Item 1

3rd October 2023

Glasgow City Council

Environment and Liveable Neighbourhoods City Policy Committee

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WINTER MAINTENANCE 2023-2024

Purpose of Report:

To advise and update Committee on the winter maintenance policy and how winter maintenance will be undertaken during this forthcoming winter period November 2023 to April 2024.

Recommendations:

It is recommended that Committee notes the terms of the report and the updated Winter Maintenance Plan attached in Appendix 1.

Ward No(s): Citywide: ✓

Local member(s) advised: Yes ☐ No ☐ consulted: Yes ☐ No ☐

***PLEASE NOTE THE FOLLOWING**:*

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Introduction

1.1 The purpose of this report is to outline the policy and management procedures for the Winter Maintenance Service.

1.2 **Winter 2022/23 -** Last year, winter gritting operations commenced on 3 November 2022 and continued until 27 March 2023. 41 footway treatments, 41 cycle way and 44 carriageway were instructed using 7,533 tonnes of rock salt and 5,000 litres of liquid brine. The amount of rock salt used was substantially less than in a severe winter when 24,000 tonnes of rock salt could be used.

1.3 Last winter, compared to the 30-year average, the mean temperature was 0.2°C higher. Despite the overall mild temperatures there were colder spells in December and March when the Met Office issued yellow weather warnings for snow, freezing rain and black ice conditions. These challenging conditions required repeated de-icing treatments.

2. Legislation

2.1 The Council has a statutory obligation under Section 34 of the Roads (Scotland) Act 1984 to take such steps as it considers reasonable, to prevent snow and ice endangering the safe passage of pedestrians and vehicles over public roads.

2.2 The Glasgow City Council (GCC) Winter Maintenance Plan is based on the principles contained within the code of practice, 'Well–Managed Highway Infrastructure', the National Winter Service Research Group's practical guidance and sets out how the winter maintenance service will be provided for Glasgow.

2.3 The Council's aim is to provide an effective and efficient winter maintenance service within the resources available to allow for: the safe passage of pedestrians, wheelers, cyclists and vehicles minimise delays due to winter weather and ensure operations are undertaken safely.

2.4 The service is designed to cope with an average winter but having the capability to be extended or adapted when winters are more severe or of a longer duration than average.

3. Resources

3.1 The gritting of the road network will be carried out mainly by night shift operatives based at NRS's Gartcraig Depot. Operating on a nightshift basis addresses driver hours' legislation and reduces disruption to normal day time work activities. Gritting of the road network will also be undertaken during normal day time hours as and when required.

The gritting of the footway and cycle way network will be carried out by operatives during day shift but with the ability to start before 0500hrs when required.

3.2 Arrangements are made each year to ensure the availability of sufficient specialist plant and vehicles, trained drivers and operatives, supervisors and

decision makers. A full description of these resources is available within the Winter Maintenance Plan. All of the main carriageway gritting fleet has global positioning satellite and automated gritting technology. This technology improves the level of service provided in terms of accuracy, health and safety, monitoring and recording, resulting in a more cost-effective service.

3.3 This winter, 18 drivers can be on duty on any given night and when necessary this resource can be increased. Their primary duty is driving gritting vehicles but when carriageway gritting is not required the drivers can be used for business operations, cleansing, lighting, emergency response and any other duties directed by management.

3.4 Mechanised footway and cycle way plant and carriageway gritters deployed in winter maintenance operations are -

- 7 permanently mounted 9m^3 carriageway gritting vehicles
- 11 demountable 6m^3 carriageway gritting vehicles
- 2 small 3m^3 carriageway gritting vehicles
- 12 trailer carriageway gritters
- 23 carriageway snow ploughs
- 1 narrow gauge brine spraying vehicle for segregated cycle ways
- 7 large and mid-size tractor units with ploughs and 3 with mounted gritters
- 20 utility vehicles/small tractors with mounted gritters and ploughs
- 22 pedestrian gritters
- 23 powered footway ploughs

4. Treatment Priorities

4.1 The following criteria have been applied to determine the Priority 1, 2 and 3 categories for footways, cycle ways and carriageways:

<u>Footways</u>

Priority 1 Footway Routes -

- Access routes to schools;
- Pedestrian precincts;
- Prioritised city centre footways with high pedestrian traffic;
- Shopping centres out with the city centre;
- Hills steeper than 1 in 10 gradient with moderate pedestrian traffic;

Priority 2 Footway Routes -

- Locations which include the following amenities - local shopping; health centres; day care centres; community sports centres; libraries; places of

worship and any other places of local significance. Appropriate link routes to main Priority 1 footways within each neighbourhood. Also a designated access through route has been determined for each Park;

Priority 3 Footway Routes -

- All remaining footways.

