINTER SERVICE PLAN 2016/2017

1 INTRODUCTION

1.1 Our highways winter service operation is important in terms of the local and national economy and road safety. The Council seeks to maintain safe road surfaces at all times, so far as the resources available permit.

1.2 The Highways Act 1980, Section 41 (1A) places a duty on the authority "to ensure, so far as reasonably practicable, that safe passage along a highway is not endangered by snow or ice".

1.3 The highways winter service involves treating the highway in order to:

- Prevent ice from forming, "precautionary salting"
- Melt ice and snow already formed, "post salting"
- Remove accumulations of snow

1.4 This Plan seeks to ensure compliance with the statutory duty.

1.5 The highways winter service period for the winter 2016/17 runs from:

Monday 17 October 2016 through to 16 April 2017 with our contractor on standby from 31 October 2016 to 2 April 2017.

1.6 This Plan should be read in conjunction with the Council's Corporate Severe Weather Plan should the conditions warrant it (see extract as Appendix L). The Chief Officer: Environment and Public Protection has specific responsibilities in relation to managing the Councils overall response at times of severe weather.

2 SERVICE OBJECTIVE

2.1 As the Highway Authority, Bracknell Forest Council has a duty to ensure, "so far as is reasonably practical," that the highway is not endangered by snow or ice.

2.2 This is not an absolute duty, given the qualification of "reasonably practical". The scale of financial and other resources involved in delivering the highways winter service and the challenges inherent in maintaining high levels of availability of specialist equipment, means it is not practically possible either to:

- Ensure surfaces are kept free of ice or snow at all times, even on the treated parts of the network;

- Provide the service on all parts of the network.

2.3 As a first priority at times of predicted low temperatures the Council aims to provide, as far as is reasonably practical, the safe movement of traffic on all A and B class roads and other pre-defined well trafficked roads throughout the Borough (Primary routes). Secondary routes tend only to be treated when there is a strong possibility of snow falling, at the discretion of the Council officers taking due account of the resources available at the time.

2.4 Pre-salting will be carried out based on information received from the weather forecasting service. In certain circumstances, it may be necessary to apply salt after the formation of ice due to unforeseen circumstances such as burst water mains for example. For precautionary salting, the response and treatment times are 1 hour and 3 hours respectively.

2.5 When snow falls and accumulates on highway surfaces, snow ploughs and other appropriate tools will be used to remove snow where physically practicable and salt will be spread to help melt the snow and to prevent ice forming. Roads will be cleared of snow in descending order of priority, and will continue to be given priority, until such time as all the Primary pre-salting routes are cleared. Snow ploughs can not be used on streets containing traffic calming speed humps, cushions and tables.

2.6 When severe weather is predicted efforts will be made to salt the priority footways in town centres, neighbourhood centres, and subway approaches. These areas will be cleared of snow, largely by hand, and post salted as resources permit. These activities are currently undertaken by the Street Cleansing and Grounds Maintenance Contractor.

SALT BINS

2.7 Salt bins are provided at predetermined locations where there is a need to undertake regular spot salting of the road or footpaths. The following criterion for the provision of salt bins has been adopted. Both points have to be met:

(i) Salt bins will only be placed along roads where there is a continuous steep and/or hazardous gradient of at least 10% (1 in 10) and where there are buildings in regular occupation nearby.

(ii) Salt bins will not be located on a Primary salting route unless intended for use on an adjoining road, which is not on the Primary salting route.

2.8 Salt bins are also placed at strategic locations on the network where there is a high pedestrian usage, for example Bracknell Town Centre.

2.9 The locations of salt bins meeting the criteria described above are set out in Appendix E. No further salt bins will be provided during the season.

2.10 The contents of salt bins are provided for use on community assets (public roads and paths) and should not be used on private pathways or drives. Evidence of persistent mis-use of the salt may lead to the removal of the salt bin. Salt bins are periodically refilled in response to usage as resources permit.

2.11 Salt bins are placed on the network in the weeks leading up to the standby period and are removed into storage at the end of the winter season.

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3 ANNUAL REVIEW

3.1 This Plan is subject to annual review. The review identified the need for some minor amendments to the Primary pre-salting Network. To tie in with neighbouring Highway Authority routes New Wokingham Road, Crowthorne has been added to the Primary Routes. There may be further amendments as the Town Centre re-development progresses.

3.2 Salt bins are provided by the Council at locations throughout the Borough according to the criteria detailed in paragraph 2.7. In addition the Council supports 27 salt bins on behalf of the Parish and Town Councils. The requests for additional salt bins

logged during the last winter season have been considered. None were found to meet the eligibility criteria to have been added to the network. However, one road was added to the Third Tier salting route. The salt bin previously in Charles Square has been deleted due to Town Centre redevelopment works.

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3.3 In the course of the preparation of this plan the Council has taken into account the DfT's commissioned reports into the "Resilience of England's Transport Systems in Winter" and the UK Roads Liaison Group's Winter Service Guidance documents published in October 2010 and January 2011.

4 ROAD HIERARCHY

4.1 The road hierarchy system adopted within the Borough is that recommended in "Well-maintained Highways; Code of Practice for Highway Maintenance Management" published in July 2005, as amended.

Category 2: Strategic Route. Principal "A" roads between strategic Primary Destinations for fast moving long distance traffic with little frontage access or pedestrian traffic.

Category 3a: Main Distributor. Other important Principal "A" roads in the Borough in terms of volume of traffic carried, the proportion of heavy goods vehicles and their strategic function as principal links between settlements or within major urban areas.

Category 3b: Secondary Distributor. Classified "B and C" roads and main distributor roads carrying significant volumes of traffic and public transport services. These are important thoroughfares distributing traffic from the strategic routes to residential or commercial areas.

Category 4a & b: Other roads, being roads providing local access within and between residential and commercial areas.

4.2 The Primary Salting Network comprises all Category 2, 3a and 3b roads, and some heavily trafficked Category 4a and 4b roads, including major bus routes and represents 41% of all highways in the Borough (Appendix A). The total length of the Primary Salting Network is 178 kilometres (111 miles).

4.3 The Secondary Salting Network comprises selected (non primary) Category 4a and 4b residential roads, bus routes, roads leading to schools and lightly trafficked rural roads, which may become hazardous if left untreated during prolonged periods of particularly severe weather conditions. (Appendix B.1.) The total length of the Secondary Salting Network is 56 kilometres (35 miles).

4.4 The Council has also identified a third tier of roads which, due to their particular location or gradient, will be treated with smaller demountable gritters as resources allow in times of snowfall (Appendix B.2). In addition, fourth and fifth tier salting networks have been identified which would only be treated should resources become available and only after the Primary, Secondary and Tertiary Salting Networks are deemed 'clear'.

4.5 The Core Network comprises strategic routes only. Salting of the Core Network will be implemented only in conditions of extreme salt shortages, or as directed by Central Government. At such times no other salting of routes takes place. The Core Network

is detailed in Appendix (C). The total length of the Core Salting Network is 118 kilometres (73 miles).

4.6 The Primary Salting Network within the Borough is covered by 3 salting routes. Each route is designed to give a target maximum treatment time of 3 hours. The Secondary salting network is covered by 2 routes. Each route is similarly designed to give a target maximum treatment time of 3 hours. The response time to mobilise salting lorries at any time, night or day, is 1 hour.

4.7 Footways/cycleways are categorised as follows:

Category 1:	Main public shopping areas including neighbourhood centres
Category 2:	Medium usage routes, including footways leading to local shopping centres, large schools and other essential community services/assets.
Category 3/4:	Other less used footways.

