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**ARGYLL AND BUTE COUNCIL**

**ENVIRONMENT, DEVELOPMENT AND  
INFRASTRUCTURE COMMITTEE**

**ROADS AND INFRASTRUCTURE  
SERVICES**

**12 SEPTEMBER 2019**

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**WINTER SERVICE POLICY 2019/20**

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**1.0 EXECUTIVE SUMMARY**

- 1.1** Each year Members consider for approval the Council's Winter Service Policy. The format and general content of the Winter Service policy 2019/20 remains similar to 2018/19.
- 1.2** The policy sets out priorities for treatment and routes that will be 'pre-treated' in advance of winter hazards. In prolonged winter conditions the policy provides for all roads to be treated with resources being allocated to focus on the hierarchy of priorities (i.e. the lower priorities will only be cleared once the higher priorities have been treated and are clear).
- 1.3** The policy is a comprehensive document setting out the management, governance and operational requirements for the winter service. The policy sets out signing provision to warn the travelling public of roads that are unsuitable for use during extreme winter conditions. The policy also provides a protocol for the reduction in use of salt and preservation of remaining stocks in the unlikely event of replenishment salt stocks not being available. This was introduced following the severe winters of 2009/10 and 2010/11.
- 1.4** It is recommended that the Committee:-
- Notes the proposals for community resilience
  - Notes weather summary from 2018/19 at Appendix 1
  - Approves the 2019/20 Winter Maintenance Policy at Appendix 2
  - Approves the Salt Use Reduction and Preservation of Stocks Protocol at Appendix 4.

**WINTER SERVICE POLICY 2019/20**

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**2.0 INTRODUCTION**

- 2.1 This report presents the Winter Service Policy 2019/20 which remains in a similar format and covers a similar network to the Policy approved by this Committee in previous years. This is generally based on the network and times of the public bus service with additional priority and resources allocated to strategic high speed roads.

**3.0 RECOMMENDATIONS**

- 3.1 It is recommended that the Committee:-
- Notes the proposals for community resilience
  - Notes weather summary from 2018/19 at Appendix 1
  - Approves the 2019/20 Winter Maintenance Policy at Appendix 2
  - Approves the Salt Use Reduction and Preservation of Stocks Protocol at Appendix 4.

**4.0 DETAIL**

**Winter Maintenance Policy 2019/20**

- 4.1 The proposed Winter Maintenance Policy for 2019/20, in terms of treatment standards and routes, remains largely unchanged from that approved by the Council in 2011. The number and category of pre-treatment salting routes remains the same including the amendments introduced to cater for the transfer of A83 Kennacraig – Campbeltown to the Trunk Road network in August 2014. No other direct changes to the category or length of routes treated is proposed at this time. The current level of treatments is based largely around the public bus service network.
- 4.2 The advisory signs of alternative routes in severe snow conditions remain similar to the four routes proposed in previous years. Details on sign configuration and locations are contained in Appendix 3 of this report.

- 4.3 Winter stand-by arrangements will commence on Friday 1 November 2019 and will continue until Friday 17 April 2020. There are a total of 31 treatment routes detailed in the policy's operational planning web-based management tool.
- 4.4 The Winter Treatment Fleet for 2019/20 will consist of 17 hired gritters from Econ Ltd. 1 contractor vehicle on Jura, one shared route assisted by 1 contractor in Lochgoilhead and 12 Council vehicles. This provides 31 main frontline vehicles with 2 spare vehicles to cover breakdowns. In addition, there are 2 x 7.5 tonne tipper vehicles which also incorporate 'multispread' units (gritting attachments) and ploughs and a further 4 x 7.5 tonne tippers that can accommodate ploughs giving a total of 6 extra vehicles that can be deployed together with tractors and 'V' ploughs if conditions demand.
- 4.5 The requirement to manage drivers' hours within the delivery of all Council Services directly impacts on the retention of the Council's Operator Licence. Drivers from across the operational teams (grounds, waste, roads) deliver the pre-treatment service, in conjunction with external contractor assistance on the islands of Jura and partly in North Cowal. In extended periods of extreme winter conditions consideration will be given, at an operational level, to prioritising services to ensure that winter treatments can be delivered. This may result, for example, in refuse collections and other services being temporarily suspended in order to prioritise the clearing of ice and snow. Such measures are only likely in prolonged periods of extreme weather.
- 4.6 Steps are being taken to increase the available driver "pool" by utilising other council drivers including grounds and waste disposal operatives. Discussions are ongoing to resource additional resilience being provided by engaging assistance from external contractors on some mainland routes where in-house coverage is limited. In extreme and prolonged weather events and where other priority tasks occur (such as responses to road traffic collisions, collapsed culverts etc) resource may need to be allocated based on a risk based priority.
- 4.7 The table below indicates the statistical variations in operational activities over the last five winter seasons. Weather patterns vary with some years experiencing hazards more widespread and in others more concentrated on inland and higher routes. The equivalent Full Fleet runs statistic is used to indicate an approximation to the budget allowance. The application of salt varies between 10gm<sup>2</sup> and 40gm<sup>2</sup> depending on a number of factors including road surface temperature, forecast and residual salt. In parallel with these methods, grit and sand are applied in snow conditions. The route with the individual highest number of turn-outs, remains consistently the A819 East Lorn Strategic Route.
- 4.8 Footways and footpaths will only be treated, in periods of lasting hazard, when it is considered by the winter management team that the physical condition of the footways and footpaths makes it necessary and treatments will be effective. Footways and footpaths will usually only be treated during normal working hours. Our staffing levels are such that we generally don't have sufficient labour available to deal with footways and footpaths in parallel with treatments of the carriageway.
- 4.9 In specific locations additional information and diversion signing will be erected to further inform drivers of the hazardous conditions on some routes and advise them of alternative routes where available resources will concentrate on maintaining treatments. There are three roads where signing to indicate specific alternative routes are available. The sign is deployed for these road closures are detailed in Appendix 3.

1. A817 "Haul Rd" , Lomond.  
Snow gates at A82 and A814 "central" roundabout  
Diversion via A818 Arden - A814 Garelohead
2. C46 Glen Aros / Glenbellart road , Mull Signs  
at Aros Bridge and Dervaig Primary School  
Diversion via A848Tobermory
3. C9 Glenfinart Road ( The Larach) , Cowal  
Signs at Whistlefield Hotel and Sligrachan Bus turning head;  
Diversion via A880 Cot House
4. C11 Otter Hill road ( Bealach an Drain) , Cowal  
Signs at Glendaruel A886 and Otter Ferry B8000;  
Diversion via A8003 Tighnabruich and Kames.

Appendix 1 to this report provides a summary of the 2018/19 winter conditions.

Winter Season	2014-15	2015-16	2016-17	2017-18	2018-19
Equiv Fleet Runs	82nr	58nr	66nr	110nr	62nr
Salt used tonnes	19,204t	10,151t	11,457t	22,992t	13,059t
Most turned out run	A819 = 120nr	A819 = 107nr	A819 = 99nr	A819 = 162nr	A819 = 109nr

- 4.10 The Council's Winter Maintenance budget has been increased by £500k in Financial Year 2019/20 to an operational budget of £2.12M . This provides the capability to deliver the equivalent of approximately 62 full runs over the coming winter season. This is an increase in estimated runs from the previous years 55 runs. The actual cost of winter maintenance is dependent upon the severity of winter conditions and is a financial risk in that the service responds in accordance with set policy to variable weather events that are not predictable. In the financial year 2018/19 the Hire Gritter Supplier went into administration and thanks to strong financial procurement management the council did not suffer any detrimental financial burden, in fact we were able to save over £250k in hire costs.
- 4.11 Overall the financial cost for 2018/19 was £1.89million against a budget of £1.62million, however had we not saved the £250k from the hire contract we would have overspent the budget with a projected outturn of over £2million. If we have a similar number of runs in this coming winter season, the additional budget figure will mean that we can deliver the service within the available budget. The actual cost of winter maintenance will be dependent upon the severity of winter conditions and is an ongoing financial risk in that the service responds in accordance with set policy to variable weather events that are not predictable.
- 4.12 The current 2019/20 Gritter Hire Contract with Econ Ltd has cost £515k, which is approximately £20k more than last year's costs, however in light of previous older less

reliable fleet, we have ensured this contract delivers vehicles less than 1 year old vehicles which will increase reliability and efficiency.