Cycle Ways

Priority 1 Cycle Way Routes/busy commuter routes –

- The operational segregated cycle way network.
  This winter the following 1.4km of segregated cycle way section will be added: London Rd (London Dr to Baillieston Rd).

- The National Cycle Network Number 75 (NCN 75) that extends from Cambuslang Bridge/boundary with South Lanarkshire Council in the east to Riverside Museum in the west.
  This winter the following 300m cycle way will be added to the above NCN 75 route: Festival Park (Govan Rd at Pacific Dr to Harvie St).

- A designated route through Queens Park, Kelvin Way and Glasgow Green cross paths. This winter, an additional designated route through Pollok Park will be added.

- Carriageway areas that have been allocated to cycle lanes adjacent to an existing Priority 1 Carriageway route.

Priority 2 Cycle Ways -

- All remaining cycle ways.

Carriageways -

Priority 1 Carriageway Routes -

- All main bus routes registered at the end of the preceding summer within the City;

- The length of public road from the adjacent Priority 1 Carriageway Route to any designated school dropping-off points on the public road for Assisted Support Learning buses and emergency vehicles;

- The public road access to fire, ambulance and police stations and main bus garages from the adjacent Priority 1 Carriageway Route;

- Public access roads to Park and Ride car parks from the adjacent Priority 1 Carriageway Route;

- Buchanan Street bus station;

- A or B class roads;

- Hills steeper than 1 in 10 gradients;

- Industrial areas as appropriate;

Priority 2 Carriageway Routes -

- Locations which include the following amenities - local shopping; health centres; day care centres; community sports centres; libraries; places of worship and any other places of local significance. Appropriate link routes to main Priority 1 carriageways within each neighbourhood and industrial access roads.

Priority 3 Carriageway Routes -

- All remaining carriageways.

4.2 Pre-treatment of Priority Footways, Cycle Ways and Carriageways will be instructed should the domain-based weather forecast predict that hoar frost, ice or snow is likely to be present on road surfaces.

4.3 Post-treatment of Priority 2 Footways, Cycle Ways and Carriageways and Priority 3 Footways, Cycle Ways and Carriageways will be instructed should there be ice or snow and a forecast that these hazards will last for longer than 48 hours. The post-salting will take place between 0730hrs and 1830hrs the following day and depending on available resources.

4.4 It should be noted that if Priority 1 Footways, Cycle Ways and Carriageways require treatment during any extended period of ice or snow this treatment will take precedence over Priority 2 and Priority 3 Route treatment.

4.5 Where lying snow requires to be ploughed on a Priority 1 Carriageways, the ploughing will move the snow to the nearside of the road. Where the ploughed snow covers a cycle lane or space for walking/wheeling, clearing of the snow will take place between 0730hrs and 1830hrs the following day as resources allow.

4.6 During sustained periods of winter hazards, all available operational resources will be deployed to gritting and/or snow clearing operations. Also, arrangements are in place to call upon external contractors as and when winter weather conditions dictate.

5. Decision Making Process

5.1 Each day at 0600hrs, 1200hrs and 1800hrs a detailed hour by hour weather forecast highlighting expected hazards such as hoar frost, ice or snow for the next 36hrs is received as well as a 6hr interval forecast for the next 8 days. This alerts the decision maker, managers and winter supervisors as to whether any gritting operations are likely. For the purposes of winter weather forecasting, the city has been divided into two 'climatic domains'– City Centre and Outer. The weather systems and temperatures affecting the climatic domains vary and may allow for no gritting to be undertaken in the City Centre when road temperatures are marginal. The forecasts are supplemented by road sensors situated throughout the city which provide real time information on road surface and weather conditions.