Whilst footways/cycleways are not normally pre-salted, the Category 1 and 2 footways are treated in the same way as the Secondary Salting Networks. These are only salted and/or cleared of accumulations of snow, resources permitting, during particularly severe and prolonged hazardous weather conditions. The Council will re-deploy available landscape operatives and in severe weather conditions other Council contractor employees to clear snow from these priority footways.

A list of priority footways to be cleared of accumulations of snow is included as Appendix (D1). A Daily Record Sheet for treatment of these areas is included as Appendix (D2). Location plans of these priority areas are also available.

4.8 There are a number of roads in the Borough which for various reasons are subject to wet conditions. On dry nights when temperatures drop below freezing and frost is not forecast to form on the carriageway then only the wet patches are pre-salted.

4.9 The Highways Asset Management Team hold and maintain details of the:

Primary Salting Network
Secondary Salting Network
Core Network
Additional roads (Schools, Doctors, inclines, etc)
Third, Fourth and Fifth tier Salting Networks.
Wet patches – updated periodically throughout the winter season
Priority Footway Salting Network
Subways and footbridges
Drawings associated with the routes
Database of salt bin locations
Salt stocks

5 CLIENT/CONTRACTOR RELATIONSHIP

5.1 The Term Maintenance Works Contract includes for winter maintenance operations. The contractor is Ringway Infrastructure Services (RIS).

5.2 The following table indicates how the principal winter maintenance responsibilities between Bracknell Forest Council and its contractor are split.

Preparation of Highways Winter Service Plan	Bracknell Forest Council
Road hierarchy priorities	Bracknell Forest Council
Routing (salting and snow clearance)	Contractors with guidance from the Council
Vehicles/plant	Contractor
Decision making (primary routes)	Duty Manager (Contractor)
Decision making (secondary routes and other areas)	Bracknell Forest Council (Highways Asset Management Group)
Day-to-Day operations	Contractors with co-ordination by officers of Bracknell Forest Council
Performance monitoring	Bracknell Forest Council
Opening of Emergency Operational Centre in severe Weather conditions	Bracknell Forest Council
Approval to commence operations in severe snow conditions	Bracknell Forest Council.

6 ROSTERING OF SUPERVISORY AND OPERATIONAL STAFF

6.1 Bracknell Forest Council has entered into an agreement with the Contractor to utilise their services for the purposes of decision making and the co-ordination of the winter maintenance operation. The Contractor will provide Duty Mangers to carry out this activity in relation to the Primary routes.

6.2 Bracknell Forest Council has its own Highways Asset Maintenance Group available for client duties. Duty Managers are rostered to be on standby for decision making duties for the winter period from November to March inclusive. The roster, typical details of which are given in Appendix (F), is finalised during October.

6.3 Each Duty Manager is available 24 hours a day, during his/her period on duty. Outside of normal working hours, the officers can be contacted through Forestcare. During normal office hours all winter service enquiries from members of the public should be directed to Bracknell Forest Council's Customer Service Centre. Contact out of hours is through Forestcare.

6.4 When on duty, each Duty Manager will be available to make decisions regarding winter service operations on the Primary salting network. Further information concerning weather forecasts and decision making is provided in sections 9, 10 and 11.

6.5 Rosters of the contractors' operational staff involved in winter maintenance are requested during October in preparation for commencement of operations in November.

7 PLANT, EQUIPMENT AND SPREAD RATES

7.1 The Contractor is responsible for the provision and maintenance of all plant and equipment needed for the performance of this Plan.

7.2 To be effective, salt must be spread evenly and at rates to suit prevailing weather conditions. Excessive salt spreading is undesirable on both environmental and economic grounds. To this end, the spreading equipment is calibrated annually and the controls marked accordingly for the spread rates listed in Appendix H. Any decision to vary this application rate or to use other materials (due to a need to conserve supplies) is a matter for the Council and authority has been given to the Highways Asset Manager to make such changes having regard to the circumstances.

8 OPERATIONAL COMMUNICATIONS

8.1 All winter maintenance vehicles have means of contact with the operational depot in order that instructions can be passed to and current information relayed back from the vehicles.

9 WEATHER FORECASTS

9.1 During the winter period, the Duty Manager and officers use the 'RoadCast' forecasting service provided by the MeteoGroup from their UK HQ in Victoria, London. The information received each day includes the following:-

(i) detailed 36-hour forecast
(ii) evening update forecast
(iii) site specific temperature graphs (three sites)
(iv) early morning summary
(vi) 2 – 5/10 day forecast

In addition radar pictures can be obtained when deemed appropriate.

9.2 The 24-hour forecast is issued at approximately 1200 hours each afternoon. The main features of this forecast are as follows:-

(i) Alert Levels (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.

(ii) 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.

(iii) Minimum temperatures
Minimum air and road temperatures for urban and rural areas are provided.

(iv) 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.

(v) 24 hour weather summary
This is a general summary of the forecast for the period from midday to midday.

9.3 At approximately 1800 hours each evening, a forecast update is issued by MeteoGroup and can be viewed by the Duty Manager. If further information is required the Duty Manager can make use of the 24 hour consultancy service provided by MeteoGroup when a discussion can be held with the duty forecaster (see section 11 for further information on decision making).

10 THERMAL MAPPING AND ICE PREDICTION

10.1 A survey measuring and analysing the thermal characteristics of road surfaces has been undertaken by Vaisala TMI Ltd. The thermal mapping covers approx 90% of the primary salting network.

10.2 The information yielded from thermal mapping is used in conjunction with site specific forecasts to predict accurately the minimum temperature of road surfaces across the road network. This allows accurate decisions to be made not only about whether to salt or not, but whether to salt only those roads that require treatment.

10.3 Thermal mapping has been used to produce data, which allows the pre-salting routes to be analysed objectively and to ensure the optimum location of road surface and atmospheric condition sensors. Nine sensors sites have been installed through Berkshire County.

10.4 Annual calibration checks on all sensors are undertaken by the appropriate equipment supplier with a full report submitted to West Berkshire Council which currently acts as client manager for the Ice Prediction service on behalf of the Berkshire Unitary Councils.

10.5 Every hour, information from these sensors is fed automatically into the Central Processing Unit at Vaisala TMI's offices in Birmingham. The parameters recorded are, air temperature, humidity, precipitation, wind speed and direction, road surface temperature, surface condition (wet or dry) sun-surface temperature and residual salt levels. Forecasts are produced for the Berkshire Unitary Authorities based on this information.

11 DECISION MAKING

11.1 Precautionary salting of the Primary network decision making is the responsibility of the Duty Manager. During the winter, the Duty Manager is on standby and has an overview of prevailing conditions in Berkshire. The Duty Manager also has a specific responsibility for liaising directly with the MeteoGroup forecaster and for notifying the media and other organisations as described in Section 14.2 of the intention or otherwise to treat the Primary Salting Network.

11.2 Using the forecast data provided the Duty Manager will make his/her decision regarding pre-salting as appropriate. To assist with this process, guidance notes are provided together with call out guidelines as shown in Appendices (G) and (H) respectively.

11.3 The Duty Manager's decision is recorded on a justification form as shown in Appendix (I) and filed for future reference.

11.4 Appropriate training is provided regularly for all Duty Managers particularly with regard to technological improvements in forecasting techniques and the ice prediction system.

11.5 Decisions to salt the Secondary salting network and other areas will be made by the Council's Highways Asset Management staff.