- 4.13 As of 19 April 2019, the Council held a stock of 10,572 tonnes of salt. Provisional replenishment orders will be called forward from mid-Oct, for 4,000 tonnes. This will top up capacity in storage facilities to the target starting stock of +14,000 tonnes.
- 4.14 The Salt Use Reduction and Preservation of Stocks protocol was introduced in December 2010 in light of severe shipping and material shortages is attached at Appendix 4.
- 4.15 The assessment of school routes subject to pre-treatment before 08:00hrs, as required under Priority 3b of the route hierarchy, in section 4 of the Policy, will be assessed each year after the confirmation of enrolment numbers from the autumn intake. Once the levels of occupancy on school bus routes have been confirmed, amendments will be made as necessary to the pre-treatment route plans and descriptions.

### **Community Engagement**

- 4.16 As part of the current in year budget settlement, Council allocated an additional £500k to offset historic overspends. £50k of this funding has been allocated to help improve community resilience during winter conditions. As part of the community resilience proposal, as an initial step we aim to better engage with our local communities and involve them in our winter maintenance programme. Where possible, this will involve empowering communities to work with the Council during winter weather events.
- 4.17 Officers have liaised with representatives from Aberdeenshire Council and the Ayrshire Roads Alliance, both of which have successfully trialled community engagement and involvement through Snow Wardens (Aberdeenshire) and Community Engagement (Ayrshire Roads Alliance). Over a period in excess of three years each authority has seen a rise in members of their community being trained and given access to personal protective equipment as well as grit/shovels from the authority to help clear snow and ice from their local community. Both authorities are clear that a structured media campaign is required to get communities on board along with help and guidance. This includes resource from the Council to facilitate community engagement, training, media, provision of equipment etc.

### **Transport Scotland**

- 4.18 Following the decision to trunk the southern section of the A83, Transport Scotland are now roads authority for this section of road. Argyll and Bute Council continue to provide a winter service and reactive emergency repair service on behalf of Transport Scotland via Bear Scotland to the section of trunked A83 between Kennacraig and Campbeltown.

### **Winter Review**

- 4.19 A winter maintenance review is currently underway during the 2019/20 and 2020/21 winter seasons. The review is considering vehicle type and procurement, staffing issues and route optimisation. Multiuse vehicles may reduce the overall vehicle numbers required to deliver the year round service by maximising the use of chassis units with demountable bodies. These changes will be incorporated in 2021/22 in line with current contracts for hire of winter vehicles. At present these measures are still to

be finalised through the vehicle procurement process as a consequence of the Departmental Re-Design which amalgamated Roads, Amenity and Waste resources in each area, into a single multifunctional operational workforce.

## **5.0 CONCLUSION**

- 5.0 This report details the Council's Winter Maintenance Policy for 2019/20 and highlights the pressures on resources and operational effectiveness due to the constraints of future funding levels and best practice advice.
- 5.1 Committee is asked to approve the Winter Service Policy 2019/20 and note the details in appendices 1 – 3.

## **6.0 IMPLICATIONS**

- 6.1 Policy It is considered to be good practice for Committee to confirm policy for winter maintenance activity on an annual basis. This report seeks to achieve the above.
- 6.2 Financial The Council's Winter Maintenance budget has been increased to £2.12M this financial year. This provides the capability to deliver the equivalent of approximately 62 full runs of the treatment fleet over the season. The actual cost of winter maintenance is dependent upon the severity of winter conditions and is a financial risk in that the service responds to weather events that are not predictable. Should the criteria for school bus routes change this will have a financial effect on the budget.
- 6.3 Legal The Winter Maintenance Policy sets out the Council's level of service provision for winter maintenance
- 6.4 HR Staffing levels have reduced over recent years, this can make it challenging to have sufficient staff to deal with a severe winter event. Processes are in place for external suppliers to assist in geographic specific locations with additional support being levered in by framework contracts should severe weather persist.
- 6.5 Equalities /Fairer Scotland Duty None known
- 6.6 Risk The proposed policies are designed to reduce the Councils exposure to risk.
- 6.7 Customer Services The winter service has been designed to maintain access to the Councils Strategic Road Network during winter conditions.

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August 2019

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## **APPENDICES**

1. Summary of 2018/19 winter conditions
2. 2019/20 Winter Service Policy
3. Advisory Signing – Road Closures in Severe Conditions.
4. Salt Use Reduction and Preservation of Stocks Protocol ( 2018 revised)

## **Appendix 1 – Summary of 2018-19 Winter Conditions**

### **Weather Summary Nov 2018 – April 2019**

A winter of fluctuating conditions with short spells of wintry weather interspersed between wet and mild conditions. Only one distinct snow event period, the two weeks in mid- January leading to lowest temperatures of Minus 10 Deg C Road Surface Temperatures (RSTs). Two periods of unseasonably warm conditions in February and March. A classic “marginal” winter with frequent “wash-off” conditions removing salt from the network and requiring repetitive treatments in advance of the next risk of borderline sub-zero conditions.

### **Weather forecasts and observations – Oct-Nov 2018**

Wintry conditions came early in 2018, due to a Polar Vortex forcing northerly winds and arctic air over the British Isles during the last week of October. Sub-zero temperatures were forecast from Friday 26<sup>th</sup> October onwards, largely in clear dry conditions. Road Surface temperatures dropped to a minimum of Minus 2.3 C at the Leanach - Cowal sensor overnight into Sat 27<sup>th</sup> October. Temperatures of Minus 3.3C to Minus 3.7C were recorded between the Blaran and Salachray sensors on A816 over the nights of Sun 28<sup>th</sup> to Wed 31<sup>st</sup> Oct, in Western mainland districts. Sensors in Lorn East, Cowal and Lomond were recording RSTs of Minus 1.5C to Minus 2.3 C during this time. A brief respite to marginal but positive RSTs on Thu 1<sup>st</sup> November before a return to a hard frost Friday a.m. 2<sup>nd</sup> Nov. also affecting island domains of Bute and Mull. Throughout this week Islay/Jura and Kintyre sensor generally indicated marginal but positive RSTs. Although initially dry and sunny during the day, light rain began to affect the area from Tuesday 30<sup>th</sup> onwards, affecting road surfaces before more persistent rain and milder conditions developed from Fri 2<sup>nd</sup> November onwards. RSTs recovered in the first two weeks of November to overnight minima of Plus 3.5C to Plus 8C , with little risk of winter hazards, however localised flooding and windblown tree debris was a feature of 9<sup>th</sup> – 11<sup>th</sup> Novperiod.

From 16<sup>th</sup> November, colder air from the East gave drier conditions but with dips in temperature in intermittent cloud cover, to marginal sub-zero RSTs mainly in Lorn East, West and Mid-Argyll. This trend continued, with a slight improvement Thursday night 22<sup>nd</sup> Nov. through the weekend to Tuesday 27<sup>th</sup> Nov. with RSTs dropping to between Minus 1 and Minus 3 Deg C in most domains overnight until the easterly airflows and clear spells were replaced with a series of Atlantic weather fronts bringing wind and rain and milder conditions through to 1<sup>st</sup> December.

### **Weather forecasts and observations – December 2018**

December started as November had finished with mild and wet conditions, however icy roads and sub-zero temperatures were forecast from 2<sup>nd</sup> Dec in NE domains, extending to all areas on 3<sup>rd</sup> and 4<sup>th</sup> with overnight minimum RSTs recorded as marginal minus 0.2Deg C to 0.6Deg C on 3<sup>rd</sup> on A816, A819 and A815 sensors before dipping below Minus 4 Deg C at Salachray and Leanach on 4<sup>th</sup> with all sensors subzero, followed by a low of Minus 3.3Deg C at Accurrach on 5<sup>th</sup> Dec. before temperatures recovered again on 6<sup>th</sup>. RSTs dipped again on 9<sup>th</sup> and 10<sup>th</sup> with a low of Minus 3.3 Deg C at A816 Blaran on 10<sup>th</sup> and after a brief period of mild conditions with rain, dipped again on the nights of the 14<sup>th</sup> to

17<sup>th</sup> Dec. mainly in central, northern and eastern domains. Minimum RST of Minus 3.6 Deg C at A817 Haul Road on 16<sup>th</sup> Dec. A further spell of mild and wet weather with warm fronts coming in off the Atlantic was followed by a change to northerly wind and a sharp frost on 23<sup>rd</sup> Dec. Forecasts for central domains indicated sub-zero RSTs throughout the day . Observed minimum temperatures of Minus 1.1C at Blaran on 23<sup>rd</sup>, dropping to Minus 5.3C on 24<sup>th</sup> with all sensors sub-zero overnight. On Christmas morning Leanach sensor recorded Minus 4C with temperatures at sensors North and East of the boundary of Argyll as low as Minus 6C. The remainder of the month from Christmas Day to Hogmanay was generally mild with periods of rain or misty conditions. Minimum overnight temperatures no lower than Plus 6C to plus 3C on 27<sup>th</sup> and 31<sup>st</sup> Dec.