5.2 Following receipt of the 1200hrs daily forecast a decision maker and nominated verifier will agree the de-icing treatment required. Wherever possible, pre-treatment will be carried out in advance of any anticipated frost, ice or snow. The timing of any gritting treatment will take account of forecast precipitation due to the risk of wash off reducing the effectiveness of the gritting.

Any required repeat treatments (caused by rain washing off de-icer) will normally be restricted to Priority 1 Footways, Cycle Ways and Carriageways.

5.3 Once instructed, the treatment decision is confirmed to managers, supervisors and depots by email.

5.4 The instructed de-icing treatment will be based upon the weather forecast conditions although the instruction may be changed or added to, should the later forecasts or actual conditions dictate. If marginal road surface temperatures are forecast over-night, vehicle patrols may be instructed and any hazards encountered reported to the on duty supervisor. The duty supervisor will then update the decision maker who may then issue a further treatment instruction.

5.5 The last daily weather forecast is received at around 1800hrs for review by the decision maker and verifier. The MetDesk duty forecaster will phone the decision maker to discuss any subsequent changes to the predicted weather.

6. De-icing Materials and Grit Bins

6.1 The de-icer used for precautionary treatment of Priority 1 Carriageway Routes is a proprietary product called Safecote. Safecote has a molasses additive which enhances the performance of rock salt in terms of accuracy, placement and longevity. Safecote can be applied at lower spread rates than untreated rock salt. These qualities allow gritting vehicles to travel greater treatment distances and as such improves the efficiency of the gritting fleet.

In addition to Safecote, untreated rock salt is used for reactive gritting and as required during severe weather situations.

6.2 As Safecote uses lower spread rates, it is less harmful to the environment. There is also the added benefit that Safecote is 82% less corrosive than untreated rock salt and so reduces damage to vehicles, plant and the roads infrastructure as shown in independent tests.

6.3 In designated city centre shopping pedestrian areas, white marine salt has been used successfully to minimise discolouration at shop frontages and entrances.

6.4 The de-icer used for precautionary treatment of Priority 1 Segregated Cycle Ways is a liquid brine solution applied by a low level rear mounted spray bar on a narrow gauge multi-purpose vehicle. The Priority 1 NCN 75 is shared by pedestrians and cyclists, is wider than the segregated cycle ways and is de-iced using rock salt spread by mechanised footway plant.

6.5 In addition to the gritting service and to promote 'self-help', 1611 grit bins will be sited in the city at the commencement of the winter season to allow members of the public to grit in areas out with the priority gritting routes. These grit bins will be filled with untreated rock salt prior to the start of winter. Grit bin locations can be viewed online via the Winter Gritting Story Map which can also be used to request a refill. QR codes on grit bins will allow residents to request a refill or request that a damaged grit bin is replaced.

6.6 Members of the public can also obtain small quantities of rock salt for their own use from NRS depots throughout the city. The NRS depot addresses 'Where can I get salt supplies' can be viewed on the www.glasgow.gov.uk winter maintenance page and on Connect.

6.7 Also in any prolonged severe weather periods, large 1 tonne temporary grit sacks will be placed strategically within neighbourhoods to assist community resilience with free salt supplies during severe weather.

6.8 Winter wardens from the Neighbourhood Improvement Volunteer (NIVS) resource have been identified and further expressions of interest are currently being sought from the remaining registered NIVs. The aim is to have a winter warden available in each local neighbourhood area. The winter wardens are trained and equipped to undertake organised footway gritting within their neighbourhood.

7. Communication Strategy

The winter maintenance strategy provides adverse weather warnings, winter gritting operational and school closure information to residents and businesses. Social Media channels will be the primary means of communicating this information. In addition, an interactive online Winter Gritting Story Map is available and suitable for residents to use. During periods of severe winter weather elected member briefings will be issued.

8. Fleet Strategy 2020- 2030

8.1 A replacement programme for small size mechanised plant and mounted gritters/brine tanks will be delivered over the next two years to support footway and cycle way de-icing.

8.2 With GCC having committed to becoming a Net Zero city, it is incumbent to lead by example and embrace the technologies that are now emerging to support around 2,000 vehicle and plant items.

8.3 The GCC short term fleet replacement will be Euro 6 for heavy fleet and Electric Battery for light fleet. Initially, Hydrogen will be used in a dual fuel solution for the carriageway gritting fleet.

