

Brighton & Hove Highways Winter Service Plan 2011-12

Structure

The Highways Winter Service Plan has been structured into two segments.

Part A comprises of an overview of the essential services and information while Part B details the operational and record keeping aspects of the Plan.



Part A

Overview of Essential Services

1 Summary

In cold weather conditions Brighton & Hove City Council provides a Highways winter service which endeavours to keep the traffic moving and to minimise delays and accidents. The priorities of the service are public safety and keeping the city moving.

The objective is to provide a winter service, which will permit, as far as is reasonably possible, the safe movement of traffic on designated roads throughout Brighton and Hove; it also aims keep to a minimum delays and accidents brought about by adverse weather conditions. Designated footways and cycleways are treated only in severe and prolonged snow conditions.

The service operates from 1 November until the end of March, 24 hours a day, 7 days a week and includes salt gritting the main network in advance of road frost, ice or snow and the provision of salt/grit bins at outlying ungritted roads. In prolonged snowfall, the service also includes snow ploughing and pavement clearance. The period may be extended on a day-to-day basis by the Head of Network Management in cases of severe cold weather continuing into April or starting earlier in October.

2 Winter Weather Conditions

Winter weather conditions which are managed are:

Snow – rare, but it does cause great difficulties due to its infrequency, the topography of the city and the resources needed for clearance.

Ice – occurs when conditions are freezing and wet.

Hoar Frost – is formed from white ice crystals. We only deal with this when it forms on roads making them slippery. This should not be confused with low-level frost, such as the white frost that appears on car roofs or vegetation in the mornings.

Freezing rain – is rain which freezes as soon as it hits the road surface. This is a rare occurrence but difficult to treat because of the timings between rain washing off the treatment and the roads freezing.

3 What the Council Does

Decision-making

Brighton & Hove City Council has a team of Winter Maintenance Duty Managers in the Highways section who use the latest technology in weather forecasting/prediction to decide what is required to protect road users during cold weather. They will assess the weather forecast for a 24-hour period combined with local road temperature sensor data information in order to decide what action is necessary.

These duty managers are on standby during office hours, out of office hours, at weekends and during holiday periods.

Over a winter season, weather forecasts are approximately 90 percent accurate. Typically, this means that there are several days when a road frost or other freezing conditions are not forecast but will still occur. Similarly, there are some forecasts which predict ice and snow conditions which do not occur.

Winter Duty Managers are volunteers from within the Highway Operations section of Brighton & Hove City Council who all have regular day-to-day jobs. Winter duties are in addition to their normal roles so please be aware of this if awaiting a written response to queries.

Routes

The priority is to keep major routes treated and passable. These are generally all the 'A' roads, most of the 'B' and 'C' roads and other roads of local importance, e.g. all bus routes. A total of 156 miles of main routes around the city will be treated if weather conditions require it.

The aim is to use the resources available to us as effectively as possible.

There are four levels of routes which the Council will use depending on the severity of the weather conditions and the variables which can affect it. They are listed below in order of severity according to climatic zones and weather conditions:

- 3.1.1 Hilltop Routes (Level 1): The routes are mainly based in the northern hill top side of Brighton and Hove where frost is more likely to form in marginal conditions.
- 3.1.2 Standard Routes (Level 2): This is the most common route used. It covers the main roads, bus routes, emergency service depots, hospitals, important commuter routes, most schools and shopping centres. These routes are commonly used for pre-salting and gritting before frost and icy conditions. These routes do not cover the warmest parts of the city.
- 3.1.3 Full Routes (Level 3): These are extended versions of the Standards Routes and cover more of the City's roads. These routes are commonly used in advance of snow or in extremely cold conditions if wet roads are likely to freeze where all of the city will be affected.
- 3.1.4 Priority Routes (Level 4): These are limited variations of the Full Routes. They are used when sustained snow or ice conditions are causing severe disruption and the routes need to be reduced to maintain the core of the city. When there is severe or sustained adverse weather conditions the gritting needs to occur more intensely on the most important routes in order to try and keep these roads operable. They include roads around the main hospitals and the main arterial routes. These routes may also be employed if for any reason there is a reduction in available resources.
- 3.2 During periods of prolonged heavy snowfall pavements are cleared in priority order - main shopping areas and pedestrian routes first, followed by other important pavements and local shopping areas. This work will only be undertaken after the main carriageway routes have been cleared, due to resources.

Designated footways and cycleways are treated only in severe and prolonged snow conditions.

Treatments

Precautionary Salting - The application of salt to carriageways on priority routes usually in advance of frosty conditions (often referred to as spreading, gritting or pre-salting).

Where there is leakage of ground water from the roadside, it will be treated on a reactive basis.

Post-treatment – the application of ploughing, salt, a salt/grit mix or grit (sharp sand) to carriageways following snow and depending on the depth and severity of the snowfall.

- 3.3 Available alternative de-icers are regularly reviewed, particularly with a view to their use on structures and special paved areas. However, such alternatives are currently prohibitively expensive and may also have their own environmental disadvantages. Therefore, as the temperature seldom falls below minus 5°C, salt is used almost exclusively as the means of melting ice or snow on the highways (including structures and special paved areas). When conditions remain well below freezing, a salt/grit mix may be used to aid traction. This mix may also be used for trouble spots or extreme gradients. For extreme snowfall, pure grit may be spread to assist with traction.
- 3.4 The council is dependent on the national salt supply chain to replenish its stocks. For 2010-11, national government has issued a warning that if the UK experiences a similar severe winter to that of 2009-10, salt supplies could again become depleted during mid-winter season. Brighton & Hove has stored as much salt as it is able to do so in advance. The winter service plan will therefore be carried out to the best of our ability but also according to available resources and identified national and local priorities.