### Weather forecasts and observations – Jan 2019

The seasonal trend for short duration periods of hazards between longer spells of milder conditions continued into the first two weeks of 2019. A sharp frost on 1<sup>st</sup> Jan saw overnight temperatures drop dramatically from Plus 0.7 to Plus 5.5 Deg. C on Hogmanay, to Minus 0.4 to Minus 6.4 Deg C overnight into 2<sup>nd</sup> January. Sub-zero temperatures persisted throughout the day on 2<sup>nd</sup> in some areas of Cowal and Lorn although improvements moved North and East over the following 36hrs, with temperatures no lower than Minus 0.1 – 0.2 at A886 Leanach–Cowal and A819 Accurrach–Lorn E , with the minimum at B842 Stewarton-Kintyre , Plus 4 Deg C overnight 3<sup>rd</sup>Jan.

Milder, cloudy conditions then took over until the morning of Tue 8<sup>th</sup> where marginal conditions were observed in Lorn East. Clear skies that evening allowed RSTs to drop to Minus 2.9 Deg C by early morning at Leanach but only dropping to marginal Plus 0.2C at Dervaig – Mull and Ballygrant - Islay. The next series of weather fronts passed over Scotland from the Atlantic returning conditions to mild with cloud cover and frequent rain. Overnight temperatures fluctuated in intermittent clear spells, no lower than plus 6.7C at Accurrach on 12<sup>th</sup> but dipping to Minus 4.3C at Haul Rd and minus 4.6C at Leanach of 16<sup>th</sup> Jan. Another brief mild spell ended on 20<sup>th</sup> and 21<sup>st</sup> with minimum overnight RSTs of Minus 4.3 C.

The first widespread snow event of the season arrived early on Tue 22<sup>nd</sup> January. Routes were largely clear at 06:30hrs but by 09:30hrs severe disruption was experienced in Western districts and spread to the whole area thereafter. Frequent and intense snow showers continued to move South-East over the area throughout the day before giving way to a hard frost with overnight RSTs of Minus 6.3 C at A816 Salachray on 22<sup>nd</sup> -23<sup>rd</sup> .

Subzero RSTs continued into Thu 24<sup>th</sup> in all districts with the exception of milder conditions in the South West (Islay / Kintyre) with a minimum RST of Minus 3.7C at A816 Salachray. A brief respite overnight into Friday 25<sup>th</sup> through to Saturday of milder conditions with rain, gave way to clearer conditions with frosts returning early morning Sunday 27<sup>th</sup> Jan. with overnight lows on Mon 28<sup>th</sup> of Minus 5.9 at A816 Salachray.

The second and more disruptive snow event of the season so far, developed overnight Monday into Tuesday 29<sup>th</sup>. This again caused widespread traffic disruption due to the frequency of intense but localised showers, affecting several high level roads at first but extending to the whole network by 08:00hrs. Snow showers continued throughout the day before an overnight frost and more snow arrived on Wed 30<sup>th</sup>. Overnight temperatures

continued to drop due to the effects of lying snow, all sensors in Argyll reading sub-zero from 29<sup>th</sup> with RSTs ranging from Minus 1.3C to Minus 4.7C , dropping to Minus 4.9C to Minus 10.1C at A886 – Leanach – Cowal overnight to Fri 1<sup>st</sup> Feb. In clearer conditions from 31<sup>st</sup>, the hazard remaining was ice, associated with compacted snow on footways or lower priority carriageways.

### Weather forecasts and observations – Feb 2019

Lying snow from the events of late January contributed to the lowest overnight temperatures of the season so far on the evenings of 1<sup>st</sup> and 2<sup>nd</sup> of February, with Leanach – Cowal recording a minimum RST of Minus 10.1 Deg C. A warm front passed over the area early on Sunday morning, bringing a band of rain. Although prior to this minimums RSTs of Minus 7.3 Deg C were recorded. Due to the low temperatures inland, snow affected most high level roads from 08:00hrs before slowly clearing during the day. Overnight temperatures dropped briefly to Zero on Sunday evening, in the North East of the area before a general improvement RSTs were generally in the region Minus 1 to Minus 4 Deg C although this fluctuated on some nights before another mild spell with frequent weather fronts of rain took effect from 6<sup>th</sup> Feb , with milder overnight RSTs.

Named Storm “Erik” affected the country over the period 8<sup>th</sup> – 10<sup>th</sup> February. Strong winds and rain affected inland areas and coastal routes were affected by flooding and wave bourn debris. Areas of Sandbank, Tarbert and Helensburgh were affected by high tides on Friday morning 8<sup>th</sup> but only the C18 Keprigan Road at Southend - Kintyre was actually closed due to debris. Weather conditions meant that it was not until Monday 11<sup>th</sup> that clearance operations with mobilised. Clear skies on Sunday morning resulted in additional areas on Mull and Islay becoming critical, sub-zero RSTs developing wider than previously forecast. A widespread frost on Sunday evening into Monday saw temperatures vary from Minus 0.4 Deg C in Oban to Minus 4.3 C at A816 Salachray on the morning of Mon 11<sup>th</sup>. Thereafter the week was mild with some shower activity, until a minor dip in RSTs on Friday 15<sup>th</sup> with A817 Haul Road, A819 Accurrach and A886 Leanach all hovering just below zero RST. Milder conditions with another warm flow of southerly air lasted over the weekend to Mon 18<sup>th</sup> Feb. For the bulk of the remaining ten day period, conditions reached “record” levels with temperatures exceeding the norm on most nights. Until 23<sup>rd</sup> there was very little in the way of precipitation and overnight temperatures of Plus 5 DegC were being recorded. Between 24<sup>th</sup> and 28<sup>th</sup>, clearer conditions allowed RSTs to dip to marginal conditions in isolated inland domains. RSTs of minus 0.3Deg C being recorded at Leanach and Accurrach sensors on consecutive nights running up to the end of the month.

### Weather forecasts and observations – March 2019

March started with a return to mild but wet conditions, after the “mini-heatwave” of unseasonably mild weather in the second half of February. Overnight minimum temperatures forecast to be marginal but positive over the initial period. The predicted strong winds and disruption associated with, Named Storm Freya, did not develop as strongly as predicted in Argyll as this storm travelled farther south over England than predicted. No treatable hazards were forecast within the first week to 7<sup>th</sup> March. However, clear spells overnight allowed fluctuation of the overnight temperatures to

develop. Marginal Minus 0.8 to 0.6 Deg C on 6<sup>th</sup> and 8<sup>th</sup> were short lived hazards before a dramatic change overnight into Fri 8<sup>th</sup> where minimum RSTs were recorded as Minus 1.2 Deg C down to Minus 3.7 Deg C recorded across the rural road sensor network.

Strong winds were an accompanying feature of the second full week of March, as Named Storm Gareth travelled over Northern Ireland and Scotland, over the weekend, with disruption caused by fallen trees overnight 11<sup>th</sup> – 12<sup>th</sup> – 13<sup>th</sup> in Cowal, Lomond, Mid-Argyll and Lorn, unusually there were no issues on Bute or the outer isles of Mull, Islay etc.

Temperatures varied on 10<sup>th</sup> to 13<sup>th</sup> with a range in rural sites of Minus 0.8C to Minus 2.5C although generally urban sites remained positive but marginal. Sub-zero temperatures returned between 16<sup>th</sup> and 18<sup>th</sup> with a range of RSTs from marginal Minus 0.2 DegC Dunoon to Minus 1.8 C at Leanach on 16<sup>th</sup> and again Minus 3.0 C there on 17<sup>th</sup>.