12 SALT

12.1 Road de-icing salt will supplied by the Contractor. The contractor is required to have sufficient salt in place by 30 September each year to meet the recommended level of resilence recommended by recent reviews of winter service operations. (Quarmby et al)

12.2 Successful road salting relies on the salt dissolving and lowering the freezing temperature of moisture. Bracknell Forest Council use pre-wetted salt comprising a brine solution of 30% salt and 70% water, spread with dry salt at a ratio of 30% brine to 70% salt. The advantage of this treatment method is that the de-icing action begins to take place almost immediately on contact with the road surface. This in turn reduces the amount of overspill and verge dieback that can occur with the use of dry salt.

12.3 Salt bins are normally filled with salt. Footpaths where they are treated may also be treated with salt or a salt/sand mix.

13 SNOW CLEARING

13.1 For the purpose of this Plan, there are two stages for snow clearing:-

- **Stage 1 - Light falls** of undisturbed accumulations of snow reaching a depth less than 10mm.
- **Stage 2 – Moderate/Heavy falls** of snow exceeding 10mm

13.2 In Stage 1 and 2 conditions, snow clearing operations may be undertaken subject to available resources by the Council's contractor and landscape staff. These operations will be controlled by the Highways Asset Management Team in consultation with our contractors.

13.3 The start of snow clearing operations will aim to commence within 1 hour of an instruction being issued by the Highways Asset Management Team. During snow clearing operations priority will normally be given to the Primary Routes followed by other routes in priority order as resources permit. During severe weather conditions, snow clearing operations on footways and cycleways may be undertaken during normal working hours, as prevailing conditions and resources permit, after treatment of higher priority routes.

13.4 In Stage 2 conditions, the Council's Emergency Operations Centre (EOC) may be opened and manned until conditions abate. If so, then during this time, all incoming calls relating to winter maintenance operations will be directed to the EOC.

13.5 Throughout any of the two stages described the Council may decide to establish its own Corporate Severe Weather Management Team to oversee the response.

13.6 The Council also have a Corporate Severe Weather Plan, an extract from which, detailing the Councils Priorities for snow clearance, is attached as Appendix L.

14 MEDIA COMMUNICATIONS

14.1 Liaison with the news media, particularly the local radio stations, BBC Radio Berkshire and Heart FM is of the utmost importance and will be maintained during periods of snowfall. This contact will normally be directly via the Council's Communications & Marketing Office.

14.2 Thames Valley Police, BBC Radio Berkshire, Heart FM and other organisations as detailed in Appendix J will be advised by email on those occasions when precautionary salting is to be undertaken. Additional information will also be provided as appropriate to the motoring organisations, particularly during periods of snow clearance when it is essential that the travelling public are advised of current road conditions and cleared routes.

15 LIST OF APPENDICES

Appendix A:	Primary Pre-Salting Routes
Appendix B.1:	Secondary Salting Routes
Appendix B.2.	Third Tier Roads List
Appendix C:	Core Salting Network
Appendices D:	Priority Footways, Record Sheet, Location Plans
Appendix E:	Salt Bin Locations
Appendices F:	Duty Manager Rosters and Contact List
Appendix G:	Guidance Notes for Duty Officers
Appendix H:	Call out Guidelines
Appendix I:	Justification Form
Appendix J:	Notification List
Appendix K:	Salting of Footways/Cycleways in Bracknell Town Centre
Appendix L:	Extract from Corporate Severe Weather Plan re snow & ice

APPENDIX A

PRIMARY PRE-SALTING ROUTES

Binfield

Binfield Road (B3018)
Church Hill
Church Lane
Forest Road (B3034)
Howe Lane (end at junction with Westley Mill (north exit))
John Nike Way
London Road (B3408) (incl Wokingham BC section through to Coppid Beech Roundabout)
Popeswood Road
St. Marks Road (Popeswood Road to Terrace Road South)
Temple Way
Terrace Road South
Terrace Road North
Twyford Road

Bracknell

Bagshot Road (A322)
Berkshire Way (A329) (to Borough boundary)
Binfield Road (B3018)
Birch Hill Road
Bracknell Bus Station
Broad Lane
Church Road (A3095)
Crowthorne Road (Part – Wildridings Road to Downshire Way Bus Crossing)
Crowthorne Road (Part – Wildridings Road to Rectory Lane)
Crowthorne Road North
Crowthorne Road (A3095)
Deepdale – to bus turn round
Doncastle Road (West, including Link Road to Berkshire Way)
Downshire Way (Bagshot Road to Wokingham Road)
Easthampstead Road
Ellesfield Avenue
Ellesfield Avenue Bus Link to Wildridings Road
Great Hollands Road
Great Hollands Square bus turn round
Hanworth Road
Harmans Water Road
High Street (The Ring to Skimped Hill Lane)
London Road (A329)
Market Street and Bus Station Ramp
Millennium Way (A329)
Mill Lane (A3095)
Mill Lane / Wildrings Road Link Road (Both carriageways)
Nine Mile Ride
Old Wokingham Road
Opladen Way
Park Road
Peacock Lane
Ralphs Ride
Rectory Lane (Speed Cushions)
Ringmead (Sump Traps)
Skimped Hill Lane

South Hill Road
The Ring (Easthampstead House to High Street including Police Station Loop)
Vigar Way
Warfield Road (A3095)
Western Road (through route only)
Wildridings Road
Wokingham Road (B3408)

Crowthorne

Bracknell Road (B3348)
Dukes Ride (incl Wokingham BC section through to Wellingtonia Roundabout) (Speed Cushions)
High Street (Speed Tables)
New Wokingham Road
Nine Mile Ride
Old Wokingham Road
Sandhurst Road

Sandhurst

College Road (Speed Humps)
Crowthorne Road
Foresters Way (A3095) (Salt in both directions)
High Street (A321)
Laundry Lane (incl Surrey CC section through to A30 London Road)
Marshall Road
Meadows Roundabout (A30/A321) (treated by Surrey CC under agreement)
Owlsmoor Road – Rackstraw Road to Yeovil Road (northbound)
Rackstraw Road
Tank Road
Wokingham Road (A321) (incl Wokingham BC section through to Wellingtonia Roundabout)
Yateley Road (to Hampshire County boundary)
Yorktown Road
Yeovil Road

Warfield

Ascot Road (A330)
Bracknell Road (B3022)
County Lane
Forest Road (B3034)
Harvest Ride
Jigs Lane North
Jigs Lane South (Park Road to Harvest Ride)
Kingscroft Lane
Maidenhead Road (A3095)
Newport Drive
Newell Green (A3095)
Warfield Street (B3034)
Westmorland Drive (Speed Cushions)

Winkfield

Bagshot Road (A322 – to borough boundary))
Bagshot Road (B3020) (treated by Surrey under agreement)
Bracknell Road (B3022)
Chavey Down Road (B3017)
Church Road (A330)
Cocks Lane (A330)
Drift Road (North Street to Borough boundary)
Fernbank Road
Forest Road (B3034) (incl RBW&M section through to Hatchet Lane)
Harvest Ride
Hatchet Lane (Forest Road incl RBW&M section through to A330 Lovel Road)
Kings Ride (Swinley road to Borough boundary 80m east of Prince Albert Drive)
Locks Ride (B3017 - Priory Road to Chavey Down Road)
London Road (A329 - end at junction with Gainsborough Drive)
Longhill Road
Lovel Lane
Lovel Road (A330)
Maidens Green (A330)
Mounts Hill (B383) (incl RBW&M section)
New Forest Ride (Salt Martins Heron railway bridge in both directions)
New Road
North Street
Pigeonhouse Lane
Priory Road (B3017)
Sheet Street Road (A332) (end at Borough boundary 650m east of Peanut Roundabout)
Sunninghill Road (B383)
Swinley Road (A332)
Swinley Road (B3017)
Windsor Road (A332) (end at junction with Woodside Road)
Winkfield Lane
Winkfield Road (B383) (end at Borough boundary 500m east of Cranbourne Roundabout)
Winkfield Row (B3017)