4 What The Council Does

4.1 Which Department in The Council Is In Charge?

The Highways section within City Infrastructure in Brighton & Hove City Council take responsibility for putting this Winter Service Plan into operation and for providing the resources and equipment required for the majority of the public highway service during the Winter Service Period.

This includes providing the salt and gritting materials, providing the vehicles, providing information to the contractors carrying out the work and operating the Winter Service 24/7 during the period.

In conjunction with the Highways section, Cityclean and Cityparks within City Infrastructure may also provide resources and equipment for hand clearance.

The Highways Winter Service is reliant on Winter Duty Managers (WDM) to perform the organisational and operational functions during the Winter Service Period. WDM receive regular daily weather updates and decide what level of action is required and when. The WDM instructs the contractors about which work needs to be carried out and when, based on information received from external sources (Met Office, Police information, weather stations) and information in the "White Book" (Highways Winter Service Plan).

4.2 Who Carries Out The Winter Work?

The Highways Winter Duty Manager carries out the decision-making and management of the service.

Highways work with City Clean as the Winter Service "Contractor" and as such Cityclean will provide the staff required to carry out the machine and manual spreading and ploughing operations. Part of this requires that City Clean drivers will maintain a 24 hour stand by rota for all of the gritter driving whilst other Cityclean staff may be required to respond to a Winter Service event under the direction of the WDM and/or the Head Of Operations at Cityclean.

Highway contractors are also used for tasks such as filling up grit bins and for pavement clearance under the direction of the WDM. Cityparks staff may also assist with vehicle provision and clearance in the event of heavy snowfall.

Other sections of the council and other services (such as fire, police and NHS) will also have plans in place to deal with severe weather incidents. The Highways team consult on this winter service plan with other service providers to ensure that our highway gritting routes best suit their needs as much as is practicable.

4.3 Weather Forecasting

Brighton & Hove City Council has several key weather forecasting tools to help in predicting and deciding on action to be taken.

There are 4 weather forecast outstations situated in strategic locations across the city. These stations provide various information such as air and road surface temperatures, humidity and wind speed /direction. The information is retrieved remotely by computer.

We also have a contract with the Met Office to provide the weather forecasting for the region. During the Winter Period daily forecasts from the Ice Prediction System are sent. Additional updates can be asked for by a Winter Duty Manager to confirm or track potential changes.

Thermal mapping has also been used for the purposes of establishing gritting routes and priority risk areas. Thermal mapping is able to indentify which sections of road are cooler or warmer than average due to the lie of the land, type of construction, traffic flows and other factors which can affect road temperature.

4.4 Communications

The Communications team will post regular updates on the Councils website informing of severe weather conditions, advice on self-help and on driving and movements across the city during extreme of adverse weather conditions.

5 What Do Other Agencies Do?

The Highways Agency is responsible for treating national routes including the A23, M23 and A27 trunk roads. They can be contacted on 0845 600 0414.

What areas do the HA cover? A27, Brighton bypass, A23 north of the A27 Junction.

What areas does East Sussex County Council cover? Falmer and Saltdean border.

What areas does West Sussex County Council cover? Fishergate border, Devil's Dyke border.

5.1 Co-ordination with Neighbouring Highway Authorities

Highways Authorities will manage their own salting solutions within their own boundaries unless assistance is requested. In that event, level of assistance will be determined on a day-to-day basis. Due to concerns regarding liability issues, reciprocal salting arrangements with other neighbouring Highways Authorities ceased in 2006-07. However, in the event of severe and prolonged snow or other

business continuity issues the Head of Highway Operations will liaise with members of East and West Sussex County Councils.

6 What Can You Do To Help?

6.1 Self Help

You can apply table salt to paths, pavements and driveways. During frosty and icy conditions one tablespoon per square metre is generally all that is needed.

Salt/grit mixes can be used from over 400 locally placed salt/grit bins to apply to roads and pavements if necessary. This is best spread in a thin even layer.

SHOVEL SWEEP SALT

In heavy snowfall, the best thing to do is to shovel, sweep, and salt.

Firstly, particularly if the snow is deep, and you've got a shovel, try to shovel it out of the way, into the gutter, or somewhere it won't cause a trip hazard. You can then sweep away the remaining residue, and apply salt onto the pavement.

It's worth bearing in mind that what we put in our grit bins is a mixture of salt and grit or pure grit during snowfall, but ordinary salt will usually work just as well, especially if the snow is cleared. All you need is household table salt, and really you don't need that much: usually one tablespoon will do a square metre. So you can use it sparingly. Grit can also work to give traction on icy surfaces.

Finally, if you are clearing snow, please don't use any water – boiling or otherwise. The problem with the water is that it can very quickly re-freeze, and leave an icy patch. The same is true for clearing your car windscreens; obviously water can leave icy patches on the road.

6.2 Driving Advice

Please remember to drive with caution during freezing weather. The Highway Code makes it clear that drivers should always drive according to the weather conditions. Before setting out on a wintry day you should:

- consider whether your journey is absolutely necessary
- if it is, check the local and national weather forecasts
- if driving, listen to your local or national radio stations for travel news

- Even if roads have been gritted, do not assume that they are free from ice and frost.

Please remember that we are not able to salt all roads.

Before setting off on a journey make sure you have

- Ice scraper and de-icer
- Warm clothes and a blanket
- First aid kit
- Torch and spare batteries
- Reflective warning sign
- Jump leads
- Food and a warm drink in a thermos flask
- And clear the snow from the bottom of your shoes and from the outside of your car.