Thereafter overnight minimum RSTs for the remainder of the month, were much milder approaching double figures apart from a slight dip on 23<sup>rd</sup> to Minus 0.1C at Leanach and Accurrach and again Minus 0.3C at Leanach on 25<sup>th</sup> but generally Plus 5 to Plus 9 Deg C. Overnight 30<sup>th</sup> - 31<sup>st</sup> March there was an isolated dip with RSTs of Minus 0.3 to Minus 0.7 DegC recorded on the two Mull sensors, to Minus 1.7DegC at Leanach and Minus 2.8DegC at Blaran but with eastern domain sensors and urban sites generally 1 – 1.5Deg C milder.

### Weather forecasts and observations – April 2019

Monday 1<sup>st</sup> April saw a dramatic change for the conditions at the end of March with milder air flows and rain forecast through 2<sup>nd</sup> onwards. This resulted in an effective overnight temperature swing, improving by 5 Deg C in 24 hrs. Minimum RSTs Plus 2 Deg C but in clearer and generally drier conditions on Tue/Wed RSTs in inland domains forecast as marginal, RSTs dropped to Minus 0.6 Deg C at A819 Accurrach and A816 Blaran on the morning of 2<sup>nd</sup> and Minus 0.6 at Dervaig – Mull on 4<sup>th</sup> along with Minus 0.7 to Minus 0.5 DegC A816 sensors. Intermittent rain and days of dry and clear conditions resulted in a fluctuation in overnight minimum RSTs. Plus 5.2 C at Blaran on 7<sup>th</sup> , Plus 2.1 C on A817 Haul Road on 8<sup>th</sup> and Plus 4.7C at A886 Leanach on 9<sup>th</sup> .

During this time national forecasts predicted snow showers in cold airflows from Norway but little of this reached the West coast, so the effect on Argyll was minimal, with just some hail slush for a while on Thu 4<sup>th</sup> although locations were varied as showers were unpredictable. A long clear sunny day on 9<sup>th</sup> lead to Maximum RSTs of over 28 Deg C in upland sites but this then resulted in a dramatic temperature drop , with grass frost and ice on vehicles on the morning of 10<sup>th</sup> April. Minimum RSTs recorded as MINUS 1.4 Deg C at Leanach, MINUS 1 Deg C Blaran and Accurrach and MINUS 0.5 C at Salachray although road surfaces were generally dry. In clear sunny conditions daytime maximum RSTs again climbed as high as Plus 32 Deg C. but dropped to marginal Minus 0.7DegC overnight in generally dry conditions, resulting in another grass frost on the morning of Thu 11<sup>th</sup>

This pattern of marginal temperatures in variable cloud cover continued until 14<sup>th</sup> April with overnight RSTs Plus or Minus 0.5Deg C for limited periods, in generally dry conditions. Temperatures improved with overnight lows in rural areas continuing to climb with Plus 8 Deg C the minimum at A819 Accurrach on 20<sup>th</sup> April, with urban sensors by then in double figures. Temperatures generally stayed at this level for the remainder of April but with a

trend downwards towards the May-day holiday weekend. Remaining dry with no surface hazards, despite a late season dip to Minus 0.5 Deg c at Leanach and Accurrach overnight on 3<sup>rd</sup> May before recovery during the day in clear sunny weather to PLUS 31.5 Deg C.



# WINTER SERVICE POLICY 2019-20

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<b>Owner</b>	Head of Roads & Infrastructure Services
<b>Date</b>	August 2019
<b>Version</b>	1.0



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## **1. INTRODUCTION**

- 1.1 Argyll & Bute 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" in the Council area, which by definition includes carriageways, footways, footpaths, pedestrian precincts, etc.
- 1.2 Argyll and Bute Council will consider implementation of the recommendations included in the UK Roads Liaison Group document - Well Managed Highways Infrastructure, code of practice (first published October 2016 ) within the practicalities of resources and geography. The Council, through its officers, will liaise and take guidance from the Society of Chief Officers of Transportation in Scotland (SCOTS), Winter Service Subgroup on the consistent approach to implementation, in the context of the Geographical and Climatic conditions relevant to Scotland.
- 1.3 It is the aim of Argyll & Bute Council to provide a service with respect to the above that will:-
- a) Ensure the provision of a standard of treatment appropriate to the prevailing weather conditions.
  - b) Establish patterns of working which will produce the greatest benefit from the deployed resources, with the view to reducing the level of risk and the extent of any delays to the public, caused by adverse weather conditions.
  - c) At all times comply with the requirements of the Health & Safety at Work Act 1974.

## **2. OUTLINE PRINCIPLES**

The Council, through the Executive Director of Development and Infrastructure Services, will:-

- a) Set policy and strategy and monitor the winter maintenance service.
- b) Arrange weather forecasts to assist the Winter Management team to determine the daily winter maintenance treatment strategy.
- c) Provide specialist winter maintenance plant. e.g. snow plough attachments, bulk gritters, demountable gritters, towed gritters and loading shovels.
- d) Provide salt, grit, grit bins, snow gates and signing.
- e) Provide organise and manage a trained labour force.
- f) Provide non specialist plant e.g. lorries for demountable gritters, pickups, non-specialist loading equipment, hand tools, tarpaulins and the like.

### **3. MANAGEMENT ARRANGEMENTS**

- 3.1 The Executive Director of Development and Infrastructure Services is responsible for implementing the Council's Winter Service Policy.
- 3.2 The Head of Roads and Infrastructure Services has overall responsibility for ensuring that the Council's winter maintenance activities are carried out in line with the Council's Winter Service Policy.
- 3.3 The Operations Manager is responsible for the day to day operation of the Council's winter service policy. He is responsible to the Head of Roads and Infrastructure Services for the appointment of a Weather Service Provider (forecaster), collection of winter management and weather data, maintaining salt stocks, winter plant and communications, training of staff, preparation of rotas for on-call Managers and Area Supervisors.
- 3.4 The Operations Manager in consultation with the Network and Standards Manager shall appoint appropriate staff as Winter Managers. The Winter Manager on duty is responsible for consulting with the Duty Manager and approving the draft winter plan of action together with any subsequent updates to that plan produced by the on-call Duty Manager.
- 3.5 Duty Managers are responsible for analysing forecast data, liaising with the forecast provider and producing the daily winter maintenance action plan and gaining approval from the Winter Manager. They will ensure that the daily winter maintenance action plan is submitted to local areas for action by 15:00 hrs each day. They will monitor the weather information and make any changes to the action plan as conditions require.
- 3.6 The Operations Manager will ensure that the appointed staff in their areas are aware of and understand the strategies and priorities as stipulated. On receiving the Duty Manager's approved daily winter action plan they will ensure, through the Area Winter Supervisor, that the plan is correctly implemented. They will ensure, wherever practicable, that adequate resources are available to fully undertake the Council's Winter Service Policy.
- 3.7 Discussions will take place between Senior Management to monitor performance, at regular meetings. Any problems highlighted by the Duty Managers will be resolved at local level, where possible. Duty Managers will be relieved by other Area Office staff, from any local management responsibilities, during their weekly duty requirements.
- 3.8 Provision of the Winter Service on Council roads will normally run from the nearest Friday to the 1st November through to 15th April each season. However, this period may be extended, at either end, to accommodate prevailing weather conditions.
- 3.9 Daily communication will take place with the Trunk Roads Service provider to inform each other of their respective treatment proposals. The Council work in partnership with the Trunk Road Operation Company and provide the winter and

emergency response service for A83 Trunk Road, Campbeltown to Kennacraig section. Treatment instruction for this road is received as part of the daily TR plan and actions are recorded on the TR gritlog form and transmitted to their control room on completion.