8.4 NRS deploy 20 Hydrogen Dual Fuel Gritters that have a significant improvement in exhaust emissions compared to diesel gritters. Also, 13 of the Hydrogen Dual Fuel Gritters have interchangeable bodies. These will allow for the seasonality of winter gritting and summer roads maintenance, halving the number of vehicles required.

9. Winter Maintenance Business Continuity – Covid 19

9.1 Should there be another wave of Covid 19, local restrictions or lockdown which severely impacts on the resources available for delivery of winter maintenance, the normal service levels may not be possible to achieve.

9.2 Winter maintenance business continuity will be delivered in the following ways:

- Carriageway, footway and cycle way gritting and the replenishment of grit bins may take longer to complete.
- The Severe Weather Hub (Eastgate) may be set up to: co-ordinate resource deployment; have direct access to real time CCTV and provide regular situation reports to the NRS senior management team.
- Based on the detailed specialist roads weather forecasts, the Decision Maker may re-prioritise the deployment of the available reduced resources. Examples of this can be: deployment of resources to those routes with a greater risk from winter hazards eg main arterial routes due to higher speed limits; schools; accesses to emergency services and areas of higher ground (due to lower longer lasting road surface temperatures).
- Deployment of external contractors.
- Engage with neighbouring councils & Transport Scotland to provide mutual aid resources to ensure that routes of strategic importance are treated.
- Timeous bespoke stakeholder communications to inform of any disruption to the normal winter maintenance service levels. Social media, press releases and web site notifications will be used.

10. Review of Winter Maintenance Plan

The Winter Maintenance Plan 2023-24 takes account of the following areas –

- Elected member feedback.
- Additional lengths added to Priority 1 Cycle Ways (details in Section 4).
- Replacement programme for small size mechanised plant and mounted gritters/brine tanks.
- Transport Scotland have provided £30K Direct Resource Grant that will be used to deploy 4 operatives and a supervisor on stand-by in the South of the City to allow for the commencement of active travel de-icing from 5am. There is an existing stand-by arrangement in the North and City Centre that allows for the commencement of active travel de-icing from 5am.
- QR codes on grits bins to assist members of the public to request a refill or to replace a damaged grit bin.
- Winter Maintenance Business Continuity – Covid 19.

11 Policy and Resource Implications

Resource Implications:

Financial:	Delivered within the allocated budget of £1.395m.
Legal:	To meet the requirements of Section 34 of the Roads (Scotland) Act 1984
Personnel:	None
Council Strategic Plan:	Reduce Poverty and Inequality in Our Communities: Improve Health and Wellbeing of Local Communities and Support Glasgow to be a City that is Active and Culturally Vibrant. Fight Climate Emergency in a Just Transition to Net Zero: Deliver Sustainable Transport and Travel Aligned to the City Region and Become a Net Zero Carbon City by 2030. Enable Staff to Deliver Essential Services in a Sustainable, Innovative and Efficient Way for our Communities: Create Safe, Clean and Thriving Neighbourhoods and Enable Staff to deliver a Sustainable and Innovative Council Structure that Delivers Value for Money.

Equality and Socio-Economic Impacts:

Does the proposal support the Council's Equality Outcomes 2021-25? Please specify.	Yes, outcome 8 – citizens with protected characteristics are provided with targeted, improved and more accessible information about the services provided by the Council Family.
What are the potential equality impacts as a result of this report?	An EQIA screening has been undertaken. The provision of an effective and efficient winter maintenance service has a positive impact on all citizens.
Please highlight if the policy/proposal will help address socio-economic disadvantage.	The winter maintenance service supports positive socio-economic impacts by taking reasonable steps to prevent snow and ice from endangering safe passage of pedestrians, cyclists and other road users.

Climate Impacts:

Does the proposal support any Climate Plan actions? Please specify:	Yes - the increase in cycleway gritting supports Action No 56.
What are the potential climate impacts as a result of this proposal?	Appropriate winter gritting enables the city to operate during winter, reducing the likelihood of vehicle congestion.
Will the proposal contribute to Glasgow's net zero carbon target?	Yes detailed as detailed in Section 8 of this report.

Privacy and Data Protection Impacts:	None

12 Recommendations

It is recommended that Committee notes the terms of the report and the updated Winter Maintenance Plan attached at Appendix 1.