When driving

- Remember it can take up to 10 times longer to stop in snow and ice
- Make gentle manoeuvres to remain in control
- Select second gear when pulling away to avoid wheel spin
- If hill climbing, try and avoid stopping on the hill. Try and leave lots of distance between you and the car in front. Try to keep at a constant speed and try to select the best gear before you get to the hill.
- When driving downhill, use engine braking by selecting lower gears. Leave plenty of room between you and the car in front.
- When using the brakes, use them gently. If you start to skid, take your foot off the brakes and reapply.

6.3 Walking Advice

When there are slippery and icy conditions it is vital to recognise the hazards of walking on these surfaces.

Tips:

- Don't wear shoes with smooth surfaces. Try putting stretch socks over your shoes to aid grip. You can also try spiked over-shoes, available from catalogues and via the internet.
- Be aware of the surface you are walking on. Don't try and run for a bus or run to cross a street.
- Use your arms to keep you balanced. Don't put your hands in your pockets when walking and avoid carrying heavy loads which could imbalance you.
- Try and remove as much snow as possible from the bottom of your shoes as you are walking.

- Walk “small”. Avoid a tall, erect marching walk.
- Just because a path has been cleared, do not assume it is free from ice and won’t be slippery.
- Assume all wet and dark areas on pavement are slippery and icy.
- Be careful when getting in and out of vehicles. Use the vehicle as support when getting in and out.
- Try and walk on grassed areas where possible as this gives better traction.
- Point your feet out slightly. Spreading your feet like this will increase your centre of gravity. Extend your arms to maintain balance and take short steps.
- If you are going to fall, try and fall on your side. Avoid falling on your knees, spine or trying to stop your fall by putting your arm out.
- If falling, try and relax your muscles. You will injure yourself less if you are relaxed.
- Watch where you are stepping and go SLOWLY!!!!!!

6.4 Salt/Grit Containers

There are over 400 salt/grit bins throughout Brighton and Hove. These bins have been made available at sites which are not usually near a gritting route. The aim of the salt bins is self help for residents of Brighton and Hove to salt/grit an area which would not be on a gritting route.

Additional salt/grit will be placed in strategic locations across Brighton & Hove at the discretion of the Winter Duty Manager.

Compared to some other authorities, we supply a high quantity of salt/grit for the public, within what is a relatively small geographical area. This is because we recognise that Brighton & Hove is a mainly urban area built on hills. Hence the bins are supplied for steep areas usually hardest hit by snow and ice. However, provision of grit bins needs to be balanced against the capability to refill within a reasonable timescale, as well as available resources such as salt and grit.

It is not possible to supply any more grit bins on the highway. This is because it would take far too long to fill them quickly during extreme weather and with finite resources we cannot keep expanding the number of grit bins that we then need to service.

7 Our Equipment

7.1 Brighton & Hove Council Equipment List:

- 7 gritters
- 7 ploughs for use with the gritters
- 6 hand spreaders used for footways and cycleways
- 1 machine pavement gritter
- We may also have access to 3 tractors in severe weather conditions
- We may also have the use of 3 JCB's in severe weather conditions

7.2 Salt Storage Capacity

The council has a contract in place for the supply of salt. This is delivered by boat from one of the two salt mines in the country direct to Shoreham Harbour. It is then stored at our Hollingdean Depot and the gritters load up and go out on their routes from here.

The average amount of salt used per winter is about 800 tonnes.

Brighton & Hove has limitations on how much the council can store in advance and must also balance purchase against lifespan/likely usage of the stock. As we have no options to increase salt storage within our boundaries, we have arranged for additional storage at a depot in West Sussex.

8 Frequently Asked Questions

Why are salted roads sometimes still icy?

Despite the high level of service provided, no guarantee can be given that treated roads will always be completely clear of ice or snow.

This can be for various reasons.

- It takes time for the salt to become effective after roads are salted
- Rain and running water can wash salt off roads leaving them prone to re-icing.
- In severe cold weather (falling to and below -5°C) even salt will not prevent roads from icing.
- In heavy snowfall, salt treatments are only effective on roads with heavy traffic.
- If freezing conditions follows rain, salting will normally start after the rain has stopped to avoid salt being washed away. Temperatures may fall by as much as 5°C per hour and the wet roads may well freeze before the gritter has been able to salt them.
- Dawn frost occurs on dry roads where early morning dew falls on cold road surfaces and freezes on impact. It is not possible to forecast with any accuracy where and when this may happen.
- When rain turns to snow during the rush hours, early salting is washed away and gritters are unable to make progress due to traffic congestion.
- There may be water on the highway due to a number of reasons. These could include a water mains leak or vehicles being washed and screens having water poured over

them to melt the ice. These quantities of water will result in ice forming if the road surface temperature is below zero degrees. The council will treat major water leaks as soon as it is made aware but this obviously takes time after receiving reports.

- Over a season, weather forecasts are approximately 90 percent accurate. In most winters, this means that there are several days when a road frost is not forecast but will still occur

Treated roads can still therefore have icy patches and drivers should remain vigilant and aware of the need to drive with due care at all times, especially when road frosts or freezing temperatures follow rain.

Why are roads on the gritting routes not always clear during snowfall?