#### 4.0 POLICY ON TREATMENT PRIORITIES

##### 4.1 Carriageway treatment

4.1.2 Prior to the commencement of each winter the Operations Manager will produce carriageway gritting routes based generally on the following principles:-

<b>Priority 1</b> Strategic high speed, main traffic routes					
Lomond - A814 Dumbarton- Garelochhead, A818 Arden (A82) - Helensburgh Cowal - A815 Cairndow – Dunoon Ferry Lorn / Mid-Argyll - A816 Oban - Lochgilphead, A819 Dalmally – Inveraray					
	04:00 – 08:00hrs	08:00 – 16:00 hrs	16:00 – 22:00 hrs	22:00 – 04:00 hrs	
Mon - Sat	Pre-treat as required + reactive	Pre-treat as required + reactive	Pre-treat as required + reactive	Reactive as reported conditions dictate	
Sun & PH	Pre-treat as required + reactive	Pre-treat as required + reactive	Pre-treat as required + reactive	Reactive as reported conditions dictate	

<b>Priority 2</b> Other “A” and “B” classified roads, Except where treatment is categorized under Priority 3 bus routes, or less.					
A814 Garelochhead –Arrochar, A815 Dunoon-Toward, A817 Haul Road & B833 Rosneath Peninsula, A880 to Ardentinny, A885 Sandbank, A886 Strachur– Colintraive, A8003 Tighnabruaich, A844 / A845 & A886 on Bute, A846 / A847 on Islay, A846 on Jura, A848 / A849, A884 & B8073 Tobermory – Dervaig, on Mull, B828 / B839 to Lochgoilhead , B842 Southend –Carradale, B843 to Machrihanish, B844 / B8003 to Easdale & Cuan, B8024 Kilberry Loop , B841 / B8025 Achnamara & Tayvallich. Plus Principal Accident and Emergency routes or roads to hospitals and routes to Police stations, Fire stations and Ambulance depot accesses Other selected streets in main urban areas e.g. steep hills, etc where route efficiency permits.					
	06:00 – 08:00hrs	08:00 – 16:00 hrs	16:00 – 22:00 hrs	22:00 – 0600 hrs	
Mon -Sat	Pre-treat as required + reactive	Pre-treat in advance (if possible) + reactive	Reactive as reported conditions dictate	Reactive - only in extreme conditions	
Sun & PH	Pre-treat as required + reactive	Pre-treat in advance (if possible) + reactive	Reactive as reported conditions dictate	Reactive - only in extreme conditions	

<b>Priority 3</b> Any section of public road, outwith P1 & P2 above, subject to :- Main Public Service bus routes as timetables require that can be met within operational time bands. Should it be impractical to cover a service then the operator must be notified or Main School Bus routes prior to or during term days only.					
New designation		06:00 – 08:00hr	08:00 – 16:00 hrs	16:00 – 22:00 hrs	22:00 – 0600 hrs
<b>Priority 3</b>	Mon-Fri	Pre-treat as required	Pre-treat in advance (if	No treatment unless stable	No Treatment

<b>Service Route</b>		+ reactive	possible) + reactive	conditions forecast a.m.	
	W/E	Pre treat in advance of journey, if possible, but no guarantee. Timetabled days only.			
<b>Priority 3 School Route</b> (12 or more occupied seats)	Mon- Fri	Pre-treat as required + reactive	Pre-treat in advance + reactive	No treatment unless stable conditions forecast a.m. (Not Friday p.m.)	No Treatment
	No treatments out-with School Term days (apart from Sunday evenings in advance, if stable conditions forecast Monday a.m.)				

<b>Priority 4</b> All other public roads, Only as actual conditions dictate and resources are deemed to be effective.				
	06:00 – 08:00hr	08:00 – 16:00 hrs	16:00 – 22:00 hrs	22:00 – 0600 hrs
Mon - Fri	No treatment	Reactive (may include pre-treat)	Reactive – only in extreme conditions	No treatment
W/E & PH	No treatment	Reactive – only in extreme conditions	No treatment	No treatment

4.1.3 The above route priorities are set around the requirements to pre-treat in advance of freezing conditions or react to developed hazards within a reasonably practicable timescale within the confines of the resources available. Under standard conditions, pre treatment routes are designed to be completed within 3 hours of mobilisation.

4.1.4 Where hazards re-occur after treatment or in conditions where instantaneous hazards occur, resources may be required to concentrate on re-application of several treatments prior to moving on. In such circumstances the highest priority routes, experiencing such conditions, will generally be treated first and resources will only be released to other priorities once it is determined that treatments have an expectation of remaining effective.

## 4.2 Footway and Footpath Priorities

421 At the start of each winter, the Network and Standards Assistant Manager will produce footway and footpath treatment routes based generally on the following principle.

Priority 1 - Urban Shopping Areas and Precincts

Priority 2 - Other areas of high pedestrian concentration, e.g. in the vicinity of hospitals and schools.

Priority 3 - Steep hills in housing developments and in the vicinity of residential homes for the elderly.

422 Footways and footpaths will only be treated, in periods of lasting hazards, when the Duty Manager, in consultation with Area staff, considers that their physical condition makes it necessary and treatments will be effective. They will usually only be treated during normal working hours.

### 4.3 Resources

#### 4.3.1 Labour

To ensure that an adequate labour resource is available to allow treatment to be carried out, arrangements are in place with Amenity Services section to participate in the supply of additional labour when conditions require.

#### 4.3.2 Plant

Plant to assist with the clearance of snow and spreading of salt has been provided by Roads and Infrastructure Services. Attachments to mowers to allow footpath ploughing will be fitted at the start of each season, where practicable. Footway salt spreading barrows are provided for use by available labour when required.

### 4.4 Cycleways

- 4.4.1 Only cycleways contiguous with roads and footways will be treated in conjunction with any planned treatments.

## 5. WINTER STANDBY, STANDBY PROCEDURES AND GRITTING GUIDELINES

- 5.1 The formal winter standby period for Council roads will normally be from the end of the working day on the Friday nearest to 1st November to the Friday nearest to 15th April. This period may be extended at either end as the prevailing weather conditions dictate.

### 5.2 Shift and Standby Procedures.

- 5.2.1 During the operational period, standby arrangements will be operated on a formal home standby basis, with call-out as required. Arrangements will be put in place to allow mobilisation of any frontline vehicle within 1 hour of call out.

- 5.2.2 Standby rotas will include sufficient drivers to ensure that the priority 1 routes can be treated within 3 hours of commencing treatment

- 5.2.3 On receipt of a weather forecast indicating medium to heavy snow, sufficient additional operatives will be placed on standby to cover all priority 1 & 2 routes and any priority 3 routes likely to be affected as timetables indicate, by the forecast.

### 5.3 Carriageway Treatment

- 5.3.1 Carriageways will generally be treated in the order of priority as specified in section 4.

- 5.3.2 By 13:00 each day during the winter months, having considered the most recent weather forecast, the level of residual salt on the road

network and the available resources, the Duty Manager will compile an Action Plan for carriageway treatment for the following twenty-four hours. The Winter Manager will review, recommend any adjustments if needed and then approve the proposed plan.

- 533 Precautionary treatment for frost and light snow will be spread at a target rate of 10g/m<sup>2</sup> of salt.
- 534 Precautionary treatment for conditions where frost is forecast after rain should be delayed as long as possible to reduce loss of salt due to wash-off. This should not preclude the treatment of routes during showers where freezing of rain on contact has been predicted, or is reported.
- 535 Precautionary treatment when heavy snow falls are expected should be at a rate of between 20 and 40g/m<sup>2</sup> of salt according to the anticipated severity of snowfall and confidence level of the forecast.
- 536 In conditions where current snowfall is forecast to continue, substitution of salt with abrasive materials, sand or grit, will be instigated until such time as showers cease and any use of de-icing materials are deemed to be more effective. In extreme or persisting conditions, all material spreading will cease until there is an expectation that any deposits will remain on the carriageway and be effective in aiding traction.
- 537 In marginal conditions, consideration will be given to limiting treatment to known localised areas prone to icing. During periods of prolonged freezing conditions in the absence of precipitation, spot salting of areas of persistent seepage will continue while hazards remain.
- 538 Where areas of seepage from adjoining land are recorded on a regular basis, these will be identified and pre-emptive rectification of the drainage system will be instigated.  
Land owners will be notified of their requirement to carryout such work as it affects public roads. The Council will take necessary steps to effect repairs, in the absence of any undertaken by landowners and pursue recovery of costs accordingly.

#### 54 Footway and Footpath Treatment

- 541 Treatment of footways and footpaths will be by a combination of mechanical and manual operation. In large urban areas footway salting will be carried out by purpose built spreader barrows with a nominal design spread rate of 50g/sq.m.
- 542 Salt will only be utilised where ice and frost are the main hazard. In all snowfall conditions, physical clearance will be the priority with sand / grit spread thereafter to aid traction.