APPENDIX B.1

SECONDARY SALTING ROUTES

Binfield

Beehive Road
Benetfeld Road (to Wiggett Grove)
Billingbear Lane
Bottle Lane
Cain Road
Carters Hill (Church Hill to Billingbear Lane)
St. Marks Road (London Road to Popeswood Road)
Turnpike Road

Bracknell

Babbage Way (Inc. full loop)
Bay Drive
Bay Road
Braybrooke Road
Bull Lane
Bullbrook Drive
Calfridus Way
Cannon Hill
Crowthorne Road
Deepfield Road
Doncastle Road (part)
Downmill Road
Downshire Way (Wokingham Road to Binfield Road)
Dukes Hill Road
Eastern Road
Farningham
Folders Lane
Holly Spring Lane
Hopper Vale
Horsneile Lane (Dukes Hill Road to Shepherds Lane)
Kennel Lane
Kingsmere Road
Lily Hill Road
Lily Hill Drive
Longshot Lane (to Civic Amenity Site)
Longwater Road
Lovelace Road and Bus Link
Manston Drive
Moordale Avenue
Nightingale Crescent
Nuneaton
Oareborough (and Bus link to Mendip Road)
Pondmoor Road
Priestwood Avenue
Reeds Hill
Redvers Road
Sandy Lane (Warfield Road to Bull Lane – Key required for gate)
Shepherds Lane
South Road (Nine Mile Ride to the Cem & Crem.)

Bracknell Cont.

Staplehurst
Stoney Road
Turing Drive (Crowthorne Road to Hopper Vale)
Waterloo Road
Wellington Drive
Wildridings Road Link (to Downshire Way)
Windlesham Road
Windmill Road
Woodenhill
Woolhampton Way (Harmans Water Road to Wellington Drive)
Wordsworth

Crowthorne

Brookers Row
Cambridge Road (Crowthorne)
Chaplains Hill
Church Street (Waterloo Road to High Street)
Edgcumbe Park Drive (Dukes Ride to Parkway)
Furze Hill Crescent
Grant Road (Pinehill Road to Edgbarrow School)
Lower Broadmoor Road
Napier Road
Pinehill Road (Sandhurst Road to Grant Road)
School Hill
Upper Broadmoor Road
Waterloo Road (Crowthorne)
Wellington Road (Crowthorne)

Sandhurst

Acacia Avenue (Rackstraw Road to Fakenham Way)
Branksome Hill Road
Cambridge Road (Sandhurst)
Cheviot Road
Chiltern Road
Church Road
Fakenham Way
Grampian Road
Harts Leap Road
Harvard Road
High Street (Little Sandhurst)
Longdown Road
Magdalene Road
Mickle Hill
Owlsmoor Road
Scotland Hill
Swan Lane (to County boundary)
Wellington Road (Sandhurst)
York Way

South Ascot

Coronation Road (end junction with Fir Tree Close)

Warfield

All Saints Rise
Atte Lane
Darby Vale
Hebbecastle Down
Horatio Avenue
Huson Road
Julius Hill
Mareshall Avenue
Shakespeare Way
Total Rise

Winkfield

Braziers Lane
Bowland Drive
Church Road
Hatchet Lane (end at junction with Mounts Hill B383)
Hope Avenue (Nuneaton to Bowland Drive)
Locks Ride
Mendip Road
North Road
Savernake Way
Watersplash Lane
Winkfield Row (link)

THIRD TIER SALTING ROUTES

	From	To
Ascot		
Ranelagh Crescent	Mill Ride	Mill Ride
Rhododendron Walk	New Road	Ascot Heath School gate
St Christopher Gardens	Fernbank Road	End
Binfield		
Springfield Road	Beehive Road	Turning point
Bracknell		
Ambassador	Ringmead	End
Berrycroft	Field Park	End
Bishopdale	Wildridings Road	End of spine road
Boole Heights	Turing Drive	T Junction
Brownrigg Crescent	Bullbrook Drive	Bullbrook Drive
Bywood	Hanworth Road	End
Coningsby	Rectory Lane	Brakenhale School gate
Cotterell Close	Braybrooke Road	End
Crossfell	Wildridings Road	End
Crown Row	Opladen Way	End
Donnybrook	Birch Hill Road	End of spine road
Dryden	Birch Hill Road	End of spine road
Earlswood	Ringmead	End
Epping Way	New Forest Ride	Upshire Gardens
Fitzroy Close	Babbage Way	T-Junction
Frensham	Opladen Way	Junction on right
Garswood	Opladen way	End
Grange Road	Warfield Road	End
Hawkins Close	Longhill Road	End
Hazel Hill	Station Roundabout	The Ridgeway
Jameston	Ringmead	End of spine road
Ladybank	Birch Hill Road	T Junction
Larges Lane	London Road	Gipsy Lane
Leppington	Birch Hill Road	Birch Hill Primary School gate
Ludlow	Birch Hill Road	End
Lydney	Birch Hill Road	End of spine road
Lynwood Chase	Goughs Lane	Old Farm Drive
Merryhill Road	Shepherds Lane	Horsneile Lane
Mount Lane	Church Road	Mount Pleasant
Netherton	Crowthorne Road	End
Nutley	Ringmead	2nd Junction on left
Oakengates	Ringmead	T Junction
Octavia	Ringmead	End of spine road
Old Bracknell Lane West	Downshire Way	Exit Gate of Council Depot
Ollerton	Ringmead	2nd Junction on right
Pembroke	Hanworth Road	St Margaret Clitheroe School gate
Prescott	Birch Hill Road	End
Ranelagh Drive	Broad Lane	Ranelagh CE School gate

Ringwood	Ringmead	1st Junction on Left
Bracknell (Cont.)		
Skimped Hill Lane	High Street	Bond Way
Southlynn Crescent		
Spinis	Wooden Hill	End of spine road
The Ridgeway	Hazell Hill	End
Turing Drive	Turing Drive	End
Westbrook Gardens	Warfield Road	End
Whistley Close	Ralphs Ride	Doctors Surgery on right
Crowthorne		
Byron Drive	Sandhurst Road	Chaucer Road
Heath Hill Road South	High Street	Kings Road
Kingsley Close	Sandhurst Road	T Junction
Sandhurst		
Albion Road	Yorktown Road	Wellington Road
Allendale Close	Grampian Road	End
Balliol Way	Harvard Road	Birbeck Place
Beech Ride	Orchard Gate	Kings Keep
Birkbeck Place	Balliol way	End
Caves Farm Close	High Street	End
Cherry Tree Close	Appletree Way	End
Green Ways	Crowthorne Road	Beech Ride
Harvard Road	Magdelene Road	End
Lower Church Road	A321 High Street	St Michaels Church
Maple Close	Perryhill Drive	End
Nuffield Drive	Harvard Road	T Junction
Perryhill Drive	Church Road	End
Wargrove Drive	Owlsmoor Road	End of spine road
Warren Close	Crowthorne Road	T Junction
Warfield		
Antony Wall	Horatio Avenue	T Junction
Cooke Rise	Mareshall Avenue	End
Gloucestershire Lea	Essex Rise	End
Jigs Lane North	County Lane	Roundabout at Tesco Entrance
Malt Hill	A330	Bracknell Road
Plantagenent Park	Roman Way	End
Rachels Lake View	Walsh Avenue	End
Shropshire Gardens	Norfolk Chase	End
Target Hill	Top Common	End
Viola Croft	Julius Hill	End
Walsh Avenue	Harvest Ride	End
Westwates Close	Field park	End
Yorkshire Place	County Lane	End of spine road