There are specific environmental factors that will reduce the effectiveness of salting/gritting and ploughing. This is particularly the case in areas outside the main city centre:

- Salt/grit needs to be tracked in by substantial vehicle or pedestrian traffic in order to work well and break down the layers of snow. Where roads (and pavements) do not have heavy traffic, they are more resistant to treatments. Generally salt will lie inert under heavy snowfall until the layers of snow are broken up enough for it to mix in and act as a de-icer.
- Roads in more outlying areas tend to get more snowfall as they are higher up.
- Roads further out from the city centre areas are generally much colder.
- Cars abandoned on junctions or badly parked will prevent the larger vehicles such as buses & gritters from getting through.
- Some roads are too narrow for the gritters when they have ploughs on.
- Ploughing opens up the road but tends to provide a narrower band of clearance so leaves less room for manoeuvre for larger vehicles such as buses as well as pushing the snow into the kerbside which can make bus stops harder to reach.
- Ploughing is not very effective over speed humps, steep junctions, pronounced cambers and crowned roads.

Grit or Salt?

Although most of us call it gritting there is in fact no grit involved in precautionary treatment. (Precautionary treatment is where we treat the roads in advance of frost, ice or snow). What we spread on the roads is rock salt taken from an underground mine in Cleveland.

It is more or less the same as the rock salt you would grind into your food, but of a size and composition for road use.

Grit (or sharp sand) is used as post-treatment on its own or in a mix with salt. (Post treatment is where we treat the roads during or after severe ice or snow). Grit aids traction and break down layers of ice and snow.

What does salting the roads do?

We spread salt onto the road. This works best when it goes into a solution, which is why we rely on the tyres of cars passing over the top of it to crush the salt onto the road. This then forms a solution with a higher de-icing capability.

Water freezes at 0°C, but salt stops water from freezing until -6°C to -8°C. So the salt solution means the snow or ice will freeze less or melt quicker.

Salt has the potential to melt snow at temperatures as low as -20° C but is not a very efficient treatment in extreme cold. Salt starts to become much less effective around minus 5°C and almost ineffective at lower temperatures. As a result, its use becomes practically, economically and environmentally difficult. In heavy snowfall, especially on roads with no heavy traffic, salt will not make much difference.

In extremely low temperatures, or heavy snowfall, a mix of salt and grit or pure grit may be used to aid traction and to break down compacted layers of snow and ice. Ploughing is also used if the depth of snow allows this but cannot clear away all of the snow (e.g. around speed humps)

When and how do you salt the roads?

We salt the roads to prevent icy conditions when we are expecting ice or snow. Each route is planned to achieve a maximum of three and a half hour response time from leaving the depot to completing the route prior to ice forming.

Which areas of the city are salted?

Salting depends on how severe the weather conditions are. It may be necessary to salt the coldest areas only or alternatively to salt all main routes. Under severe conditions resources are focused according to priorities on identified gritting routes. Decisions are based on the following priorities:

- 1) primary roads (all 'A' roads), hospital, ambulance and other emergency service areas
- 2) the majority of 'B' roads
- 3) other important roads (bus routes)

ROAD CLOSURES - It is our policy to work with the Police in closing roads. This may include where:

- roads become impassable
- road conditions become hazardous

However we do not generally tend to close roads during winter weather. This is because not all roads are treated and because in heavy snowfall even treated roads may still have snow/ice on them. It would not be feasible to close all these roads. Motorists are advised to drive with caution on all city roads during cold winter weather.

Why don't you salt the pavements?

We have over 1,200 km of pavement in the city. Most pavements are too narrow to be salted by machine. We do, however, place salt/grit bins at locations across the city for anyone to make use of and we will clear snow away after prolonged heavy snowfall (in order of priority).

As with roads, salting pavements is only effective if there is heavy footfall to help the treatment work. So we clear most pavements only after snowfall. We have identified Priority 1 and 2 pavements, which are where the greatest number of people will be using central or local services.

Pavement clearance is a lengthy labour-intensive task by hand spreading, so operationally and practically this work requires a high level of resources. The ice or snow may melt during

the day of its own accord. Therefore the Duty Manager must decide on priorities, how heavy the snowfall is and when the snow may be likely to clear naturally due to improved weather conditions as well as when clearance will be most effective (e.g. in heavy and continuous snowfall, clearance may need to wait until it stops because all efforts would be immediately covered over again).

What are salt/grit bins for?

Salt bins are provided at over 400 locations in the city, often on steep road junctions or hills. They are not usually placed on major salting routes or in flatter, warmer areas of the city. They are there for anyone to make use of in icy weather.

How do I ask for a salt/grit bin refill?

Please email gritbinrequest@brighton-hove.gov.uk or complete our online application, stating the exact location of the bin.

During severe weather we batch up all the requests for grit bin refills and then make a decision on when to refill depending on amount of requests, available resources and forecasted weather conditions.

Please note that no new grit bins will be supplied on the public highway. This is because we have now reached the limit of what we can sensibly and practicably keep supplied. To request the removal or relocation of an existing bin only, please e-mail gritbinrequest@brighton-hove.gov.uk

What can I do to help?

You can apply salt to paths, pavements and driveways or “Shovel, Sweep and Salt”.

Part B

Operation and Record Keeping

This document aims to set out in one plan sufficient detail to inform anyone involved in the management of the Winter Service of current Procedures and requirements. The Winter Service plan is also known as the "White Book".

The information contained in the White Book is generally in accordance with the Local Authorities Association's Code of Good Practice for Highway Maintenance and associated local and national government Winter Reviews. A commentary on each of the Code's recommendations is made in **Appendix X**, showing how Brighton & Hove City Council's Winter Service Plan accords with these recommendations.