- 5.4.3 Treatment of footways and footpaths will normally only be carried out during the normal working day as resources permit. In most cases additional resources should be mobilised at local level as conditions dictate. The Winter Manager and Duty Manager will be kept informed of all additional resources mobilised by local management.

## **6. SNOW CLEARANCE STRATEGY**

### **6.1 Carriageways**

- 6.1.1 On receipt of a weather forecast indicating medium to heavy snow, carriageways should be treated in accordance with section 5.3.5. When the forecast is for rain turning to snow or the snow prediction is marginal the salting operations should be delayed accordingly.
- 6.1.2 When forecasts indicate that there will be medium or heavy snow falls, the Duty Manager will instruct that all vehicles capable of being fitted with ploughing devices will be so equipped.
- 6.1.3 Salting should be continued or be restarted when snow is falling, as conditions warrant however sand / grit must be used to preserve de-icing materials until such time as it can be used effectively.
- 6.1.4 Snow ploughing will commence as soon as it is considered that the operation will be effective. Generally snow can only be ploughed effectively at depths exceeding 30mm.
- 6.1.5 Spreading treatment of ploughed surfaces will be carried out when it is considered that the material will have the most beneficial effect. The normal case on two lane carriageways will be for spreading treatment to be started when the second lane is being ploughed, generally in the return direction. However in persisting snow conditions the spreading of materials shall be delayed until clearance of accumulations is effective.
- 6.1.6 Resources should generally be allocated to clear roads in the order of priority shown in section 4, but with precedence being given to those areas which have experienced the heaviest snow falls and drifting
- 6.1.7 Where slush is formed it should be ploughed as soon as practicable to avoid the risk of rutting should there be a further significant drop in temperature which might result in freezing conditions.
- 6.1.8 Where snow hazards are predicted to persist or develop intermittently throughout the night, consideration will be given to continuing action in some circumstances. Mainly in cases where a break in operations may result in hard packed snow or other conditions difficult to treat on resumption.

6.1.9 Individual circumstances, such as access for emergency services or other lifeline service vehicles will normally take precedent over the above route priority arrangements.

6.1.10 Where it is judged that a road cannot be kept open, early closure in liaison with the Police in a planned manner, should be initiated. Direct consultation at local level must be maintained where conditions are changeable and in some circumstances this may mean discussions on site between local Supervisors and Police officers.

6.1.11 In specific locations additional information and diversion signing will be erected to further inform drivers of the hazardous conditions on some routes and advise them of alternative routes where available resources will concentrate on maintaining treatments. There are three roads where signing to indicate specific alternative routes are available.

1. A817 "Haul Rd" , Lomond.  
Snow gates at A82 and A814 "central" roundabout  
Diversion via A818 Arden - A814 Garelohead
2. C46 Glen Aros / Glenbellart road , Mull  
Signs at Aros Bridge and Dervaig Primary School  
Diversion via A848Tobermory
3. C9 Glenfinart Road ( The Larach) , Cowal  
Signs at Whistlefield Hotel and Sligrachan Bus turning head;  
Diversion via A880 Cot House
4. C11 Otter Hill road ( Bealach an Drain) , Cowal  
Signs at Glendaruel A886 and Otter Ferry B8000;  
Diversion via A8003 Tighnabruaich and Kames.

6.1.10 Road closures will be reported to the Director, Head of Service, Operations and Network Standards Managers as soon as practicable, with immediate notification transmitted to Traffic Scotland and local radio stations where appropriate.

## 62 Footways and Footpaths

621 Where footways and footpaths are covered with light accumulations of snow i.e. less than 30mm, treatment will consist of the application of Sand or Grit as described in section 5.4. of this document.

622 Where snow depths exceed 30mm footways clearance will be carried out where practicable by pedestrian operated or ride on powered footway ploughs. This will be enhanced by manual clearance when necessary i.e. where access precludes the use of the above plant.

623 Snow clearance of footways will normally only be carried out during the normal working day and as resources permit.

## **7. ASSISTANCE FROM EXTERNAL CONTRACTORS**

- 7.1 Roads and Amenity Services provide labour and non-specialist plant as specified. In some districts, mainly islands, resources are limited and private contractors are used to provide cover to comply with this policy.
- 7.2 In areas of the network remote from the main depots, sub contractors are engaged to provide the full winter service provision in parallel with the in house council resources.
- 7.3 In severe weather conditions additional resources can be drafted in from local private contractors to supplement those of the Council. Arrangements are made through the Operations Manager to contact these contractors in advance to determine their availability and formulate contingency plans for contact and mobilisation. The Winter Manager and Duty Manager will be kept informed of all additional resources mobilised by local management.

## **8. SALT ETC.**

### 8.1 Provision of Salt

- 8.1.1 Salt or other de-icing materials will be supplied through the Network and Standards Manager. An annual supply contract shall be let prior to the start of the winter season.
- 8.1.2 Onsite sampling and testing shall be carried out in each area as the Network and Standards Manager deems necessary. The Network and Standards Manager will ensure that sufficient stocks of Salt and Abrasive materials are maintained at each storage location.

### 8.2 Storage of Salt

- 8.2.1 Where practicable salt shall be stored under cover to prevent leaching, improve handling and to reduce treatment times. A programme of upgrading salt stores with permanent roofs will be undertaken as quickly as practicable and as financial, planning and operational considerations allow.
- 8.2.2 Storage facilities will be loaded out prior to the commencement of operations and stock levels will be monitored weekly to assure optimum supplies are available throughout the season. Stores will be kept as full as practicable as protection from the weather allows and minimum stock levels will dictate optimum re-ordering procedures.
- 8.2.3 Weekly totals of all salt quantities delivered, transferred or issued as treatments will be collated for each storage location and e-mailed to HQ for central collation from 12:00hrs each Friday.
- 8.2.4 Requests for additional salt will be included in these weekly e-mails and calling forward of orders will be co-ordinated centrally through the Roads

Procurement Officer, with the supply contractor to provide the most efficient means of optimising stock levels.

### 83 Use of Salt and Salt / Abrasive Mixtures

- 83.1 Preservation of salt or other de-icing materials for use where they are most effective should be a consideration when formulating a treatment plan. Service resilience must be taken into consideration at all times.
- 83.2 All routes will be pre-treated with pure rock salt, as the most effective method of preventing freezing of wet surfaces or melting of previously formed ice. However on predominantly rural routes affected by snow, grit may be added at 1:1 salt/grit mix to aid traction and break up compacted layers. In severe conditions or when supplies are restricted, pure Sand / Grit will be employed to preserve de-icing stocks.  
In wholly urban areas, salt only should be applied to the carriageway at all times. Salt should be spread at the designated spread rates as determined by the Duty Manager.
- 83.3 The grading of salt and grit for mixtures shall be such that 100% will pass a 6.3mm sieve but less than 1% passing a 2mm sieve.
- 83.4 Grit bins should be filled with a 3:1 grit/salt mix, initially at the start of the season. Continued replenishment in times of persisting hazard will be purely of Sand / Grit to preserve de-icing materials and only when resources permit.
- 83.5 Provision of Salt to other departments of the Council or other Contractors will be restricted to maintain the resilience of the Roads and Footways Winter Service within the terms of the Salt preservation Protocol.

### 84 Calibration and control of Salt Rates of Spread

- 84.1 The Operations Manager will ensure, through the Fleet Manager that all spreaders, permanent and demountable, are maintained in such a manner as to optimise the salt feed and regular checks of the calibration shall be carried out. Records of all tests and alterations to the calibration shall be maintained for inspection.
- 84.2 All spreaders shall have limiting devices fitted such that spread rates cannot exceed 60g/m<sup>2</sup>. The device may be fitted in such a manner as to allow it to be temporarily disconnected to assist the clearance of blockages.

### 85 Grit Bins and Grit Heaps

- 85.1 Grit heaps and grit bins are normally placed on routes not included on the Priority 1 – 3 pre-treatment network, or on sections of these routes where additional self help facilities are considered advantageous. They are provided to allow the public to use the salt/grit mix to treat localised hazards on carriageways and footways on the public adopted network.