APPENDIX C

CORE PRE-SALTING ROUTES

Binfield

Binfield Road (B3018)
Church Hill (B3018)
Church Lane (B3018)
Forest Road (B3034)
London Road (B3408) (**incl Wokingham BC section through to Coppid Beech Roundabout**)
Twyford Road B3018)

Bracknell

Bagshot Road (A322)
Berkshire Way (A329) (to Borough boundary)
Binfield Road (B3018)
Church Road (A3095)
Crowthorne Road (A3095)
Doncastle Road (West, including Link Road to Berkshire Way)
Downshire Way (A322)(Bagshot Road to Berkshire Way)
Ellesfield Avenue
High Street (The Ring to Skimped Hill Lane)
London Road (A329)
Market Street and Bus Station Ramp
Millennium Way (A329)
Mill Lane (A3095)
Nine Mile Ride (B3430)
Skimped Hill Lane (A329)
The Ring (Easthampstead House to High Street including Police Station Loop)
Warfield Road (A3095)
Wokingham Road (B3408)

Crowthorne

Bracknell Road (B3348)
Dukes Ride (B3348) (**incl Wokingham BC section through to Wellingtonia Roundabout**) (Speed Cushions)
High Street (Speed Tables)
Nine Mile Ride (B3430)
Sandhurst Road

Sandhurst

Crowthorne Road
Foresters Way (A3095)
High Street (A321)
Marshall Road (A321)
Meadows Roundabout (A30/A321) (**treated by Surrey CC under agreement**)
Rackstraw Road (A3095)
Wokingham Road (A321) (**incl Wokingham BC section through to Wellingtonia Roundabout**)
Yorktown Road (A321)

Warfield

Ascot Road (A330)
County Lane (Harvest Ride to Jigs Lane north)
Forest Road (B3034)
Harvest Ride (Warfield Road to County Lane)
Kingscroft Lane (A330)
Maidenhead Road (A3095)
Newell Green (A3095)
Warfield Street (B3034)

Winkfield

Bagshot Road (A322 – to borough boundary))
Chavey Down Road (B3017)
Church Road (A330)
Cocks Lane (A330)
Forest Road (B3034) (**incl RBW&M section through to Hatchet Lane**)
Hatchet Lane (**Forest Road incl RBW&M section through to A330 Lovel Road)**
Kings Ride (Swinley road to Borough boundary **80m east of Prince Albert Drive**)
Locks Ride (B3017 - Priory Road to Chavey Down Road)
London Road (A329 - **end at junction with Gainsborough Drive**)
Longhill Road
Lovel Lane
Lovel Road (A330)
Maidens Green (A330)
Mounts Hill (B383) (**incl RBW&M section**)
New Forest Ride
Pigeonhouse Lane (A330)
Sheet Street Road (A332) (**end at Borough boundary 650m east of Peanut Roundabout**)
Sunninghill Road (B383)
Swinley Road (A332)
Windsor Road (A332) (**end at junction with Woodside Road**)
Winkfield Road (B383) (**end at Borough boundary 500m east of Cranbourne Roundabout**)

APPENDIX D.1

PRIORITY FOOTWAYS

Binfield

Terrace Road North (Forest Road to Binfield House access)

Bracknell Town Centre

Broadway (Library to The Ring)
Charles Square
Footway - from Railway station through Bus Station to Stanley Walk
High Street
Market Street (Railway Station to Time Square)
New temporary pedestrian route from High Street to Broadway through Service Yard C
New temporary pedestrian route from High Street to Waitrose through Service Yard G
Stanley Walk
Station Road (Market Street to Stanley Walk)
Subway Approaches as shown on Town Centre Plan

Bracknell

Bay Road, Bullbrook, Shop frontages
Birch Hill Road, Ladybank to Birch Hill shops
Birch Hill Shops
Bywood, Hanworth Road
Deepdale, Wildridings
Great Hollands Road, Great Hollands Square to Ringmead
Great Hollands Square
Crown Row, Opladen Way, Crown Wood
Priestwood Square, Windlesham Road
Harmans Water Road / Ralphs Ride (Oareborough to Lowbury)
Rectory Row
Whitton Road, Martins Heron (New Forest Ride to Community Centre)

Crowthorne

High Street
Church Street (shops)
Dukes Ride (shopping areas)

North Ascot

Fernbank Road Fronting shops
New Road – Fronting Shops
Warren Row

Sandhurst

Old Mill Parade, High Street
Yorktown Road (Swan Lane to Railway Station)
Yorktown Road (Swan Lane to The Broadway)
Yorktown Road (College Road to RMA)
Yeovil Road (Shop fronts and Victoria Road to Cambridge Road)

APPENDIX D.2

Priority Footways Checklist

Plan No.	Location	Snow Cleared	Salted / Gritted	Time		Name
				On Site	Off Site	
	Bracknell Town Centre					
	Primary Route					
	Secondary Route					
	Binfield					
	Terrace Road North					
	Bracknell					
	Bullbrook Row, Bay Road					
	Birch Hill Road and Shops					
	Bywood					
	Wildridings Square, Deepdale					
	Great Hollands Square					
	Crown Row, Opladen Way					
	Priestwood Square, Windlesham Road					
	Harmans Water Square					
	Harmans Water Road/Ralphs Ride					
	Rectory Row, Rectory Lane					
	Whitton Road					
	Crowthorne					
	High Street / Church Street					
	Station Parade, Dukes Ride					
	North Ascot					
	Fernbank Road					
	New Road					
	Warren Row					
	Sandhurst					
	Old Mill Parade, High Street					
	Yorktown Road					
	Swan lane to Railway Station					
	Swan lane to The Broadway					
	College Road to RMA					
	Yeovil Road					

APPENDIX E

SALT BIN LOCATIONS 2016/17

Binfield

1.	Beehive Road **(P)**	J/w Beehive Lane
2.	Boltons Lane **(P)**	J/w Dunfold Place
3.	Chase Gardens **(P)**	J/w Terrace Road North
4.	Cressex Close **(P)**	Opp. 7 Cressex Close
5.	Emmets Nest **(P)**	To the side of 1 Albert Cottage
6.	Emmets Park **(P)**	J/w Forest Road
7.	Fletcher Gardens **(P)**	Opp No.2
8.	Knox Green **(P)**	J/w Terrace Road North
9.	Mill Green **(P)**	Opp. Samian Place
10.	Murrell Hill Lane **(P)**	J/w Foxley Lane
11.	Nash Park **(P)**	Nash Park entrance
12.	Red Rose	J/w Rose Hill
13.	Stevenson Drive **(P)**	Adj to field gate near No.65
14.	Tilehurst Lane **(P)**	J/w Terrace Road
15.	Tilehurst Lane **(P)**	Opp. Coote Close
16.	Turnpike Road **(P)**	J/w Farley Copse
17.	Wiggett Grove **(P)**	On Benetfeld Road opp. junction
18.	York Road **(P)**	J/w Forest Road