Appendix X

10 Objective

The Railways & Transport Act 2003: Section 111 – Highways, Snow & Ice, has a duty, as far as in reasonably practicable, that the safe passage along a highway is not endangered by snow and ice.

The Traffic Management Act 2004 places a network management duty on the local authority to secure the expeditious movement of all users.

The objective is to provide a winter service, which will permit, as far as is reasonably possible, the safe movement of traffic on designated roads throughout Brighton and Hove and to keep to a minimum delays and accidents brought about by adverse weather conditions. Designated footways and cycleways are salted only in severe and prolonged snow conditions.

11 Definitions

11.1 Winter Service Period

The winter period shall be from 1 November each year to 31st March the following year. The period may be extended on a day-to-day basis by the Head of Highway Operations in cases of severe cold weather continuing into April or starting in October.

11.2 Precautionary Salting

The application of salt to carriageways on priority routes usually in advance of frosty conditions (often referred to as spreading, gritting or pre-salting).

11.2.1 Hilltops Routes

Two routes salted on marginal occasions where frost is liable to form on hilltops and in known frost hollows furthest from the influence of the sea. The routes usually take approximately 1½ hours each to complete.

11.2.2 Standard Routes

The most frequently instructed routes but do not cover the warmest areas identified by thermal mapping. Six routes cover main road, bus routes, emergency service depots, main hospitals, important commuter routes, large schools and shopping centres. The routes usually take approximately 2½ hours to complete.

11.2.3 Full Routes

An extension of each standard route to cover the warmest areas, usually instructed when a wet road is liable to freeze or in advance of snow. The routes usually take up to 3½ hours to complete unless it is snowing.

11.2.4 The routes are defined as pace notes with plans and are kept in the Out of Hours office at Hollingdean Depot. These are summarised in **Appendix B**. Copies of the notes are also kept on the shared Highways Drive >Winter Service Plan 2011-12.

Appendix B

11.2.5 Where there is leakage of ground water from the roadside, it will be treated on a reactive basis.

11.3 Ploughing

The removal of snow by means of a plough blade attached to a spreader or such other vehicle as may be agreed by the Client, Highway Operations, Brighton & Hove City Council.

11.4 Highway Winter Service Provider (Client)

The client service provider is the Highways team, City Infrastructure Brighton & Hove City Council.

11.5 Winter Service Contractor – WSC

The in-house service provider for waste management (Cityclean) provides the drivers and other operatives for the Winter Service. For the sole purpose of clarity, they are referred to as the Winter Service Contractor (WSC) in this plan. Details of Rota at **Appendix F**. The co-ordination of drivers at the Depot will be carried out by the Emergency Out of Hours' Officers, reporting to the Head of Highway Operations. For the purposes of this document, the Out of Hours Officers will also be referred to as the WSC, receiving and carrying out instructions from the Winter Duty Managers or the Head of Highway Operations (the Client).

Appendix F

11.6 Winter Duty Manager - WDM

The Duty Officer is employed by the client and the duties are shown in paragraph 5.2. Although the duties are rotated, whoever holds the winter maintenance mobile phone is on duty and is known as OSCAR 5. Details of the rota and contact numbers are in **Appendix E**.

Appendix E

12 The Client's Role

12.1 The Client will be responsible for: -

- instructing the contractor
- providing salt
- providing the spreaders and ploughs and their maintenance requirements.
- providing route information and updates where necessary.

The Client will operate a round the clock service for the Winter Service period.

12.2 Winter Duty Manager (WDM)

12.2.1 The functions of the WDM will be: -

- to receive and record daily weather forecast including updates
- to decide what action is required and when
- to inform the Emergency Out of Hours' officer of every decision
- to instruct the WSC in reasonable time to enable the action to be fulfilled

Appendix H

- storage of information.
- responding to public queries and reports
- ensure that decisions are also communicated to Cityclean and Cityparks relevant staff such as the Operations Managers and Contact Centre.
- responding to and recording decision based on police (or other agency) information or requests. Records should be kept on the form detailed in **Appendix S**.

Appendix S

12.2.2 The starting time will be determined by the Client and may need to be varied due to prevailing weather conditions. The starting time is the time the spreader leaves the depot. The finish time is the time the spreader returns to the depot.

13 The WSC (Winter Service Contractor)'s Role

13.1 Stand-by Rota

Throughout the Winter Service Period, the WSC shall organise and maintain a 24 hour stand-by rota for spreader drivers, fitters and other operatives who will be involved in the spreading operations and they shall be contactable by telephone.

The rota shall show the names and telephone number of personnel and shall be given to the WDM before the season starts. See **Appendix F**.

Appendix F

13.2 Response Time

On receipt of an instruction from the Client the WSC personnel required to carry out spreading shall report to the depot in sufficient time to load the spreaders to enable them to leave at the time specified by the Client.

13.3 Spreaders and Loading Equipment

a) The WSC will be provided with seven spreaders - 6 for routes and one spare. 7 ploughs are provided for use in the event of major snow fall. See **Appendix C**.

Appendix C

b) The WSC will provide the vehicle washing facilities. The loading equipment will be organised by the Client, but used and maintained by the WSC.

c) The spreaders shall be driven at the speed recommended by the manufacturer to achieve the rate of spread of salt specified by the Client.

d) Vehicle and electronic equipment – WSC to ensure that drivers always use equipment in accordance with the instructions manual in **Appendix V**. Technical breakdowns must be reported to the Client officer immediately. A check should be made of the vehicle before a route is started.

Appendix V

13.4 Handwork in the Event of Snow

Cityclean & Cityparks Operations Managers will be asked if they can provide sufficient labour and plant for handspreading of salt/grit in the event of severe snowfall and as directed by the WDM. Contractors may also be used at the agreed rates during a snow event.