- 852 Grit heaps will be situated on rural road verges predominantly on bends, junctions or steep sections. They shall be placed at distances which provide a reasonable volume of material over the extent of any problem area as, if material has to be carried too far, it is unlikely to be used. Consideration will be given to the environmental impact associated with tree roots, hedges and watercourses.
- 853 Grit Bins will normally be situated in urban areas or where leaching from grit heaps in rural areas is likely to have an environmental impact. They are placed similarly to rural grit heaps to provide an additional self help facility in streets such as at bends, junctions, steep sections of carriageway or footway or close to schools and other public buildings where delays in planned treatments may result in persisting hazards. Care must be taken in locating bins to avoid impeding sight impaired pedestrians or access to public utilities or roads authority apparatus. Generally where practicable, grit bin sites will allow material to be carried downhill to treat sections of the public network
- 854 Replenishment of material to grit heaps or bins will be carried out as regularly as conditions of use require, within the confines of available resources. Sites in regular use may require more frequent visits and the mix of material may vary as operational resources and stocks of available materials permit. This may depend on the overall salt resilience capability of the Council in times of prolonged severe weather conditions.
- 855 Requests for the locating of additional grit heaps or grit bins in urban areas will be considered using the following criteria.
- Is the request relevant to the Council asset of adopted roads and footway network?
  - Is there a genuine need for an additional facility, based on local knowledge, the type of hazard of concern and any accident history? The criteria for locations in 8.5.2 & 3 above will apply.
  - The proximity of similar facilities will be considered, as provision of bins and heaps often leads to further requests in similar locations.
  - The overall volume of bins and heaps will have an impact on the ability to provide an effective replenishment operation.
- 856 A register of grit bins shall be maintained by the Network and Standards Manager and their location and suitability will be reviewed annually. Grit bins will be serviced and all debris and litter removed prior to the start of the winter season. Initial replenishment of heaps and bins will be carried out prior to the start of the formal standby period, where practicable.

## **9. PLANT RESOURCES AND SERVICING PRACTICES**

- 9.1 All winter maintenance plant will be serviced, overhauled and made ready for use, at least two weeks before the designated start of the winter period. All servicing and maintenance of specialist winter maintenance plant will be the responsibility of

the Operations Manager. The Council's Fleet Services section, maintain all plant and equipment for the user departments. The Fleet Manager will inform the Operations Manager of any deterioration in the effectiveness of any items of Winter Maintenance Plant.

92 Any short fall in resources caused by the removal of plant from service, during the winter period, should be reported to the Operations Manager by the Duty Supervisor. The Operations Manager will then seek ways to address the problem. Where additional fleet vehicles are available, these will be prepared as back-up units, either in advance of operations or as soon as practicable whenever a shortfall in vehicles arises..

93 The Operations Manager will ensure that all major items of plant are made operational by the start of the standby period. A programme of trial runs will be drawn up, to allow all items of plant to be tested and have all their accessories fitted to ensure readiness for the winter period. The trial runs will be carried out on a depot by depot basis during normal working hours.

## **10. WEATHER FORECASTING AND MONITORING**

10.1 MeteoGroup Ltd , Vauxhall Bridge , London have been contracted to provide the road forecast for the period 1<sup>st</sup> October to 15<sup>th</sup> May each winter period. Access to forecast information will be gained via the local area networks at Council offices during office hours, or by a broadband router link from Duty Manager's homes. Information is available on a bespoke website for weather information and partially backed up by e-mail. In the event of a system failure it will be possible to obtain the forecast information by fax to the Duty Manager's Office or verbally out of hours to their home.

10.2 The contract with MeteoGroup provides for a twenty-four hours consultancy arrangement. Forecasters are available throughout the winter period by telephone, to discuss weather matters and clarify details with department staff.

10.3 The text forecast is augmented by other services as necessary, including the use of RADAR and satellite images to study precipitation patterns. There are fourteen Road Sensor stations, owned by the Council and maintained by MeteoGroup's partner Vaisala Ltd, giving atmospheric and surface conditions, situated throughout the Argyll and Bute road network.

## **11. OPERATIONAL COMMUNICATIONS**

11.1 Vehicle / Duty Supervisor / Depot Communications

11.1.1 Winter maintenance vehicles are provided with a cellular telephone, such that contact may be maintained with the Duty Supervisor or depot at all times. When it is considered safe to do so, manning of vehicles fitted with effective communications facilities, will be limited to the driver only.

11.1.2 The fleet of 30nr frontline, route specifically allocated and 2nr back-up, winter maintenance vehicles are fitted with satellite tracking and data-

logging equipment, provided by Trackyou Ltd. Vehicles can be monitored through web access, in real time during operations and their actions are recorded and archived for future reference. One other private contractor owned vehicle is employed on pre-treatment operations on the Isle of Jura where in-house resources are limited.

11.13 Throughout the period of winter standby, the Operations Manager will ensure that staff are available to receive calls from the Police and other appropriate agencies. Call out rotas will be provided to the Operations Manager, adjacent authorities, management agents and the Police.

## 112 Communications with Police Scotland, Roads Policing Section

1121 It is important that the strong partnership, formed with the Police, is maintained. Information relating to severe weather conditions will be communicated to the Police at the earliest possible opportunity. The Duty Manager will consult fully with the Police when it becomes necessary to arrange road closures and when there is a need to move abandoned vehicles.

1122 The “out of hours” emergency rota will be issued to the Police by the Operations Manager. This will be confirmed to the Police Area Control Room at Helen Street, Glasgow on the Friday start to each weekly duty shift.

1123 The Duty Manager will arrange for the daily action plan to be e-mailed to the four main local Police offices each day. This will also include a confirmation of the Area Supervisors’ and Duty Manager’s out of hours contact telephone numbers.

1124 The Duty Manager will take due regard of all reports received from the Police, concerning dangerous road conditions and give consideration to them, in line with the Council Policy, in deciding the action to be taken.

## 113 Communications with other Agencies and Motoring Organisations

1131 BEAR Scotland, the North West Trunk Roads term contract operator will be sent the daily action plan and out of hours contact information, each day throughout the winter period.

1132 The Duty Manager will inform Glasgow City Council ; Roads and Lighting Faults Call Centre , R.A.L.F. , of the out of hours contact numbers for the following weeks shift and any amendments necessary thereafter. Contacts with Scottish Fire and Rescue and Scottish Ambulance Service, control rooms are included in this transmittal process.

1133 The Winter Manager will inform Traffic Scotland when severe weather conditions are causing delays to traffic movement.

## 114 Communications with the Public

- 114.1 The Winter Manager will post details of the 24hour winter treatment plan each day no later than 1400hrs on the winter maintenance page of the council website.
- 114.2 Enquiries from the public will normally be dealt with by the Customer Access Centre during normal working hours.
- 114.3 Consideration will be given to the placing of warning signs, alerting drivers to the possibility that road surface hazards may develop outwith treatment times will be placed at the interface of Priority 1 to Priority 2 & 3 routes
- 114.4 Leaflets explaining the extent of treatment routes, their priority and hours of operation will be prepared and where necessary updated, in advance of each season. These will be distributed by electronic means or to all local area Council premises and other public access buildings and establishments, such as filling stations and shops. Further copies may be issued as mail-drops or inserts to local newspapers.
- 114.5 The Winter manager will ensure that any disruption to the network is reported through the internal service disruption noticeboard on the council website.
- 11.5 Media
- 11.5.1 National radio, television and national press enquiries should be dealt with by the Director or the Head of Service or through the Council's Press and Media Relations Office.
- 11.5.2 Local radio and press should be dealt with by the Head of Service or by the Operations and Network and Standards Manager.
- 11.5.3 The Head of Service, Operations or Network and Standards Manager will be advised as soon as practicable if conditions deteriorate such that major routes have to be closed.

## **12. INSTRUCTION AND RECORD KEEPING.**

- 121 The management of the Instruction, Recording and Archiving of daily winter Action plans is automated, by use of a bespoke winter maintenance management tool provided by Vaisala Ltd.
- 122 Vaisala – Road DSS Manager is the web based system which allows access by managers and supervisors simultaneously, to post instructions and record actual activities on each specific pre-treatment route as operations progress. Details will include some or all of the following:-
- a) Details of the routes treated.
  - b) The start and completion of treatment on a specific route.
  - c) Type of treatment carried out.
  - d) Driver and other operator details
  - e) Quantity of materials used
  - f) The prevailing weather conditions.
  - g) Any contacts by Police regarding reactive requirements
  - h) Details of any plant breakdowns, accidents or incidents.
  - i) Any other problems
- 123 In parallel to the above recording system, vehicle activities are recorded on the “Trackyou” - vehicle tracking system. Reports and map based graphical records can be run to confirm and clarify in more detail, the recorded activities.
- 124 All records are archived in separate remote servers and can be retrieved through web access by any authorised user, at any time after a plan has been completed.
- 125 Additional records of all telephone calls related to winter operations are kept by all duty supervisors and managers. These are completed at the end of each shift, collated and filed centrally for future reference.