Bracknell

19.	Arncliffe	Opp No.66 on footpath
20.	Avebury	Opp No.38 Avebury
21.	Babbage Way	On Central island opp junction by nos.31/38
22.	Beech Glen	J/w Crowthorne Road
23.	Broadway	O/s Magistrates Court
24.		
25.	Bus Station	Bracknell
26.	Calfridus Way **(P)**	O/s The Wayz
27.		
28.	Crowthorne Road	Adj Mill Lane footbridge
29.	Greenham Wood	J/w Ringmead
30.	High Street	O/s McDonalds nr The Ring
31.	High Street	Bank Square
32.	Jevington	J/w Ringmead
33.	Juniper	J/w Ringmead
34.	Kimberley	On footpath about 10m from Ringmead
35.	Leppington	Opp entrance to Community Centre
36.	Lingwood	On verge to side of 56 Manston Drive
75.	Lynwood Chase	On footway to side of no.10 Avon Grove, opp. no. 16
37.	Neuman Crescent	Adj to LC 11 on grass verge Opp no. 26
38.	Orion	J/w Ringmead
39.	Quintilis **(P)**	O/s No.69 Quintilis
40.	Sylvanus	J/w Woodenhill
41.	Tawfield	O/s No.13 Tawfield
42.	Wokingham Road	O/s No.14
43.	Worlds End Hill	Opp No.50

Chavey Down

44.	Church Road	J/w Longhill Road adj. One Way Sign o/s Bakehouse Ct
45.	North Road	J/w Priory Road

Crowthorne

46.	Byron Drive **(P)**	Footway adj. to Give Way sign 59 yds ahead
47.	Grant Road	J/w Pinehill Road on verge
48.	Pine Hill Road **(P)**	Outside No.74
49.	South Meadow **(P)**	South verge opp first garage block
50.	South Meadow	At junction on verge o/s 77 next to LC
51.	Furze Hill Crescent	J/w Cambridge Road

North Ascot

52.	Bracken Bank	Side of No.55 Bracken Bank
53.	Fernbank Place	On central Island j/w Bracken Bank
54.	Mill Ride **(P)**	J/w Whitelands Drive
55.	The Grove	J/w Asher Drive

Sandhurst

56.	Owlsmoor Road **(P)**	Owlsmoor Road between Rackstraw Road and Fakenham Way by Bus stop
57.	Grampion Rd	O/s New Scotland School
58.	Greenways	J/w Broom Acres
59.	Harts Leap Close	J/w Crowthorne Rd
60.	Hone Hill	J/w York Way
61.	Humber Way **(P)**	Against fence inside playing field adj to LC No.2
62.	Long Mickle	At Jnc, o/s No.12 Long Mickle
63.	Mickle Hill (East)	J/w Longdown Road
64.	Mickle Hill (West)	J/w Longdown Road
65.	Moffats Close	J/w Crowthorne Rd
66.	Mountbatten Rise	J/w High Street
67.	Pinehill Rise **(P)**	Top of hill adj to Robin Lane street name plate
68.	School Hill	J/w High Street
69.	Scotland Hill	Opp J/w Cock-a-Dobby
70.	Scotland Hill	J/w A321 High Street
71.	St Helens Crescent	Side of No.2

Warfield

72.	Juliet Gardens	J/w Shakespeare Way
73.	Dorset Vale	At end of footway at side of No.6 Wiltshire Grove

Winkfield

74.	Micheldever Way **(P)**	Adj. LP 4 on verge opposite Woodmancott Close

Notes:

(P) Salt bin sponsored by Parish or Town Council

APPENDIX F.1

DECISION MAKING BY RINGWAY INFRASTRUCTURE SERVICES

RINGWAY INFRASTRUCTURE SERVICES
WINTER MAINTENANCE DUTY MANAGER ROSTER 2016/17

Week Commencing	**Duty Manager**
31 October	Chris Edwards
7 November	Kevin Stephens
14 November	Linda Gray
21 November	Chris Edwards
28 November	Kevin Stephens
05 December	Linda Gray
12 December	Chris Edwards
19 December	Kevin Stephens (Chris Edwards 24th and 25th)
26 December	Linda Gray
02 January	Chris Edwards
09 January	Kevin Stephens
16 January	Linda Gray
23 January	Chris Edwards
30 January	Kevin Stephens
06 February	Linda Gray
13 February	Chris Edwards
20 February	Kevin Stephens
27 February	Linda Gray
06 March	Chris Edwards
13 March	Kevin Stephens
20 March	Linda Gray
27 March	Chris Edwards

RESPONSIBILITY
1. ACTING AS DUTY MANAGER FOR ROADS WITHIN BRACKNELL FOREST COUNCIL
2. LIAISON WITH THE WEATHER FORECASTER (METEOGROUP)
3. INFORMING THE COUNCIL'S HIGHWAY MANAGEMENT TEAM OF DECISIONS MADE
4. ENTERING THE DECISION UPON THE METEOGROUP WEBSITE MESSAGE BOARD
5. INFORMING THE MEDIA AS REQUIRED

Duty Managers:

Chris Edwards
Linda Gray
Kevin Stephens

Office: 01344 355160
Fax: 01344 421695

Outside of normal working hours, the Duty Manager can be contacted through Forest Care - dial 01344 786500

BRACKNELL FOREST COUNCIL

HIGHWAYS ASSET MANAGEMENT GROUP

Inside Office Hours

Officer	In Hours Contact
Anthony Radford-Foley	ALL VIA CUSTOMER CONTACT CENTRE 01344 352000
Sebastian Navaranjan	
Jim Naylor	
Andy John	
Help Desk	

Management Team – Outside Office Hours

Contact	
Anthony Radford-Foley Highway Asset Manager	Via Forest Care 01344 786500
Jim Naylor Engineer (Highway Assets)	Via Forest Care 01344 786500

BRACKNELL FOREST COUNCIL CALL OUT FACILITIES OUTSIDE OFFICE HOURS

Bracknell Forest Council
Forest Care 01344 786500 01344 353236 FAX

APPENDIX F.3

GRITTING OPERATION BY RINGWAY INFRASTRUCTURE SERVICES

RINGWAY INFRASTRUCTURE SERVICES
WINTER MAINTENANCE OPERATIONS ROSTER 2016/17

Week Commencing	**Operations Manager**
31 October	Paul Christian
7 November	Paul Christian
14 November	Paul Christian
21 November	Paul Christian
28 November	Paul Christian
05 December	Paul Christian
12 December	Paul Christian
19 December	Paul Christian
26 December	Paul Christian
02 January	Paul Christian
09 January	Paul Christian
16 January	Paul Christian
23 January	Paul Christian
30 January	Paul Christian
06 February	Paul Christian
13 February	Paul Christian
20 February	Paul Christian
27 February	Paul Christian
06 March	Paul Christian
13 March	Paul Christian
20 March	Paul Christian
27 March	Paul Christian

RESPONSIBILITY

1. ACTING AS OPERATIONS MANAGER FOR ROADS WITHIN BRACKNELL FOREST COUNCIL

2. LIAISON WITH THE DUTY MANAGER

3. MOBILISING GRITTERS

4. REPORTING BACK TO DUTY MANAGER ON COMPLETION:
   - Start Time
   - Finish Time
   - Rate of Spread
   - Tonnes Used

Operations Managers:

Paul Christian

Office 01344 355160
Fax 01344 421695

Outside of normal working hours, the Operations Manager can be contacted through Forest Care - dial 01344 786500

WINTER MAINTENANCE
GUIDANCE NOTES FOR DUTY MANAGERS

1. FORECAST INFORMATION

(i) At approximately 1200 hrs obtain and analyse all weather forecast data to assist in making an action decision, if possible.