Appendix L

13.5 Personnel

Drivers

- i) The WSC shall provide sufficient personnel to enable all the vehicles listed in **Appendix C** to be capable of simultaneous operation. All personnel will be adequately trained for winter duties. Training shall be to City & Guilds 6159 and will cover operation of the prime movers spreaders and ploughs. If necessary, for 24 hours continuous operation the WSC shall provide additional personnel required by the Client.

Before the winter period, any spreader driver who is not familiar with the routes will be required to report to the Depot Co-ordinators for familiarisation with at least one standard route.

Appendix C
Appendix A

- ii) Also, before the winter period the client shall employ sufficient WSC staff to test the spreaders and ploughs. The WSC shall report back all defects and problems so the Client can effect repairs before the Winter Service Period begins. This is called Operation Snowdrop.

Appendix O

- iii) The WSC is responsible for the health, safety and welfare of the labour force.

13.6 Spreader Driver's Mate

The WSC shall be asked to provide personnel to accompany spreader drivers during snow-ploughing operations. This may require doubling up from the drivers' rota or use of Cityclean's other operatives if agreed with the Head of Operations at Cityclean.

13.7 Driving Hours

The provision of drivers' hours is a matter for the Winter Service Contractor and it is also the Contractor's responsibility to ensure that the drivers comply with the appropriate laws governing driver hours etc. Where this has an impact on Cityclean operations, the Winter Service budget will pay any costs associated with relief agency cover.

13.8 Records

The WSC completes the Winter Service Action report for each instruction received and ensures that any necessary remarks by the drivers are recorded and that the driver signs and dates the report upon return to the depot. The WSC returns the Action Reports daily to the Head of Highway Operations. See **Appendix H**.

Appendix H

13.9 Breakdowns

In the event of a breakdown the WSC will contact the Spreader Maintenance fitter directly. See **Appendix G**.

Appendix G

13.10 The WSC is responsible for refuelling the spreaders. Refuelling will mainly be carried out at Hollingdean Depot but should fuelling need to take place at a garage, the WSC is responsible for passing the receipts to the Head of Highway Operations. Fuel cards are kept on each spreader key ring.

14 Operations

14.1 Pre-Salting

14.1.1 All routes to be pre-salted shall accord with the Client's current objective.

- 14.1.2 Salting Procedures shall take the following into account: -
- i) Weather forecast
 - ii) Timing
 - iii) Rates of spread
 - iv) Previous action
- 14.1.3 In general, the spread rates will start at 10g/m² for pre-salting and up to 40g/m² in advance of snow.
- 14.1.4 Brighton & Hove City Council's waste management section, City Clean, or other council sections may contact the WDM for help with pre-salting or snow clearance on refuse routes that are not on the usual gritting routes. The WDM will make the final decision on whether this work can be carried out, based on citywide needs, driver availability, salt stock, future forecasts and other priority factors that may need resources to be directed elsewhere. Any additional gritting decisions must be recorded by the WDM on the relevant form at **Appendix S** including reasons for the decision.

Appendix S

14.2 Snow Clearance - Carriageways

- 14.2.1 At the onset of snow, the Head of Highway Operations or the WDM can instruct the highway teams (Highway Inspectors, Network Co-ordination, Parking Infrastructure and/or Highway Enforcement) to gather information about the overall situation in areas of the city. This information is to be fed back to WDM by 1000 hrs on the first morning and a current situation report at the same time each day thereafter or more frequently if instructed by the WDM.
- 14.2.2 Priority and effort is to be devoted to clearing the full routes. Once the routes are open and can be kept open attention may be turned to other public highways and is based on feedback from the teams. The WDM shall

decide on that priority based on citywide needs, driver availability, salt stock, future forecasts and other priority factors that may need resources to be directed elsewhere.

- 14.2.3 When heavy snow is forecast, at the direction of the WDM, the ploughs will be fitted to spreaders in readiness for use.
- 14.2.4 If precautionary salting has been carried out, ploughing will usually commence when the depth of snow exceeds 30 mm. A mix of salt and grit may be used in any salting operation during ploughing. Vehicles must retain some salt/grit load in the back of the vehicle to ensure sufficient weight when ploughing.
- 14.2.5 If precautionary salting has not been carried out, snow will be salted until the depth of snow exceeds 30 mm when ploughing will usually commence.
- 14.2.6 Section 67 of the Road Traffic Regulation Act 1984 gives police the authority to place road closure signs and close any road in extraordinary circumstances. In the event of a road becoming blocked with snow or dangerous due to ice, the WDM in association with Sussex Police may close that road temporarily to facilitate clearance.

For prolonged closure the Police may ask the Highway Authority to formally close that road with an Emergency Notice and then the Highway Authority will arrange appropriate signage.

14.3 Snow Clearance - Footways

- 14.3.1 Snow clearance of footways will only be carried out during severe and prolonged snow events. Town centre and main pedestrian routes are to be cleared first. Use of salt/grit will be at the decision of the WDM or Head of Highway Operations. The decision regarding operational staff

to clear snow will be made by the Heads of Operations of City Clean and Cityparks

Private shopping precincts and private forecourts are not to be treated. Attention is then given to important linking footway and local shopping areas. In the last phase residential footways may be tackled but only with the prior consent of the Head of Delivery. Footway clearance is a lengthy labour-intensive task and therefore the WDM must decide on priorities and when the snow may be likely to clear naturally due to improved weather conditions. See **Appendix M**.