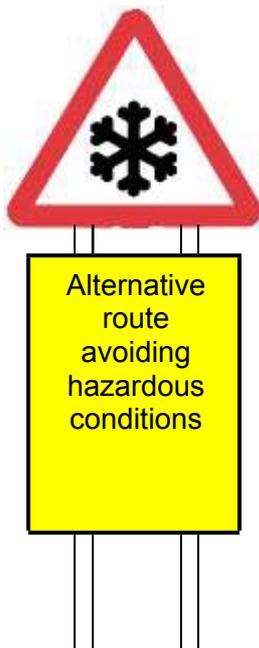
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### Appendix 3 – Advisory signing, routes unsuitable in severe conditions

In specific locations additional information and diversion signing will be erected to further inform drivers of the hazardous conditions on some routes and advise them of alternative routes where available resources will concentrate on maintaining treatments. There are three roads where signing to indicate specific alternative routes are available.

5. A817 “Haul Rd” , Lomond.  
Snow gates at A82 and A814 “central” roundabout  
Diversion via A818 Arden - A814 Garelochhead
6. C46 Glen Aros / Glenbellart road , Mull  
Signs at Aros Bridge and Dervaig Primary School  
Diversion via A848 Tobermory
7. C9 Glenfinart Road ( The Larach) , Cowal  
Signs at Whistlefield Hotel and Sligrachan Bus turning head;  
Diversion via A880 Cot House
8. C11 Otter Hill road ( Bealach an Drain) , Cowal  
Signs at Glendaruel A886 and Otter Ferry B8000;  
Diversion via A8003 Tighnabruich and Kames.

#### Example of typical information sign



Sign on permanent display during Winter Season.

Road Closure in conjunction with temporary signs when conditions dictate.



## **Appendix 4 - Salt Use Reduction and Preservation of Stocks Protocol.**

### **Argyll and Bute Council WINTER SERVICE – OPERATIONS 2019/20**

#### **Protocols for the reduction in use of salt and preservation of remaining stocks. Storage Capacity, Stock Transfers and replenishment times**

Storage capacity in all 15 “Operational” salt stores has been increased by 3,500tonnes to approximately 14,000tonnes, since 2009, through phase 1 of the covered tunnel construction programme. The 3,000tonne Dome in Helensburgh, although an operational store, has an element of strategic storage.

For national salt resilience purposes, daily usage is calculated on 2 Priority WRC1-3 network treatments and one WRC4 “other routes” treatment in each 24hr period. This equates to 375tonnes/day at normal use levels, 600tonnes/day for heavy snow.

The West of Scotland Co-ordination Group, Roads sub-group agreed that Roads Authorities should achieve a minimum storage capacity of equivalent to 70% of the average total salt usage of the last three severe winters. This equates to a minimum 11,650tonnes for Argyll and Bute.

However the target tonnage for the start of this season, 1st November, is 10,970tonnes. This equates to 28 continuous days supply at Winter Policy treatment levels.

As the national salt supply contract has an allowance of 21days to fulfil delivery from point of order, the minimum resilience required in normal conditions equates to four weeks operations or approximately 60% of the new capacity, at 10,000tonnes. In practice, reduced quantities of 6,000tonnes before replenishment are acceptable. This equates to a resilience of 16 days operations, at normal treatment levels.

Within this total quantity, material may require to be moved between stores to preserve a degree of individual resilience in each of the operational stockpiles around the network. Internal transfers between stores ensure adequate stocks are available as much as practicable to maintain a consistent treatment regime throughout the network. In this way the hierarchy of route treatments can be preserved as per the policy, for as long as practicable within any delivery shortage period.

#### **Operational Decision techniques to Manage Salt use.**

Winter Service Policy already recognises the need to preserve salt primarily for the prevention or treatment of ice on higher speed carriageways. 3Grit:1Salt mixes are already utilised in Grit Heaps and Bins and in the reactive treatment of footways.

Salt preservation techniques can be instigated on carriageway treatments where forecasts or conditions indicate that a mixture of salt and grit will provide the best treatment to aid traction. The winter operations decision to use 50/50 mixes should only be for this purpose, rather than to preserve supplies.

In periods of falling snow, Grit only should be used on “return” ploughing legs until such time as snowfall ceases and there is an expectation that salt will melt any residual snow after ploughing.

In settled constant dry conditions Residual Salt levels on carriageways allow the curtailment of further treatments, as part of the daily operational plan.

## **Reduction in Salt use in treatments, to preserve remaining stocks.**

Where salt stock levels reduce and replenishment quantities are doubtful in either quantity or timescale, the use of salt will be curtailed under the following procedures.

Salt Preservation level                      Circumstances                      Authorised by.

### **SP1 Total Operational Stocks reduce to 6,000tonnes                      Winter Manager**

This level will be reached in conditions of reasonably prolonged hazardous conditions or where extreme conditions reduce the effectiveness of salt. The supply chain for salt replenishment may become of national importance and Transport Scotland and Strathclyde Emergency Co-Ordination Group advice may be received.

#### **First Operation:- Activate replenishment from Strategic Stockpile (+ 4,400 tonnes)**

Depending on the likely delay in replenishment, part or all of the Strategic stockpile may be moved to operational stores and the permanent sheeting replaced. The quantity will be determined by the potential delivery date for shipping. The total stock will provide a further 12days resilience within the operational stores, at normal use rates.

**Resilience:- 27days at normal use levels 375t/day : 16days heavy snow 600t/day**

#### **Second Operation:- Activate Salt Preservation Measures.**

Salt treatments will be reduced. Spread rates adjusted from 40g/m<sup>2</sup> to 20g/m<sup>2</sup>, or 20g/m<sup>2</sup> to 10g/m<sup>2</sup>. Further reductions in the salt content of all carriageway treatments will be achieved by mixing Grit and Salt together, firstly at 1Grit:1Salt then 2Grit:1Salt. In extreme frosts where RSTs remain below -5C all day, and salt is considered to be ineffective, additional treatments of pure Grit on all routes can be instructed to aid traction. Grit heaps, bins and footway treatments will remain at 3grit:1Salt.

**Resilience:- 32days at reduced use SP1 = 188t/day : 20days heavy snow**

### **SP2 Total stocks reduce to 4,000tonnes                      Head of Service**

Salting treatments will be curtailed to Priority 1&2 pre-treatment routes only (1205 km)  
The SP1 salt mixing techniques will be used in all further SP levels.

All other treatments will be of pure Grit including replenishment of grit bins / heaps.

**Resilience:- 25 days at reduced use SP2 = 156t/day : 15 days heavy snow**

### **SP3 Total Stocks reduce to 2,000tonnes                      Executive Director**

Salting will be reduced to one treatment per 24hr forecast period, of the Priority 1&2 network, usually 06:00hrs mornings, in advance of the majority of traffic movements.

All other treatments will be of pure Grit including replenishment of grit bins / heaps

**Resilience:- 25 days at reduced use SP3 = 78t/day : 15 days heavy snow**

### **SP4 Total stocks reduce to 1,000tonnes                      Chief Executive**

Salting reduced to Priority 1 and Priority 2 "A" class routes only 06:00hrs. (492km)

All other roads and mobilisation times, Grit only.

**Resilience:- 32 days at reduced use SP4 = 31t/day : 20 days heavy snow**

### **SP5 Total Stocks reduce to 700 tonnes                      Chief Executive**

Effectively **2 days resilience at original policy normal use.** The trigger point for application to Scottish Executive Emergency Salt stockpile. Release of salt, allowing replenishment out with the normal constraints of the national salt supply contract.

**Resilience:- 22 days at reduced use SP5 = 31t/day : 13 days heavy snow**

**Total resilience: SP1 (2<sup>nd</sup> Op) > SP5 (end) = 68 days : 41 days heavy snow.**