(ii) At approximately 1800 hrs obtain and analyse updated forecast to assist in making or amending an action decision, if appropriate.

(iii) If a decision can still not be made it may be necessary to consult the forecaster at MeteoGroup.

2. COMMUNICATIONS

(i) It is the responsibility of each Duty Manager to record all action taken on the justification forms (Appendix I), complete the Message Board on the MeteoGroup website, and distribute it immediately in accordance with the Notification List (Appendix J) and file for future reference.

APPENDIX H

WINTER MAINTENANCE CALL OUT GUIDELINES

For the purpose of allocating treatments a distinction is made between dry, damp and wet road surfaces. The following definitions should be used when making the treatment decision.

Table H1: Road Surface Wetness	
Dry road	A road that shows no signs of water or dampness at the surface but may be just detectably darker (however it may have moisture contained in pores below the surface that is not 'pumped' to the surface by traffic)
Damp road	A road which is clearly dark but traffic does not generate any spray. This would be typical of a well drained road when there has been no rainfall after 6 hours before the treatment time.
Wet road	A road on which traffic produces spray but not small water droplets. This would be typical of a well drained road when there has been rainfall up to 3 hours before the treatment time.

Precautionary treatment decision matrix

A decision matrix for precautionary treatments based on road surface conditions and predicted weather conditions is given in Table H2.

<table>
<tr><th colspan="6">Table H2 – Precautionary Treatment Decision Matrix</th></tr>
<tr><th rowspan="2">Road Surface Temperature</th><th rowspan="2">Precipitation</th><th colspan="4">Predicted Road Conditions</th></tr>
<tr><th>Wet/Damp</th><th colspan="2">Wet Patches</th><th>Dry</th></tr>
<tr><td rowspan="2">May fall below +1°C</td><td>No rain
No hoar frost
No fog</td><td rowspan="4">Salt before frost</td><td colspan="2" rowspan="2">Salt before frost (see note a)</td><td rowspan="2">No action likely, monitor weather (see note a)</td></tr>
<tr><td rowspan="3">Expected to fall below +1°C</td><td>No rain
No hoar frost
No fog</td></tr>
<tr><td>Expected hoar frost
Expected fog</td><td colspan="3">Salt before frost (see note b)</td></tr>
<tr><td>Expected rain
BEFORE freezing</td><td colspan="4">Salt after rain stops (see note c)</td></tr>
<tr><td></td><td>Expected rain
DURING freezing</td><td colspan="4">Salt before frost , as required during rain and after rain stops(see note d)</td></tr>
<tr><td></td><td>Possible rain
Possible hoar frost
Possible fog</td><td colspan="2">Salt before frost</td><td colspan="2">Monitor weather conditions</td></tr>
<tr><td colspan="2">Expected snow</td><td colspan="4">Salt before snow fall</td></tr>
<tr><td colspan="6">The decision to undertake precautionary treatments should be, if appropriate, adjusted to take account of residual salt or surface moisture.
All decisions should be evidence based, recorded and require continuous monitoring and review.</td></tr>
</table>

Notes:
(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 possible other occasions.

(b) When a weather warning contains reference to expected hoar frost, considerable deposits of frost are likely to occur. Hoar frost 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 can become effective. Close monitoring is required under this forecast condition which should ideally be treated just as the hoar frost 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. Hoar frost may be forecast at other times in which case the timing of salting operations should be adjusted accordingly.

(c) If, under these conditions, rain has not ceased by early morning, crews should be called out and action initiated as rain ceases.

(d) Under these circumstances rain will freeze on contact with running surfaces and full precautionary 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.

(e) Where there is any hint of moisture being present, a pessimistic view of the forecast should be taken when considering treatment to negatively textured surfaces.

RECOMMENDED TREATMENT

Table H3: Spread Rates for Reasonable Spreading Capacity		
Weather Condition		**Salting (g/m2)**
Frost or frost forecast RST at or above -2°C		8
Frost or frost forecast RST below -2°C and above -5°C and dry or damp road conditions		15
Frost or frost forecast RST below -2°C and above -5°C and wet road conditions		20
Frost or frost forecast RST at or below -5°C and above -10°C and dry or damp conditions		20
Frost or frost forecast RST at or below -5°C and above -10°C and wet road conditions		2 x 20
Snow forecast		
	Less than 10mm	20
	10mm or more	2 x 20
Treatment during snowfall – to provide a debonding layer		20 - Dry Salt (see notes 2 and 3)
Treatment for slush when freezing conditions forecast		2 x 20 – Dry salt (see note 4)
Treatments for thin layers of ice < 1mm		
	Lower of air or RST > -5°C	2 x 20 - dry salt 2 x 20 – salt/abrasive mix (see notes 5, 6,)
	Lower of air or RST < -5°C	2 x 20 – salt/abrasive mix (see notes 5 and 6)
Treatment for layers of compacted snow and ice		
Medium layer thickness (1 – 5mm)	Initial treatment	2 x 20 – salt/abrasive mix (see notes 5, 6, 7 and 9)
	Successive treatment	20 – salt/abrasive mix (see notes 5, 6, 7 and 9)
High layer thickness (greater than 5mm)	Initial treatment	2 x 20 – abrasives only (see notes 5, 6, 8, 9 and 10)
	Successive treatments	20 – abrasives only (see notes 5, 6, 8, 9 and 10)
	After traffic started to break up layer	20 – salt/abrasive mix (see notes 5, 6, 7 and 9)

DUTY MANAGER TO DETERMINE TIMING OF SALTING RUNS AND RATES OF SPREAD DEPENDING ON FORECAST DETAILS

THE ABOVE TABLES ARE FOR GUIDANCE ONLY

DUTY FORECASTER SHOULD BE CONSULTED AS NECESSARY.

NOTES:

Note 1: Spread rates quoted make an allowance for the network having porous, negative textured and dense surfacing and take into account the spreading capacities of the plant utilised. Spread rates for pre-wetted salting are the combined weight of dry salt and brine combined in proportion 70:30 by weight with brine of concentration 20 to 23%.

Note 2: During and after snowfall, only the ploughed lane should be treated if other lanes have still to be ploughed. The spread width settings should be adjusted accordingly.

Note 3: A de-icer should not be spread alone without abrasives to anything other than a thin layer of ice or compacted snow when snowfall has ceased or future snowfall will be less than 10mm. Applying salt alone to compacted snow and ice can produce dangerously slippery conditions if a weak brine film is formed on top of the ice/snow layer.

Note 4: After snowfall, and when there will be no further ploughing but some slush remains on the road surface, it may be necessary to change the settings normally used for precautionary treatment to ensure a satisfactory distribution is achieved over the target spread width.

Note 5: Abrasives should ideally be 5-6mm and angular, but gradings down to 1-5mm should be reasonably effective. After abrasives have been used, drainage systems should be checked and cleared if necessary. Recovered material, which will be contaminated with road oil, must be disposed of safely.

Note 6: Care is needed when salt is mixed with abrasives with a high moisture content. Checks should be made that the mixture remains free flowing, does not clump and can be spread effectively.

Note 7: For medium thicknesses of compacted snow and ice, treatments without abrasives should only be used when earlier precautionary treatments have successfully established a debonding layer, and there is sufficient traffic to break up the layer of ice quickly.

Note 8: For high thickness of compacted snow and ice (greater than 5mm), treatments with a significant amount of salt should not be considered because they may leave the surface uneven. Any brine formed on the surface may collect in hollows and deepen them further, which can lead to a very uneven surface.