Appendix M

14.4 Snow Clearance - Night-time working

Night-time working is only permitted in highest priority areas e.g., main roads and town centre footways where deemed necessary by the WDM.

14.5 Snow Clearance - Provision of Labour and Payment Thereof

- 14.5.1 Before winter the Client is to approach its contractors and local plant hire companies to it to see if they would be willing to help in snow clearance. This is to identify the number of men available, plant, unit rates, communication arrangements, hire procedures and ability/previous experience in working on the highway. An annual register of snow clearance organisations is to be compiled by Client. If required for snow clearance, organisations on the register are to be approached before contact is made with any other organisations. See **Appendix L**.

Appendix L

- 14.5.2 Only the WDM can instruct snow clearance contractors. Uninstructed work will not be paid for.

15 Weather Forecasting

15.1 The forecast outstations are situated on:

- the A270 Old Shoreham Road at the junction with Hangleton Link Road
- Bexhill Road, Woodingdean
- The Fiveways junction
- Saddlescombe Road

The forecast outstations are equipped with sensors to monitor air and road surface temperatures, precipitation, humidity, road surface conditions and residual salt on the road surface, wind speed and direction. Data from the Forecast Outstation is retrieved remotely by computer.

Appendix Q

15.2 Thermal mapping was used to identify sections of road which are cooler or warmer than average due to topography, type of construction, traffic flows and other factors affecting road surface temperature. This information was utilised for the initial route planning.

15.3 A Weather Forecasting Centre provides daily forecasts via an Ice Prediction System during the months November - March inclusive. Forecasts will be available by 1400hrs each day. During October and April a general forecast is provided but the service can be extended by authorisation of the Head of Highway Operations to provide more detailed forecasts if required.

15.4 An outline of the current Ice Prediction System is given in **Appendix J**. Detailed information on access and use is contained in its User Manual.

Appendix J

15.5 The forecast will consist of the following elements;

- i) A 'General Forecast' for Brighton and Hove for the following 24 hours;

- ii) 'Site Specific' temperature forecast for the outstations together with a written text forecast.
 - iii) Morning Updates issued at around 8am each day, giving a résumé of the previous night's weather, and an indication of likely conditions for the coming night;
 - iv) 2-5 day forecasts are also provided to show the expected trend in the weather.
- 15.6 The WDM will print out a copy of the weather forecast at the time of making their decision and ensure that this copy is safely filed.
- 15.7 Updates will be made as necessary by the Weather Forecasting Centre and the WDM will be telephoned by the Centre if they deem it necessary. Should the WDM need to change the decision, they will inform the WSC immediately.
- 15.8 Outside of the Winter Service season, severe weather warnings are received by the Civil Contingencies Office and will be acted upon accordingly.
- 15.9 Details of condition indicator system for 'Road Danger Warnings' plus other weather information are given in **Appendix I**.

Appendix I

- 15.10 If for any reason the weather forecast is unavailable, precautionary salting is to be carried out when falling air or road temperatures reach +1°, provided the prevailing humidity, residual salt and cloud cover warrant that decision.

16 Communications

- 16.1 The communications available between the WDM & WSC are e-mail, telephone and fax. Communication between the WSC and its spreader drivers are the WSC's

responsibility and shall be maintained at all times. Mobile phones are provided to all drivers.

16.1.1 Telephones - **Appendix K** contains the mobile and home telephone numbers of persons who could be involved in the winter service.

Appendix K

16.1.2 Fax - also shown in **Appendix K** are fax numbers which may be useful during emergency situations. It is possible that the fax machine may not be manned out of normal working hours and an immediate response may not be made.

16.1.3 During periods of adverse winter weather conditions, the WDM may send a colleague to the Police Control Room in John Street, Brighton to ensure the latest information on road conditions is co-ordinated between the two Authorities. The WDM remains in control. The council's traffic control room may also be used for joint working such as with a representative from the bus companies.

16.2 The Communications Team

- The Communications team will provide regular internal updates during periods of severe weather via The Wave and BHCC website. Emails will also be issued to managers to cascade to their teams.
- Preparation for Heads of Service to cascade information via the councils external email portal. Can be used from any computer with online access.
- Implementation of an hourly service and advice updates to print radio and television news desks.
- Use of social media, such as Facebook, Twitter and YouTube to provide frequent updates to residents of Brighton & Hove.
- Provide a Highways Winter Service Special in the Autumn edition of City News.
- Provide clear legal advice regarding liability for clearing snow from the pavement.
- Shovel, Sweep, Salt message to be widely publicised.

- Discussions with the CVSF and other third party organisations so that information can be passed onto residents prior to or during severe weather to reassure, inform and mobilise them.

17 Co-ordinating with Neighbouring Highway Authorities

- 17.1 Reciprocal salting arrangements ceased in 06-07 due to nationwide concerns regarding liability issues. BHCC will take responsibility for the notice of closure at Old Boat Corner if directed by ESCC WDM.
- 17.2 In the event of snow, clearance will be managed by each HA within its own boundaries, unless the Duty Officers of each authority agree on a day to day basis to assist each other.

Appendix S

- 17.3 In the event of severe and prolonged snow or other business continuity issues, the Head of Highway Operations will liaise with counterparts in East and West Sussex as required and with BHCC's Civil Contingencies Officers.