Note 9: When there are layers of snow, compacted snow, or ice of medium or high thickness on the road surface, it may be necessary to change the settings normally used for precautionary treatment to ensure a satisfactory distribution is achieved over the target spread width.

Note 10: A small amount of salt should be added to the abrasive to prevent freezing of the water within it. If the moisture content of the abrasive is 7%, 25g of salt per tonne of abrasive is sufficient to prevent freezing if thoroughly mixed.

APPENDIX I

BRACKNELL FOREST COUNCIL

DAILY RECORD FORM FOR WINTER MAINTENANCE

DATE : .....……..... TIME DECISION TAKEN .....……..……

1. FORECAST:- RED/AMBER/GREEN

HAZARD	YES	NO	POSSIBLE
ICE			
HOARFROST			
SNOW/SLEET			
FOG			

MINIMUM FORECAST TEMPERATURE:-

AIR .....……

ALL ROADS .....……

URBAN ROADS.....……

2. PROPOSED ACTION

ROUTES	NO ACTION	FULL PRESALT		WET AREAS	
		Time	Rate	Time	Rate
1					
2					
3					

JUSTIFICATION:-

SIGNED .....…… DUTY MANAGER

Ringway Infrastructure Services
(Agents to Bracknell Forest Council)

APPENDIX J

NOTIFICATION LIST

No	Name	Organisation	Tel.	Email
1	Bracknell Forest BC	Highways Asset Management Group	01344 352000	
2	Bracknell Forest BC	Forest Care	01344 786500	Forest.Care@Bracknell-Forest.gov.uk
3	Bracknell Forest BC	Customer Services	01344 352000	Customer.Services@Bracknell-Forest.gov.uk
4	Bracknell Forest BC	Communications and Marketing Team	01344 352000	Communications.Marketing@Bracknell-Forest.gov.uk
5	Thames Valley Police		08458 505505	hbi@thamesvalley.pnn.police.uk
6	RBWM	Engineering and Transport	01628 685736	engineering@rbwm.gov.uk or vikki.roberts@rbwm.gov.uk
7	Wokingham Borough Council	Highways,	0118 908 8301	WBCWinter.maintenance@wokingham.gov.uk
8	Mouchel	Highways Agency Area 3		WinterService.Area3@enterprisemouchel.com and area3ncc@enterprisemouchel.com
9	MeteoGroup			Via message board
10	Heart FM		0118 928 8800	Thamesvalley.news@heart.co.uk
11	BBC Radio Berkshire		0118 946 4200	Radio.berkshire.news@bbc.co.uk
12	Surrey County Council	West Area Highways		wah@surreycc.gov.uk
13	Hampshire County Council			roads@hants.gov.uk

APPENDIX K

WINTER SERVICE 2016-2017
FOOTWAYS/CYCLEWAY SALTING
IN BRACKNELL TOWN CENTRE

1.0 General Procedure

1.1 The Council aims to provide a winter service enabling, as far as is reasonably practicable, the safe movement of pedestrian and cycle traffic on the first and second priority routes within the town centre.

1.2 Town centre footways and cycleways historically have not been pre-salted, but have been salted and/or cleared of accumulations of snow during particularly severe and prolonged hazardous weather conditions with salt applied after the formation of ice on the footway and cycleway surface.

1.3 From the 2014/15 winter season the area comprising the Town Centre first priority salting route is now pre-salted on occasions when the roads primary salting routes are being treated and the forecast minimum temperature is at or below -1 deg.C or hoar frost is forecast. Treatment of the whole area shall be completed by 0745 hours Monday to Saturday and by 0845 Sunday.

1.4 The area comprising the second priority salting route shall be treated on the instruction of Highway Asset Management staff. Treatment of the Second priority areas will generally comprise post treatment following reports of the formation of ice or deposition of snow.

2.0 Plant

2.1 All plant and vehicles used to perform the winter service shall be provided and maintained by the Contractor

3.0 Decision Making

3.1 The decision to pre-treat the Town Centre first priority salting routes shall be made by the Duty Manager based upon the forecast minimum temperature being at or below -1 deg C. or hoar frost being forecast.

3.2 The Contractor shall inform the client and Contractor of the decision to salt the prescribed routes by the same process as the main highways primary salting routes.

3.3 Decisions to salt the Town Centre Secondary salting network and other areas will be made by the Council's Highways Asset Management staff.es for salting the Town Centre may be subject to amendment as the Town Centre re-development progresses.

4.0 De-icing materials

4.1 When choosing de-icing materials for use in the Town Centre consideration needs to be given to the surface material being treated.

APPENDIX L

Extract from the Corporate Severe Weather Plan re Snow & Ice

These priorities have been established as a result of learning from previous years snow events and would relate to similar severe cold weather / snow situations. This plan comes into effect and resources will be redeployed when contractor services such as Landscape and Waste Collection cannot or are at risk of not being able to operate as normal.

The corporate aim is to seek to ensure the overarching principles of (1) ensuring movement and public health (2) employment and (3) leisure within the borough and in that order.

Priority One

- Maintaining an operational priority road network (the Highways Contractor will already be doing this as part of the Highways Winter Service plan).
- Clearing sufficient access to the Depot site (to allow access and egress of Contractors vehicles).
- Clearing sufficient access to Time Square and Easthampstead House car parks / main entrances (to be undertaken from 6.30am whilst crews are waiting further direction).
- Footpath clearance and adequate access to neighbourhood shopping areas (as part of the Highways Winter Service Plan).

Priority Two

- Ensure that waste collections continue.
- Sufficient access to the Cemetery and Crematorium site and Longshot Lane waste disposal site.
- Sufficient access to Council owned residential care homes.

Priority Three

- Sufficient access to Council owned schools (drop off points only).
- Sufficient access to fee earning Council buildings and car parks.

Priority Four

- Sufficient access to non fee earning Council car parks.
- Support to non BFC community facilities including Doctors surgeries.

Independent of the above priorities Leisure centre sites will be cleared by the Downshire golf tractor capability.

Where the severe weather plan is in operation to respond to a snow event, all relevant services and contractors will attend the corporate severe weather management team. The main point of contact with the highways management team will undertake day to day co-ordination directly with the contractor representatives to task activities and deploy resources.

16. CIRCULATION LIST

16.1 Internal

Highways Asset Management
Customer Services
Forest Care
Communications
Departmental Directors
Ringway Infrastructure Services
Environmental Services

16.2 Adjoining Councils

Hampshire County Council
Royal Borough of Windsor & Maidenhead
Surrey County Council
Wokingham Borough Council

16.3 Highways Agency's Agents

Mouchel

16.4 Emergency Services

Thames Valley Police
Royal Berkshire Fire and Rescue
South Central Ambulance Service

16.5 Parish and Town Councils

Binfield Parish Council
Bracknell Town Council
Crowthorne Parish Council
Sandhurst Town Council
Warfield Parish Council
Winkfield Parish Council

16.5 Media Organisation

BBC Radio Berkshire
Heart FM

16.6 Motoring Organisations

RAC - Touring Information (RR)
AA Roadwatch

17. REFERENCES

i) Well-maintained Highways - Code of Practice for Maintenance Management July 2005, as amended. (18 September 2013)

ii) Highways Act 1980

iii) Lessons from the Severe Weather February 2009. UKRLG

iv) The Resilience of England's Transport Systems in Winter – An Independent Review – Report October 2010.

v) Winter Service Guidance for Local Authority Practitioners – Recommended Precautionary Treatments and Post Treatments Including Revised Salt Spread Rates.(January 2011) .