18 Salt

- 18.1 Salt (Sodium Chloride) will melt ice and snow at temperatures as low as minus 21°C. However, salt starts to become much less effective at minus 5°C and almost ineffective at lower temperatures. As a result, its use becomes practically, economically and environmentally infeasible.
- 18.2 Available alternative de-icers are regularly reviewed, particularly with a view to their use on structures and special paved areas. However, such alternatives are currently prohibitively expensive and may also have their own environmental disadvantages. Therefore, as the temperature seldom falls below minus 5°C, salt is used almost exclusively as the means of melting ice or snow on the highways (including structures

and special paved areas). For trouble spots or extreme gradients, grit may be spread to assist with traction.

- 18.3 The salt currently in use is Crystalline Rock Salt complying with BS3247: 1991 Table 1. It is 6mm nominal size (Fine Grade). See **Appendix C** for current maximum stock allowed and method of procurement.

Appendix C

- 18.4 In extremely low temperatures, or heavy snowfall, a mix of salt and grit, or pure grit, may be used to aid traction.

19 Salt/Grit Containers

- 19.1 A mixture of salt/grit is stored in bins at various roadside sites throughout Brighton and Hove as a self help for residents.

- 19.2 The general principles for providing a bin are as follows: -

19.2.1 Bins would not normally be situated on spreader routes unless there was considered to be a special need.

19.2.2 Hills, steep junctions and places where water can seep across the carriageway, are general siting considerations.

19.3 Location of salt/grit containers are shown in **Appendix N**. Currently there are over 400 bins throughout the City.

Appendix N

19.4 Certain organisations such as police, fire, schools, may collect small quantities of salt from Hollingdean Depot for use around their premises. Authorisation for this must come from the WDM, and visitors must adhere to risk assessment procedures for collecting salt, shown in **Appendix R**.

Appendix R

20 Budget

20.1 The budget allows for precautionary salting of the Standard Routes 30 times per winter plus a two day snow event.

20.2 All costs incurred in Winter Service should be charged to the winter service budget which is administered centrally by the Client.

20.3 **Appendix P** indicates how any costs should be allocated.

Appendix P

20.4 Any under spend of the Highways Winter Service budget is added to the Corporate Contingency Fund and is carried forward to cover additional costs as a result of severe cold weather events and for any extraordinary requirements for the service such as technical/vehicular support.

A major snow period lasting up to 5 days would utilise much of this contingency fund in covering the additional ongoing costs of operatives, fuel, vehicle maintenance and contractor work required to run such a major operation. During a serious snow event or an extraordinarily cold winter it has been necessary to draw down from this fund, and amounts have been drawn down in 2006-07, 2008-09, 2009-10, and 2010-

11 for precisely this reason. If the fund falls below £250,000 it may be topped up by the environment budget at the year end, should funds be available.

21 Health and Safety

- 21.1 It is particularly important that Health and Safety precautions are strictly observed by the Contractor during pre-salting and snow clearing operations. At these times road conditions are likely to be very poor with additionally poor visibility and weather.
- 21.2 If a spreader is overdue to return to the depot or contact is lost, the WSC shall be responsible for re-establishing contacts or instigating a search.

22 Performance and Monitoring

- 22.1 The Contractor is required to provide data relating to the execution of salting and salt used during winter maintenance to the WDM to permit the monitoring of winter service operations.
- 22.2 The Salt Monitoring spreadsheet must be maintained by the WDM throughout the season, detailing amount used in each 24 hour period and any tonnage delivered. This is available on the shared drive and should be completed by the WDM on duty each week.

Appendix H

- 22.3 "Well Maintained Highways – A Code of Good Practice 2005", with updates, sets Standards and Performance Indicators for Winter Service activities. These are given in Appendix T. Suggested targets for these indicators have been set out by the Audit Commission and also appear in **Appendix T**.

Appendix T

23 Business Continuity/Emergency Events

- 23.1 The usual rota for gritter drivers are 6 on shift per week. The rota utilises 2 shifts, each shift being off duty one week then on duty the next week. There are 15 members of staff trained to operate gritters. In reduced staffing conditions, drivers may be asked to be on shift for 2 weeks at a time. More staff are to be trained 2011-12, once time permits and new gritters are in place in order to increase resilience in extreme conditions which require 24/7 operations.
- 23.2 Drivers' hours' legislation must be observed unless there is a compelling emergency reason to override these. If necessary, the service will be reduced to emergency main routes only already identified and documented in partnership with the emergency services. Depending on the length of time that this situation continues, press communication must be given out to the public to notify of potential reduced safety compared to normal gritting routes.
- 23.3 In a major snow event, a Winter Duty Manager will go as soon as practicable to the Depot and assist the Co-ordinators in overseeing the service operation. This will ensure that decisions can be made on the ground in real-time.
- 23.4 If it is not possible to treat the usual routes, either due to heavy snowfall, staff shortages or other major event, a priority network has been agreed with the emergency services and bus company. The priority emergency route list can be found at **Appendix B** (Spreader Route Information)

Appendix B

- 23.5 Communication to the public and other agencies will be co-ordinated via the Communications team and Civil Contingencies office.

Communications to members, the communications team and Strategic Leadership Board will be co-ordinated by the Head of Highway Operations.

White Book Updates will be made as required and each update will be incorporated into the annual winter service plan. Any updates made during the winter season will be recorded on an update form (a copy of which is included in **Appendix Y.**)

Appendix Y

Salting routes will be reviewed before each winter period to take account of network and bus route changes as well as partner agencies' priorities where practicable.

The Highways team are continually working with the Civil Contingencies Team and the Sussex Resilience Forum to maintain and update the adverse weather plans.

25 Distribution List

A list showing holders of the White Book is shown in **Appendix Z.**

Appendix Z

26 Appendices

A list of Appendices is shown at the commencement of the Appendix Section.

